EDITORIAL

Evidence and The Life-Long Learner

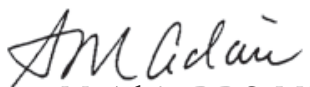
By the time you read this, our pediatric dentistry residency programs will have awarded certificates and offered good wishes to their graduating residents. These new graduates are the most recent wave of the future in our discipline. From what I saw and heard from them at the annual session in San Francisco, we have reason to be confident in their abilities and proud of their accomplishments. I am certain that among the platitudes they heard at their departure ceremonies was the admonishment to be a "lifelong learner". Indeed, many programs list this aspiration among their educational goals. Continued educational enrichment is a hallmark of being a professional.

It has been said that we dental educators should tell our residents that much of what we teach them is wrong. We do not do it intentionally, of course. It is just that much of what we teach is based on weak, or even incorrect, evidence. Some of it is simply based on expert opinion and little science. The problem for our residents (and us) is that we do not yet know which part of what we teach will be proven wrong. Take restorative dentistry as an example. Until recent years, most of us adhered to Black's classic principles of cavity design. We fervently believed in extension for prevention because our teachers held those principles dear. But Black's tenets were based primarily on his expert opinion and the limitations of the restorative materials that were available in 1891. Over the intervening century, research into cavity design and the development of new materials has led to a new paradigm of "minimally invasive dentistry". I have taught Black's principles, and now I teach new principles. The realm of dental materials is another example. Most of the direct restorative materials that I learned to use in dental school have been displaced by stronger, longer lasting, and generally more esthetic formulations. To complicate matters, the pace of materials development is accelerating exponentially. Practicing evidence-based restorative dentistry can be tricky, especially when new generations of materials reach the marketplace before the evidence on the previous generation reaches the light of publication.

This shift to "evidence-based dentistry" is confusing to some, and threatening to others. It need be neither. Have we not always taught and practiced evidence-based dentistry? In a sense, yes, but much of our "evidence" has become outmoded. The evidence-based movement, in which we lag behind our colleagues in medicine, is a shift toward basing clinical decisions on the best available scientific support. Included in the clinical decision making process, however, are other factors. These include the particular clinical circumstances, the values and preferences of our patients and their parents, and our own experiences and judgment. For dentistry, the scientific evidence is often the weak link in the equation.

Who will teach the new evidence to us and our recent graduates? First , each of us is responsible for a degree of self-teaching. We must be able to separate scientifically-derived and meaningful evidence from "it-works-in-my-hands" pseudoscience. Second, we have to accept that much of the evidence lies in the body of older research that eventually will be displaced by newer, better-designed studies. We cannot simply throw that information away, but we must interpret it with caution. Third, virtually all of us attend continuing education programs. We should expect that presenters support what they say with the best evidence available. If they do not, they should be challenged for that support. The days of simple "how to" courses are fast coming to a close. Third, distance learning is becoming a mature technology. Increasingly more of our professional education, pre-graduation and post-graduation, will be delivered via this medium. The content of distance-based courses deserves the same degree of scrutiny as face-to-face presentation. Finally, there is a wealth of information waiting for us in cyberspace. You can point-and-click your way to cutting edge data—and to other material that is just plain wrong. Your patients' parents have stumbled across some of this stuff, and you will, too. Be a critical and cautious consumer of Web-based information.

Keeping up with a rapidly changing profession is a difficult task. Each of us has the tools to do so, but just as with our bodies, we must exercise our abilities to keep them honed, or they will atrophy.



Steven M. Adair, DDS, MS
Editor-in-chief

ERRATUM

Reference #28 was inadvertently omitted from the study by Fadavi and Anderson entitled, "A comparison of the pulpal response to freeze-dried bone, calcium hydroxide, and zinc oxide-eugenol in primary teeth in two cynomolgus monkeys." *Pediatr Dent*. 1996; 18:52-56.

The missing reference was: Masterton J: The healing of wounds of the dental pulp. *Dent Pract*. 1996; 16: 325-39.

The journal regrets the omission of this reference.