Evidence-based dentistry: Challenges and possibilities

The introduction of the concept of evidence-based dentistry (EBD)\(^1\) has dramatically changed the way clinicians manage the body of knowledge published on almost a daily basis. According to the American Dental Association, EBD is an approach to oral healthcare which integrates clinical expertise and the patient’s need and preferences to the best and most current scientific evidence.\(^2\) In general, the applicability of evidence-based practice in dentistry and related subspecialties such as oral pathology, oral medicine, and oral and maxillofacial surgery (OMFS) (which in many countries is also a medical specialty) also has been successfully advocated across the world, especially in well-resourced countries.\(^3\) However, maintaining a practice based on evidence poses three major issues for the dental practitioner, particularly for those based in primary care rather than the hospital setting.\(^1\)

1 | THE QUALITY OF WHAT HAS BEEN PUBLISHED IN THE LITERATURE

It is almost impossible for a clinician to identify, read, and evaluate published articles before implementing a new technique or changing his/her clinical decision making, but scientific evidence is crucial to helping sound clinical practice. Most clinical practice is based on the results of high-quality articles. The practitioner should be able to evaluate the methodological quality of an article and guarantee that it is unbiased. This may be easy for researchers and individuals involved in academia, but are oral medicine clinicians and pathologists able to do so? The literature has recognized that they are not. Historically, key skills, such as literature searching and critical appraisal have not been adequately taught to undergraduates.\(^4\) The clinician judgment of the evidence is crucial in deciding whether a specific therapy is reliable.\(^5\) Free of bias research should guide clinical decision making.\(^6\) Significant "summaries" of evidence-based practice may help to overcome some of these issues. Meta-analysis and systematic reviews appraise the methodological quality and provide evidence on a particular topic.\(^7,8\) Dental journals including JOPM have encouraged the publication of systematic reviews and meta-analysis.\(^9\)

2 | ACQUISITION OF SCHOLARLY INFORMATION

While individuals in university and hospital appointments may have easy access to publications across journals, very few clinicians in primary care have access to scientific literature.\(^10\) The advent of the non-subscription and open access journals has increased the readership, but the large body of unreliable publications freely available on the Internet that are often not peer reviewed is a matter of concern.\(^1\)

3 | THE LANGUAGE IN WHICH PAPERS ARE PUBLISHED

English dominates scientific communication.\(^11\) However, the use of English as the universal scientific language can cause issues for those whose English is not their first language.\(^12\) According to recent ranking published by an international group, 39 of 72 evaluated countries had a low to very low proficiency in English, including developing countries such as Brazil, Iran, Turkey and Russia (EF Education First, 2016).\(^13\) Clinicians in these and other countries may face difficulties in judging the value, methodology, outcomes, and transparency of studies due to language restrictions.\(^7\)

How can we practice EBD on a global basis with these major issues? It would seem that EBD is yet to be a reality among dental practitioners worldwide.\(^6\)

There are other issues faced by allied specialties to oral pathology and medicine including OMFS, and dental radiology. The scarcity of randomized clinical trials available in the literature and their restricted sample sizes show the difficulties faced by researchers in conducting high-quality trials with individuals affected by rare oral diseases.\(^14\) Additionally, some clinical trials are also discouraged due to ethical matters.\(^15\)

Some attempts have been made to overcome some of these issues. The Evidentista website was launched in 2006 with seed funding from the International Association for Dental Research and Fulbright Scholar Program. It provided two sections: training in EBD and a section of clinical questions and answers. While the former listed the main steps involved in EBD, the latter gave answers to common clinical questions in routine practice. It was possible to select languages other than English allowing others to access the information provided in the website.\(^16\) Unfortunately, the website is no longer available. During its 20th anniversary year, The Cochrane Collaboration also responded to the challenge to increase access to medical literature through the translation of Cochrane reviews into other languages.\(^11\) Currently, the Cochrane translation projects include 14 languages.\(^17\)

In-country initiatives have also assisted with this process of incorporating the EBD among practitioners and to provide access to international scientific journals to healthcare providers.\(^18\)

This editorial has aimed to identify the barriers that oral healthcare practitioners face in trying to adopt a more evidence-based philosophy and to suggest some ways forward. We acknowledge the
relevance and strongly encourage evidence-based practice, but rec- 
ognizing some of its shortcomings may be the first step toward mak-
ing EBD the rule, rather than the exception among practitioners 
worldwide.\(^{19}\)

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REFERENCES
