

JAMA

Biomedical Peer Review (July 15 1998)

The following is a summary of a selection of the contents of the July supplement published last year. This included papers on authorship, the quality of peer review, conflict of interest, bias, editors and their journals, and solutions for when things go wrong.

Overview

In a paper on freedom and responsibility in medical publication, Drummond Rennie, deputy editor of *JAMA*, outlines four systems, which, he believes, would promote greater openness and responsibility, and which would enhance the ethical climate of the publication of research.

These comprise the:

- abolition of authorship in favour of contributorship, with the work done by each of the contributors listed for all readers to see
- change from anonymised to open peer review
- assumption of full responsibility by scientists for the aftercare (updating) of their papers
- enablement of readers to assume the responsibilities of reviewers as a result

Dr Rennie suggests that keeping the names of the reviewers from the authors is a "perfect example of privilege and power," and that it reflects a lack of accountability to the fellow scientist who wrote the paper. In any event, he says, in up to half the cases it is impossible to successfully mask the identity of the reviewer.

There are glorious paradoxes in a system that permits authors' names to be disclosed to the reviewer, thereby behaving as if anonymity does not matter, and then preventing authors from knowing the names of reviewers, and so behaving as if anonymity mattered very much indeed.

"Justice is ill served by secrecy," he writes, and suggests that openness would strengthen the link between power and accountability, because when reviewers know their names will appear at the bottom of their reviews, they are likely to do much more constructive and thorough assessments.

Dr Rennie goes on to suggest that postpublication peer review will enhance accountability for the writers. In this way published articles could be altered in response to criticism from readers who then act as potential reviewers themselves. This should be more feasible, as electronic publication becomes more widespread, he suggests, and cites the *Medical Journal of Australia* which is experimenting with posting articles on the Web for criticism from the entire readership,

and subsequent revision, before they are accepted and published.

For responsibilities to be openly shared in scientific and medical publishing, contends Dr Rennie, contributors, editors, reviewers, and readers must be prepared to be held accountable (280:300–2).

Other steps towards greater accountability are discussed in a study on the disclosure of financial interest, which the authors believe, best serves the scientific community and the public (280:225–6), and another on the appointment of a journal ombudsperson, a practice established by *The Lancet* in 1996. Twenty complaints were received in the first 18 months, 11 of which were upheld, and these did not concern editorial decisions which were felt to be outside the ombudsperson's remit. Benefits extend well beyond the issue of complaints, drawing an editor's attention to the importance of efficient and courteous journal processes, the author concludes (280:298–9).

Authorship

Several papers tackle the thorny issue of authorship, including one from the ombuds office at Harvard Medical School. It shows that author disputes have more than quadrupled from 1991–2 to 1996–7. The study concludes that: "Institutions should increase enforcement of published authorship standards and place more emphasis on managerial skills for laboratory and research department heads." (280:216–7).

A Dutch study points out that the criteria for authorship are poorly known, even if most authors seem to be complying with the terms set out by the International Committee of Medical Journal Editors (Vancouver Group) (280:217–18). Yet a further paper points to a worrying increase in the number of authors given for any study, with a significant rise of authorship among professors and department chairpersons, (280:219–21) while another shows how a substantial proportion of peer reviewed medical journals show clear evidence of honorary or ghost authorship, particularly for review articles (280:222–4).

Peer review process

Several studies address the effect of open and closed peer review. One study shows that blinding reviewers to author identity or revealing the reviewer's identity to a co-reviewer made no significant difference to review quality, reviewers' recommendations, or time taken to review (280:234–7), while another declares that the optimal time to peer review a manuscript for a general medical journal seems to be a maximum of three hours. (280:231–3). A further study points out

that reviewers who did not know authors' identities were less likely to recommend rejection than those who did know. But requiring them to sign their reports did not improve the detection rate of errors (280:237–40).

Publication bias

Research that produces non-significant results is likely to take much longer to be published, or may not even be published at all, shows a study on passive smoking data (280:250–3). The average time to publication for non-significant results was five years compared with three years for significant findings. Positive outcome also seems to affect the acceptance of research abstracts at scientific meetings and their subsequent publication.

Study design and quality did not appear to be the governing criteria (280:254–7).

Retraction

A study of MEDline articles from 1966 to 1997 showed that 235 articles had been retracted. Error was the reason in 91 retractions; inability to replicate the results in 38; misconduct in 86; and no clear reason in 20. Of these 235, 190 were retracted by some or all of the authors; 45 by another organisation. However the 235 articles were subsequently cited 2034 times after the retraction notice, and in only 19 of 299 of these subsequent citations was any mention made that the article had been retracted. The remaining 280 treated the retracted article as valid research (280:296–7).