

# Evidence-Based Practice or Practice-Based Evidence?

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The evidence-based practice movement was begun in 1972 by the Scottish epidemiologist Archie Cochrane,<sup>1</sup> and the term was first used in 1990. In 1992, a group at the Oxford University in England defined five steps for evidence-based practice. The second step asks for the “best evidence available,” irrespective of the level of credibility. This implies that any evidence is better than none. In 1993, the US Supreme Court decision of *Daubert v Dow Merrill Pharmaceuticals, Inc* ruled on the admissibility of evidence in federal court cases.<sup>2</sup> With this decision, federal court evidence must meet standards for admissibility, that is, there must be test-proven and expert-accepted, informational support for all scientific-related testimony. There must be evidence that supports the evidence.

We implant dentists strive to have our treatments supported by basic science and clinical research. The reality is that only about 5% of the published work is true science—randomized double-blinded, controlled trials, the highest-rated level of evidence. The large majority of implant research consists of case reports, case series, and meta-analyses of these. Thus, we basically may have anecdotes and series of anecdotes and analyses of collected anecdotes as our basis for treatment.

Obtaining true scientifically based evidence is time-consuming, expensive, and many times humanely impossible. Animal studies are done but cannot be extrapolated to human application. Studies with a high credibility level are difficult to design and equip and expensive to perform. Equipment, medications, and patients must be

collected. The study must be scientifically well founded and answer a proposed question. Any patients must be informed and not harmed by the process. Human and animal subjects must be treated humanely. All this entails a major commitment of time and financial resources. Consequently, much research is done by the larger implant manufacturers, which have the financial resources to fund research.<sup>3</sup> When their research results are published there is a financial disclosure statement placed at the end of the article. This may incur doubts as to the veracity for the reader.

As a result, although not science, published case reports from practitioners are an important resource by default. At this point in the advancement of clinical implant dentistry, case reports are the main source of evidence for how we operate. Thus, rather than looking to manufacturers to elucidate and edify our discipline, we should publish our particular clinical experiences, both successful and unsuccessful. Complications and unsuccessful treatment outcomes are very useful clinical caveats.

In the end our published case reports and case series may be the most underrated level of evidence we have. Our evidence is ultimately practice based.

## REFERENCES

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