EDITORIAL

Journal of Orthodontics – addressing the needs of clinicians and academics?

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The appointment of a new Editor-in-Chief can be seen as a time for reflection about the past and looking toward the future. I believe that the *Journal of Orthodontics* has moved forward in a number of ways in the last few years to the benefit of both the readers and those who wish to publish in it. The introduction of online submissions has improved and speeded up the process of reviewing, providing feedback to authors and publishing manuscripts. This is a major consideration for authors, but it also helps the readers by ensuring that the results of research are disseminated quickly and the journal can react rapidly to new developments.

The *Journal of Orthodontics* has adopted new practices intended to improve reporting, promote transparency and help readers understand what the authors have done. These include the use of structured abstracts, as well as guidelines and checklists produced to standardize the reporting of randomized clinical trials (CONSORT) and meta-analysis of randomized clinical trials (QUOROM). I believe these have been useful for both readers and authors.

The quality of the refereeing is extremely important to reassure readers that articles have been properly considered before being published. The *Journal of Orthodontics* recognizes that many referees of scientific submissions are qualified and willing to comment on the relevance of a submission, the appropriateness of the design to the objectives of the study and whether or not the conclusions are justified by the results, but they are not necessarily knowledgeable enough about statistics to comment upon the statistical analysis. The journal now undertakes an additional review by a statistician for all scientific manuscripts. This ensures that the statistical methods are appropriate and that they have been correctly applied and interpreted. This has undoubtedly improved the quality of articles.

Journals are often criticized for failing to publish work that is of relevance to the practising clinician. Some studies seem too esoteric and obscure, others simply not applicable. The *Journal of Orthodontics* has published the results of several important clinical trials in the last few years, the results of which were of immediate clinical importance and we will continue to do so. However I

believe it is also important to continue publishing work that might not seem at the time to have much practical application. It is sobering to remember that some important discoveries and inventions appeared to have no use initially. An example of this is the laser, the theoretical basis of which was postulated by Einstein in 1917.[1] The first working version of a laser was made in 1960,[2] but at the time it was described as 'a solution looking for a problem'.[3] Nowadays the laser is an important component of many electrical items including bar code readers, CDs, DVDs and printers. Lasers have even been used in dentistry for the detection and removal of caries.

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Another criticism is that few articles produce a definitive answer. It is very frustrating for readers eager to apply an evidence-based approach to their clinical practice when yet another systematic review concludes that there is not a sufficient number of well-designed studies to recommend one course of action or material over any other. The notion that there is truth out there to be discovered is based on one particular approach to science often referred to as positivism and we must not forget that there are alternative ways of looking at the world. However this is not the place to debate these issues in full. Suffice it to say that a systematic review must be viewed as only one step in the evidence-based process. In many instances it will be the first step in defining the right questions we need answered. It is then the responsibility of those interested in carrying out research to respond to those questions. Indeed it has recently been suggested that systematic reviews might actually make the process of carrying out research simpler. It is currently considered unethical to carry out a trial with too few participants to allow detection of a true difference between interventions (or an intervention and a control) if one exists. Hence the insistence of ethics committees (and journal editors) that an *a priori* sample size calculation be carried out and reported. However, Guyatt *et al.*[4] argue that in the days of systematic reviews sample sizes no longer matter. What is important is that the results of studies can be combined to obtain an overall result. If this is the case then the question and the process by which we answer that question are both major considerations, so that studies are sufficiently similar that results can be combined.

It is argued that the highest scientific evidence comes from systematic reviews of randomized controlled trials and this is true for many healthcare interventions. However I believe that there are important questions out there waiting to be answered for which an RCT design may be inappropriate. This might be due to ethical issues, or there are occasions, for example when investigating attitudes, beliefs and human behaviour, when alternative approaches such as qualitative methods might be more suitable. I am keen to encourage researchers addressing these questions to submit papers for publication and will ensure they are reviewed by those with the correct skills.

Addressing the needs of both clinicians and academics in a journal is a difficult balance. Clinicians would like to see articles tackling problems related to their clinical practice. This is not necessarily contradictory to the needs of academics who wish to read and publish in the journal. Many academics are clinicians too. However it is important for everyone to view the wider picture. I hope that all readers will find something in the *Journal of Orthodontics* of interest in the future and that authors will consider the journal a place to publish their work. I reaffirm the statement that the *Journal of Orthodontics* 'aims to publish high quality, evidence-based, clinically orientated or clinically relevant original research papers which are of interest to orthodontists around the world.' We might get the balance wrong at times, but we will keep trying.

From the next issue (September 2008), Philip Benson will be Editor-in-Chief of the *Journal of Orthodontics*.

References

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