

## Editorial

# The Challenges of Scientific Publishing

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A forum for editors, associate editors, publishers and others interested in publishing scientific literature was held in Seattle on 20 March 2013, just before the opening of the annual meeting of the International Association for Dental Research (IADR). The forum considered the challenges for publishing scientific literature over the next 20 years and the meeting took the form of a panel discussion with questions from the audience. The panellists were editors Professor Will Giannobile (*Journal of Dental Research*), Professor Rex Holland (*Archives of Oral Biology*), Dr Stephen Hancocks (*British Dental Journal*) and Professor Peter Robinson (Oral Health section of *Biomedical Central*). The forum was chaired by Professor Kenneth Eaton (editor of *Oral Health and Dental Management*) and over 100 delegates attended.

Each panel member had suggested five topics for discussion. Some related to current difficulties whereas others looked to the future. Those topics included:

- Open access publishing
- Increases in the number of papers
- Greater spread in the quality of manuscripts
- Ethic concerns including research integrity, plagiarism and falsification
- The standardisation of methods and research protocols
- Stronger peer review
- The adoption of international codes of publishing standards
- The challenges of secondary publishing
- Electronic discussion of recently published studies.
- The use of video in methods sections
- Clinical trial registration

In a free-ranging discussion the forum focussed on a smaller number of key topics.

There was agreement that many more manuscripts, than five years ago, were being submitted to journals, especially those with a Medline listing. In some respects this is a good thing. A growth in scientific publishing and the need to publish for academic advancement is a sign of the growth of science. It represents the growth of a model of human endeavour which readers of this journal should welcome.

Inevitably there are problems associated with this growth. Current difficulties recognised at the forum included: the poor quality of many papers, difficulty in recruiting peer reviewers and an apparent rise in the occurrence of plagiarism.

One aspect of the increasing number of manuscripts that is particularly pertinent to *CDH* is the very context-specific nature of manuscripts within our area of interest. Whilst authors may have data that are very important within their own service or country, the relevance of those data to other readers can be limited. One solution may be to publish in online journals, but authors still need to think about the generalisability of their findings.

Plagiarism may arise because of the greater pressure on academic staff to publish. In some cases authors may not be aware of ethical standards and do not realise that they should not reproduce the words of others without citing their origin. In other cases they do not take adequate care. Some responsibility lies with their research leaders, as Deans, Heads of Department or Professors who are expected to set standards and ensure that they are met. One aspect of this problem appears to be cultural. In some countries it is common practice to copy material written by others as a mark of respect. Such authors are often uncritical of the material. There is clearly a large task for those of us who are educators, editors and simple ambassadors of science to make international standards consistent.

The problem with insufficient suitable and available peer reviewers also has a number of causes. The explosion in the number of manuscripts submitted to journals contributes. In addition, reviewers generally gain no acknowledgement for refereeing, either in terms of academic recognition or pay. In order to do so journals would have to charge those who submitted papers. One common standard was that authors, who had manuscripts accepted by a journal, should expect to review a paper for that journal to an approved standard. Journal editors could also award continuing professional development certificates or points for acceptable reviews.

Within the scope of epidemiology and community and public health dentistry, it was recognised that guidelines such as STROBE (von Elm *et al.*, 2007), PRISMA

(Moher *et al.*, 2009) and CONSORT (Schulz *et al.*, 2010) have improved the quality of some manuscripts. Similarly, although the first wave of systematic reviews has often found insufficient primary data from which to draw conclusions, they have provided detailed critiques of areas of enquiry and the methods employed in the original studies. Those insights have guided subsequent authors, which has again increased quality.

For the future, much greater use of information technology is to be expected, with most papers published only in whatever electronic format then exists. Manuscripts might include video sequences to explain the methods used. Automatic screening for plagiarism is already in use by some journals. Continued efforts to ensure that manuscripts follow the journal's guidelines for submission also seem inevitable.

At *Community Dental Health* the time taken to identify and contact busy reviewers, secure their support or seek alternatives, allow time for them to consider the paper and report on it now constitutes the longest part of the time taken from submission to online publication. This review period can take longer than all of the other stages towards publication. Despite these difficulties, acceptance decisions are generally being made within four months; a third are made within two months. The Editorial Board has expedited publication by using a core set of reviewers and by speeding up other stages

of the process. The average time from submission of a paper to publication in print in this journal is now under nine months and electronic publication occurs a month or more earlier

The Editorial Board of *CDH* is constantly developing its arrangements for receiving, reviewing, selecting and editing papers. It strives to meet changing pressures on the journal and recognises the need to move at a pace which our authors and subscribers can sustain.

## References

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