

Peer Review in Biomedical Publication: Fourth International Congress, 14-16 September 2001, Barcelona

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Despite the terrorist attacks on the United States on 11 September, the international peer-review congress in Barcelona went on. Of 410 registrants from 47 countries (many from the United States), 275 were able to attend the excellent program, organized by the *Journal of the American Medical Association (JAMA)* and the BMJ Publishing Group. Despite logistical problems, the congress committee, with Drummond Rennie and Annette Flanagin as congress director and coordinator, revised the schedule, enabling almost all 41 oral presentations and the appearance of 58 posters for which abstracts had been accepted.

New research on authorship and contributorship, ethical issues, quality standards, and e-journals—and of course research on peer review, peer-review policies, communication to readers, editorial independence, confidentiality in peer review, and postpublication issues—it was all there. It was clear that, naturally, misinformation and misinterpretation still exist (authors do not fulfill the criteria of the International Committee of Medical Journal Editors, scatterplots use fitted lines beyond the data, and so on). There is room for improvement by authors, peer reviewers, and journal editors.

Authorship

One issue addressed at the congress was honorary and ghost authorship. In 1998 it was found that 26% of review articles in peer-reviewed medical journals had evidence of honorary authorship (persons

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who did not contribute to the paper were listed as authors) and 10% had evidence of ghost authorship (actual authors were not mentioned in the paper).¹ In Barcelona, Graham Mowatt and Jeremy M Grimshaw, of the Health Services Research Unit, University of Aberdeen, Scotland, presented findings regarding ghost and honorary authorship in Cochrane Reviews (systematic reviews, prepared by the Cochrane Collaboration, of the effects of health-care interventions; see www.cochrane.org). They found that the prevalence of ghost authorship was similar to that reported for review articles in peer-reviewed medical journals. However, the prevalence of honorary authorship, 39%, exceeded that in the earlier study. Thus, the Cochrane Collaboration and Cochrane Review Groups need to develop mechanisms to address these issues. A solution put forward by Rennie and JAMA is to define the exact contributions of each author and publish them with the article. Maybe contributorship, instead of authorship, would diminish the problem of ghost and honorary authors.

Corporate authorship (listing of authors by research-group names) produces problems in current systems of indexing and citation. Kay Dickersin and colleagues, of Brown University and the University of Maryland, examined how reports of controlled trials with corporate authorship were indexed, and they counted citations of reports with corporate authors in bibliographic databases. They concluded that although corporate authorship allows investigators to share credit, indexing systems are not adapted to this approach. It may result in confusion and fewer citations. Modification of indexing systems to list corporate authors in the author field might help to correct the problem.

Peer Review

The main issue at the congress was whether the peer-review system helps to improve the quality of research reports. Phil Alderson, Mike Clarke, and Iain Chalmers, of the UK Cochrane Centre, estimated the effect of editorial peer review by systematically reviewing prospective and retrospective studies on the topic. They concluded that there was only little and scattered empirical evidence that peer review affects importance, relevance, usefulness, methodologic soundness, ethical soundness, completeness, and accuracy of submissions to journals. Tom Jefferson, Elizabeth Wager, and Frank Davidoff—of the UK Cochrane Centre, GlaxoSmithKline, and *Annals of Internal Medicine*, respectively—tried to define quality measures for testing the effects of editorial peer review as performed by biomedical journals. It appeared that published studies had concentrated on surrogate measures, such as agreement between reviewers or subjective ratings of the quality of submissions. None directly assessed the effects of peer review on health-care systems, health status, or the advancement of scientific knowledge. Until appropriate measures are developed, there will be no evidence that supports the use of editorial peer review as a mechanism to ensure quality of biomedical research (which, of course, does not mean that journals can abolish peer review).

The validity of the statistical methods and logic used in research papers and the assessment of it by medical journals could be improved by consistently obtained statistical expertise, as Douglas G Altman, of the ICRF/NHS Centre for Statistics in Medicine, Oxford, UK, emphasized (not for the first time).² Altman advised editors to be tough on the quality of research papers and to be more lenient on process

Peer Review continued

issues, making life easier for authors.

Open peer review (in which the reviewer's identity is known to the author) was promoted because it could help track conflicts of interest. Many journals have yet to develop a policy on this, because they have to stay friends with their peer reviewers, who also are authors. Michael Berkwits, of the University of Pennsylvania, and Davidoff did a study of reviewers and found that most of them did not favor publishing manuscript-specific acknowledgments of reviewers. However, half the reviewers would favor the idea if it were linked to recognition of their peer-review activities at their institutions. According to Richard Smith of the *BMJ*, surveys assessing attitudes are often poorly predictive of actual behavior: When peer review is open, most reviewers do not shy away from reviewing.

Conflicts of Interest

Disclosure of financial conflict of interest in published research is also not regular practice everywhere. Anu R Gupta and colleagues, of the Yale University School of Medicine, revealed that even when sources of study support and individual authors' conflicts of interest are disclosed, description of the type and degree of involvement of the supporting agency, as specified by the Uniform Requirements for Manuscripts Submitted to Biomedical

Journals (www.icmje.org), is not routinely published. Disclosure of conflict of interest seems to work only when journals demand that authors explicitly put a cross in a box to indicate whether they have or do not have a conflict of interest.

Richard Horton, of *Lancet*, presented results of a study on the opinions of authors about their own studies. He found that contributors' opinions are not accurately represented by the views expressed in their research papers. Moreover, the discussion sections did not contain all six topics that should be there: key findings, strengths, weaknesses, interpretation within the totality of evidence, implications, and future research. He concluded that structuring a discussion section along those lines and incorporating the various opinions of scientists whose work is being reported could improve the quality of research papers.

Resources

Information was presented about two organizations intended to help editors fulfill their responsibilities. The Committee on Publication Ethics was founded in 1997 as a response to growing anxiety about the moral integrity of authors submitting studies to medical journals. This informal group of editors aims to provide advice on cases brought up by editors, to publish an

annual report describing the cases it has considered (www.publicationethics.org.uk), to draft guidelines on pertinent issues, to promote research (audit) into publication ethics, and to consider offering teaching and training. The World Association of Medical Editors was founded in 1995 to promote cooperation and communication between decision-making medical editors. Its Web site (www.wame.org) states the responsibility of medical-journal editors as follows: "to ensure that reports of medical research provide valid information in a form that is readily accessible by the researchers, medical practitioners and others who need it."

This congress was another step in the right direction. Abstracts of papers are available on the Peer Review Congress Web site (www.jama-peer.org). The best papers presented at the conference will be published in *JAMA*. 

References

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