

Reviewing articles

for peer reviewed journals

The first article in a two-part series looking at the peer review process, with particular emphasis on the international journal of the Society and College of Radiographers, *Radiography*. This month, background and processes. By Peter Hogg, H Brian Bentley, Julia Parrott, Jennifer-Jane Bridges, Peter Hoskins and Stuart Mackay.

Background

Journals serve many purposes within a professional/scientific community. At a basic level, they act as a register of who did what, who they did it with, what they found and when they did it. Importantly, authors are acknowledged as originators of work, and this can be quite important for academic and scientific staff. Similarly, acknowledgement of ownership can be important when the (published) article leads to activities that generate money.

Peer reviewed journals serve an additional purpose, that of quality verification. Prior

to any work being published within a peer reviewed journal, it would have been scrutinised by 'peers' for content appropriateness, rigour, standard of English, scientific merit, clinical merit, and so on. As such, there is a level of recognition within the professional/scientific community that work published in a peer reviewed journal must be of a reasonable standard. It serves as a dissemination vehicle through which (quality) work is distributed and finally it acts as an archive of the published work.

Peer review

Peer review is the cornerstone of quality maintenance of a journal. Generally speaking, articles of a suitable standard that fall within the aims and scope of the journal will be accepted for publication, those that do not will be rejected.

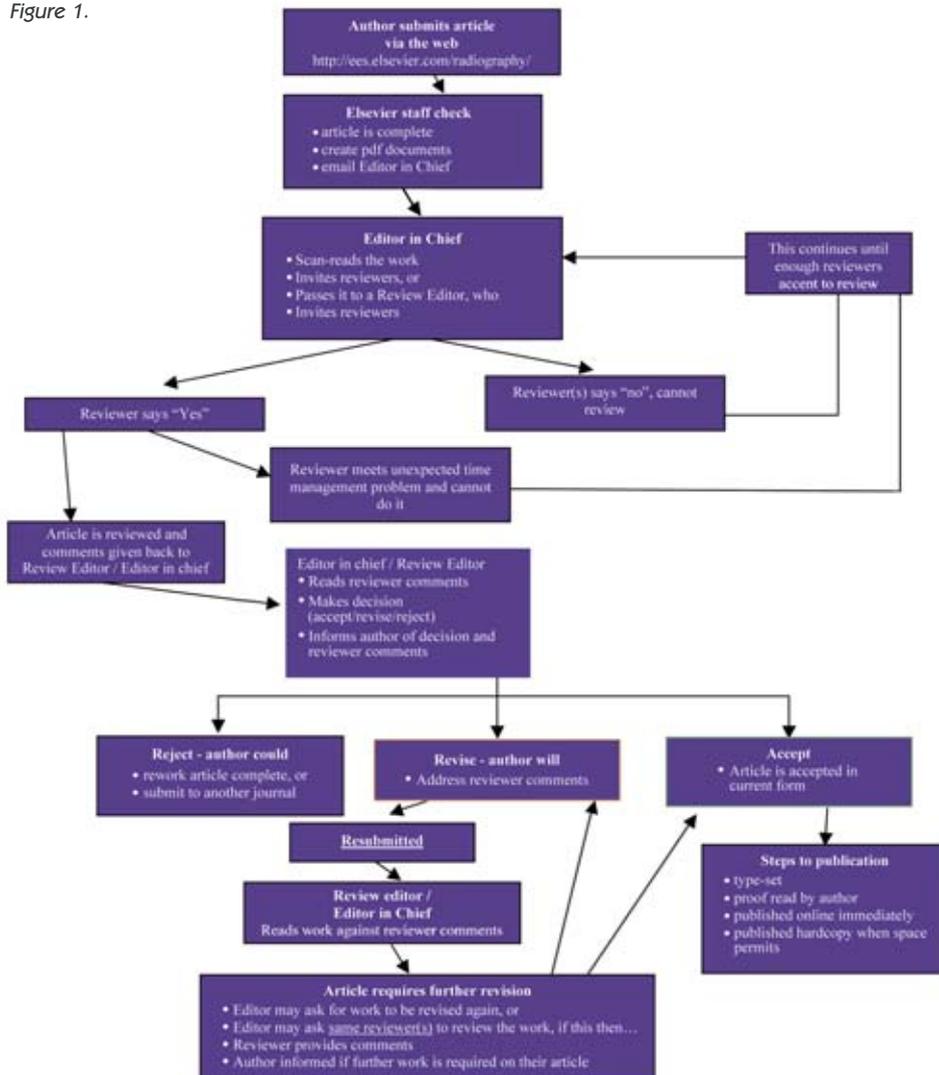
There are various approaches to peer reviewing: single blind, where the identity of reviewers is hidden from author; double blind, where author and reviewer identities are hidden; and open, where author and reviewer identities are known to all. There are pros and cons to each option but, on balance, the *Radiography* Editorial Board feels that the complete anonymity of the double blind mechanism is fair and unbiased.

Submitting to *Radiography*

Figure 1 outlines what happens to an article from submission to publication or rejection. As can be seen, there can be a problem if reviewers do not respond to the request to review, or there is a delay in responding – alternative reviewers may need to be appointed.

When the decision has been made, if, for whatever reason, the article is rejected outright, then it will be removed from the editor's work schedule. If the work needs to be reworked ('revised', a common outcome), then advice is sent to the author about what needs to be done before it is re-submitted. The article will then usually go through the peer review process again.

Figure 1.



Reviewer performance

Radiography aims to publish the highest quality material, both clinical and scientific, on all aspects of diagnostic imaging and radiation therapy/oncology. As such, it includes research findings, technical evaluations, review articles and, in addition, it provides a forum for the exchange of information and views on radiography issues. Articles do not need to be Nobel Prize winning.

Radiography has become extremely successful. Currently, almost 21,000 copies are circulated within 73 countries. A few thousand of these are electronic (web-based), provided within institutions (such as universities), allowing for multiple reader access. In 2006, via www.ScienceDirect.com, there were almost 70,000 full article downloads, nearly 100 articles submitted for publication, and 330 reviewers invited to assess the quality of these articles. This is very impressive for a quarterly journal.

Currently, we have 380 reviewers. They come from diverse backgrounds, including clinical sciences, medicine, education, psychology, surgery, mathematics and radiography/radiotherapy. Given that *Radiography* is a very widely distributed and well-read journal, it becomes evident that its reviewers play a pivotal role in upholding the quality of the body of evidence upon which radiography is practiced internationally. Not only do errors which escape the review process reflect poorly on the good-standing of the journal, the reviewers and the authors, such errors could also impact adversely upon clinical practice and patient care.

On analysing the performance of *Radiography's* reviewers, we note the following: they take an average of 14.5 days to review an article; most articles that are reviewed require one revision (occasionally some have to go through a third or fourth revision); the days taken for reviewers to respond to an invitation to review an article is reducing. This is excellent in terms of reviewer time performance.

Reviewers' roles

The most important role that a reviewer plays is to provide objective advice to editors about whether an article is suitable or unsuitable for publication. As part of this role, they help with the detection of plagiarism and falsified information. In addition, reviewers act as ambassadors for the journal and, because of the nature of the work in which they are engaged, they maintain confidentiality about articles they have reviewed. Confidentiality is paramount,

because it would be unfair for them to publicly judge work (and authors) that is not yet within the public domain. Additionally, if the work is innovative, it would give other researchers an unfair insight into quite confidential material.

The role of the editor

Radiography has eight editors, comprising an editor in chief, three review editors, three special issue guest editors and one book review editor. They play a critical role in the peer review process and take ultimate responsibility for the quality of the journal and its articles. In this regard, they personally decide whether an article is to be accepted, revised or rejected.

The editor will normally ask two reviewers to critique the work. They will be given a deadline and sent a reminder if this is missed. If the reminder is not responded to, the editor will terminate the request and select another reviewer.

The reviewer's advice on suitability for publication is sent back to the editor, who will make an informed decision and articulate this to the author. It is common for the editor to forward reviewer comments about the article, sometimes in an edited fashion, to the author. The purpose of this feedback is to either help the author improve their article ready for resubmission, or to explain why their article has been rejected.

From time to time, reviewers may give completely different opinions on an article. Reaching a decision in these circumstances can be difficult. The editor may need to invite a further reviewer to help, or the editor may also become a reviewer.

Why become a reviewer?

There are many reasons why people wish to become a journal reviewer, and none of them involve money, as they are not paid for their work.

However, reviewing articles can count towards continual professional development (CPD). Some professional bodies award specific credit values for this activity, or it is ideal for portfolio evidence. Some people feel duty-bound to help colleagues, and in the case of *Radiography*, it is clear that many of our clinical, medical and scientific colleagues do this to help our profession develop further.

Some want to be associated with a particular journal, perhaps because of the community associated with it or the kudos that it brings. Reviewers are often authors/potential authors and rely on other reviewers

and, as such, there can be a close association between the two. Some seek recognition, because it will appear on CVs and, not surprisingly, some use being a reviewer as an opportunity to update personal research knowledge (reviewers obviously see research before anybody else). Finally, and importantly, some see the invitation to be a reviewer as an honour.

Matching reviewers to articles

Editors will decide who to select, bearing in mind that they:

- ◆ Are not a co-author
- ◆ Are not employed by the same institution as the author
- ◆ Have a good track record of providing helpful and constructive comments on articles
- ◆ Return their opinion and comments promptly/within agreed timeframes.

Importantly, the topic of the article must also be consistent with the reviewer's interest areas. On occasion, the author may request that certain people are not selected because of a conflict of interest. They may also nominate people to review their article, particularly in niche research areas. This only happens occasionally in *Radiography*, but in other journals is a frequent occurrence.

Deciding to review or not

Reviewers often read the entire article before committing to it – abstracts can be misleading and give a false impression and so are not a good indicator. Reviewers should not be afraid to say 'no' if the article is not their subject area, or if there is a conflict of interest.

They must also decide whether they have time to do it within the agreed timescale. It can take three to four hours to review an article. Some will do it all in one go, others read it in 20-30 minutes and then go back for a more critical read. It is important not to agree and then change your mind, because a delay in saying 'no' can slow down the reviewing process. Delays create frustration for authors who are keen to read comments about their article and see their work in the final published format.

Can an author choose not to heed reviewer advice?

Yes, but they should indicate why they have chosen not to respond to the advice. Generally speaking, the author is expected to pay attention to the suggestions. At times, however, there may be legitimate differences of opinion. The author is expected, on article revision, to include a covering letter

to explain how they have addressed the reviewer points. This letter tends to be made available to the reviewer if they are asked to review the paper again.

How to become a reviewer

There is no one definitive set of criteria, but below are some pointers that would be taken into account when selecting one for *Radiography*. An editor would look at reviewers as a whole and not as individuals, in order to address the range of skills and abilities required for the aims and scope of the journal.

Ideally, a reviewer would be an established expert in their field, and possibly have recently published an article in a peer reviewed journal, so will be familiar with the steps involved. Reviewer selection is not always dependent upon qualifications, as experience in certain areas can count for a lot. Ideal attributes are to:

- ◆ Have published work in peer reviewer forums
- ◆ Have a particular area of expertise
- ◆ Be able to provide analytical and constructive comments upon work or be willing to develop these skills
- ◆ Be willing to review up to six articles a year
- ◆ Maintain confidentiality
- ◆ Be able to use the internet and a word processor
- ◆ Have web access and an email account, accessing this regularly (eg, two to three times per week)

If you are keen to become a reviewer for *Radiography*, please email RadiographyJournal@elsevier.com with your CV.

About the Authors

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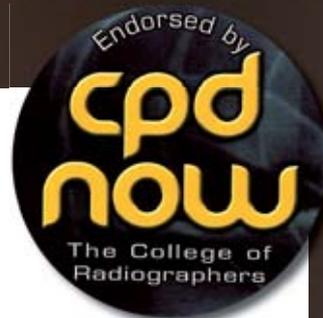
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How to use this article for CPD



This article gives a useful and informative overview of the processes of peer review and the practicalities involved in the reviewing of articles submitted for publication in *Radiography*. An understanding of these processes can help your CPD in several ways:

- ◆ A fuller understanding of the term 'peer review' and of the processes involved can enable you to appreciate the value of the work put into a peer review article and the rigour with which such work is assessed. This supports the credibility of the article which is particularly important if you are considering the article and the research described as evidence to support your practice. However, you should also exercise great caution here – it is vital that you take a critical approach to the article in question since none of the above guarantees that the author's findings are unquestionably accurate or that his findings and conclusions are valid or relevant to you and your practice. You should read *How to critique an article: a beginner's guide*, in last month's *Synergy* for a fuller discussion of this.
- ◆ An understanding of these processes, daunting though they may seem, might encourage you to write for peer review. Writing for any journal is excellent CPD and support is available.
- ◆ A clearer understanding of peer review might encourage you to read more peer reviewed material and the research you learn about in this way may well have implications for your practice. If somebody has published an article that questions the techniques you use or the approach you take, then you should review your practice in the light of this. Again, it is important that you take a critical approach to the publication in question when you do this. This may, of course, be a group or departmental activity, although for more specialised advanced and consultant practitioners, this may require an individual approach.

If you were recording your reading of, and reflection on, this article in **CPD Now**, you might complete the 'My Evidence' template as follows:

Summary of learning: I read the article (put in reference here – you might wish to reference using a standard system – find out about this if you're not sure how to). This gave me an overview of the processes of peer review for professional publication and in particular the way in which these processes are undertaken by my professional journal, *Radiography*.

Practice outcomes: Although there are, as yet, no concrete outcomes with regard to my practice, this article has demonstrated for me the importance of peer review and its role in the publication of research findings. It has also helped me to understand the value of research and its dissemination and the rigorous processes that this entails, as well as the importance of questioning and perhaps modifying or changing my practice in the light of such findings. This article has certainly made me more aware of my professional responsibility to ensure that I keep abreast of current publications in my profession.

Further learning needs: I would like to know more about the mechanisms used by peer reviewers and will use next month's follow-up article for this. I will also check the contents of my professional body's quarterly peer review journal regularly to see if there is any material in there that might have implications for my practice.

CPD Now outcomes that may be covered by your work include:

- 02 Knowledge base
- 06 Manage knowledge and information
- 17 Widening participation in education
- 18 Integration of education and employment
- 19 Evidence to support practice

Sean Kelly, CPD Officer

Next month... The team will explain the process behind reviewing an article for a journal.