

# Guest Editorial

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## Evidence-based Dentistry: From Research Experience to Clinical Expertise

Dentistry has evolved as a profession that has uniquely and successfully combined science with the art of healing. Building on this foundation, the dental profession has maintained a strong commitment to sound science, public service and an ethical obligation to protect the patient's health.<sup>1</sup>

Evidence-based dentistry (EBD) is an approach to oral healthcare that requires the judicious integration of systematic assessments of clinically relevant scientific evidence relating to the patient's oral and medical condition and history integrated with the dentist's clinical expertise and the patient's treatment needs and preferences.<sup>1,2</sup>

It was first introduced by Gordon Guyatt and the Evidence-Based Medicine Working Group at McMaster University in Ontario, Canada in the 1990s.<sup>3</sup>

The American Dental Education Association (ADEA) has incorporated the definition of evidence-based dentistry into core competencies required by dental education programs. These competencies focus on graduates to become lifelong learners and consumers of current research findings and require students to develop skills that are reflective of evidence-based dentistry.<sup>4</sup>

The ADEA Council on Scientific Affairs issues clinical recommendations based on the most current evidence in the scientific literature. While these recommendations do not constitute 'standards of care,' they are the scientific foundation for the practice of evidence-based dentistry.

Along with the dentist's professional skill and expertise, EBD allows dentists to stay up to date on the latest procedures and patients to receive improved treatment.

A new paradigm for medical education designed to incorporate current research into education and practice was developed to help practitioners provide the best care for their patients.<sup>5,6</sup>

Affairs to convene expert panels that review the collective research evidence and develop evidence-based recommendations on key clinical issues.<sup>7-10</sup>

Nowadays, the association continue developing evidence-based clinical recommendations and working with collaborative groups to conduct systematic reviews, critically appraising the reviews and policies developed by other organizations, and developing mechanisms for translating and disseminating information to the membership.<sup>5</sup>

The general dentist will address healthcare issues beyond traditional oral healthcare and must be able to independently and collaboratively practice evidence-based comprehensive dentistry with the ultimate goal of improving the health of society.<sup>11,12</sup>

The general dentist must have a broad biomedical and clinical education and be able to demonstrate professional and ethical behavior as well as effective communication and interpersonal skills.<sup>4</sup>

In addition, he or she must have the ability to evaluate and utilize emerging technologies, continuing professional development opportunities, and problem-solving and critical thinking skills to effectively address current and future issues in healthcare.<sup>13,14</sup>

A dentist's learning curve for using the evidence-based process can be steep, but there are continuing education courses, workbooks and tools available to simplify the integration of current research into practice.<sup>3</sup>

What is clear is that evidence-based dentistry poses some particular challenges to the profession, many of which have been discussed in several articles in international scientific literature.

They include resistance from dentists, misinformation about evidence-based practice, the threat of the loss of clinical autonomy, the generation of guidelines, their use by third-party payors, inappropriate dental education, and the dearth of evidence for much of dentistry and the current impossibility of justifying much of practice with good quality evidence.<sup>1,2,14</sup>

There is a gap between what evidence currently exists for the effectiveness of dental therapy and the actual practice. This gap can be most clearly seen by examining health services research and dentistry.

The gap can be filled, within the undergraduate dental program, introducing to students EBD that is lack in dental schools and the fact that sometimes the respondents were not familiar with EBD websites.<sup>15-18</sup>



A natural place for this to occur is within public health and community dentistry, in the way that this type of education facilitates a dentists' understanding of basic and applied sciences and also their knowledge on how to treat difficult cases.

As a result, dental students will be able to update their knowledge after graduation using this method; this newly gained information will affect the clinical treatments they choose thereafter.

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