

How Does Science Affect Practice?

Have you ever wondered how scientific literature affects our practices? If we plan to read the literature and then incorporate changes into our practices, in keeping with what the literature tells us, such a practitioner would be very progressive and proactive in implementing change. We have to be careful, however, because not every idea will work in the hands of every practitioner. In fact, at some point, most practitioners have to understand that they are practicing at a skill level that puts them at the limits of their abilities. For the most skillful clinicians, there must be the understanding that they operate close to the edge. When we discuss cognitive skills, these may be achievable through study, but when skills are technical, the potential for negative outcomes may be closer than we think.

Many of the ideas and concepts that we see documented in the literature are representative of subtle changes in practice. When assessing new techniques, the message in a publication may be difficult to identify, and, in some instances, the subtleties are not universally observed. This may happen if the authors do not perceive all the innovations that go into modified treatment. Sometimes the proposed changes will be limited and may represent minor tweaking rather than fundamental change. The clinician, reading such an article, does not know what the authors have left out because they perceived minor differences in techniques to be unimportant. The critical factor is that subtle changes may lead to unanticipated disproportionate outcomes in care delivery.

In most instances, clinicians will describe techniques that work well in their hands. The readers may attempt to duplicate those techniques and describe an inability to replicate the outcomes. In these situations, it is not a matter of one clinician withholding information from another, but instead, it is a recognition that there are subtleties in the provision of treatment that are not appreciated when reviewing literature that describes such treatment.

We are now about 50 years into the osseointegration era. There are numerous designs, techniques, and clinical situations where implants improve the prognosis of both short- and long-term treatment. We have myriad grafting solutions to create the ideal recipient site for a graft and, eventually, the ideal site for placement of the implants. Yet, there are many areas that continue to demand answers. Sometimes the situation is one where clarification of techniques is necessary. As an educator, my role in the future is to consistently demand scrutiny of new ideas, materials, and devices. There should be no resting on our

laurels because the future continues to demand responsiveness today.

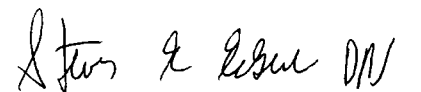
Considering this, one of the concerning events relates to the desire to consistently move treatment forward at blazing speeds. Examples of this are seen with great frequency. In this regard, the scientific dental literature continues to be one of the best sources of knowledge. Beyond the quality of knowledge, the rapidity with which it is disseminated is striking.

Over the last few years, *The International Journal of Oral & Maxillofacial Implants* has consistently worked to reduce the amount of time between acceptance of a scientific article and its publication. If it appears that articles are going to be delayed in publication, we can publish these articles online ahead of print. This is a process where the raw accepted manuscript or edited article is posted online a few months before it makes it into the print journal. By using electronic publication ahead of print, publishers can provide these articles with less delay.

Since this is a process that addresses the publication of the final article, the only thing that changes is the date of the final publication in an issue. There will be an online ahead of print publication date, and once the article is in a published issue, the publication date will be updated.

There is another system that exists, "preprint" servers, which are free online archives that will allow the distribution of unpublished manuscripts that are not peer-reviewed. If an author submits an article to a journal that does not use the peer review process, most traditional publishers will reject the article on the basis of double publication, an ethical violation. The authors' "preprinted" article would not be eligible for publication in Quintessence journals and many others. Moreover, factual errors may arise from misinterpretations of the information found in the preprint article. This will create a situation that is untenable.

I encourage you to look at the preprint repositories. Quintessence publications will not be able to publish any of these articles because the peer-reviewing process has not been and may never be completed. Without a doubt, this approach to publishing represents a new and different one. It takes a different path toward publication, but this new approach may not represent progress. Perhaps it is a situation where there is an effort to fix what currently isn't broken.

A handwritten signature in black ink, appearing to read "Steven E. Eckert DDS, MS".

Steven E. Eckert, DDS, MS
Editor-in-Chief