

## Editors Should Be Marketers, Not Guardians, of the Scientific Record

The scientific publishing process of today is inappropriate and inefficient and lacks the checks and balances required for a good scientific record.

The power of editors to determine what goes into the scientific record and what does not is inappropriate. Editors, who typically cover a multitude of subfields, are less knowledgeable than the best scientists in each subfield.

The usual reliance on peer review after an initial step of editorial review slows down the communication of scientific findings substantially and sometimes prevents it. According to Ray, Berkwits, and Davidoff,<sup>1</sup> it takes 273 days from submission to publication of a manuscript in *Annals of Internal Medicine*, of which 168 days are spent in the referee process. Once manuscripts are rejected, two thirds are published elsewhere 1.5-2.5 years after the date of rejection. The publishing process prevents one third of the rejected manuscripts from ever reaching the eyes of other scientists.

Not only is peer review slow, but it seems not to be accomplishing what editors need; the quality enhancement from peer review is truly minimal, as reported by Goodman, Berlin, Fletcher, and Fletcher.<sup>2</sup> Of 36 methodologic and presentational dimensions analyzed, only four showed statistically significant improvements after peer review: discussion of limitations, acknowledgment and justification of generalizations, appropriateness of the strength or tone of the conclusions, and use of confidence intervals; all but the last have little to do with making sure the reported results were robust.

There are no checks on slow, dumb, or politically motivated scientist referees. But beyond that, I, and I presume many other scientists, trust very few scientist colleagues to censor our reading. The intersection of trusted referees and the specialty of a particular manuscript they may be asked to review makes for a very small number. And even the best scientists are not necessarily good enough to determine what should be in the scientific record (remember that Einstein never got the Nobel for the theory of relativity).

Thanks to the recent advances in making available large amounts of data over the Internet, we need to undertake an important change in publishing: Editors should move away from their role as guardians of the scientific record toward being selective marketers of articles they believe are of interest to their read-

ers. This is how I see an acceptable process:

A scientific manuscript would be deposited into a unique Internet-based Scientific Record Keeper (SRK), which accepts anything it gets and adds a time stamp to it. The SRK would allow for anyone to search and read it, and would also allow for anyone to add named or anonymous comments. The SRK is instantaneous: As soon as a manuscript is deposited, its information can be used by anyone in the world. Researchers should be able to enter a set of criteria for when they would like to be notified about new deposits.

(Today's preprint servers are not Scientific Record Keepers in two important respects: They are not unique, and almost no one uses them.)

The bulky SRK would be continuously monitored by scientific journal editors and their staffs, who would select what they deem is the most valuable information for their readers. One or more testers, who are paid and supervised by a journal and whose only interest is in enhancing the stature of the journal, would review the selected manuscripts. After their approval, the editors would put out bids to the article authors, who could then choose which journal to publish their manuscript in. Once an agreement was reached, the editor would market the manuscript to readers as well as possible. This might include presenting the manuscript in as good a light as possible (easy to read, nice graphics, and so on), putting out press releases, and other marketing tactics. An electronic version of the journal that allows for anyone to add named or anonymous comments would serve as a check on the creativity of the editor's marketing tactics.

What do you think?

### References

1. Ray J, Berkwits M, Davidoff F. The fate of manuscripts rejected by a general medical journal. *Am J Med* 2000;109:131-5.
2. Goodman SN, Berlin J, Fletcher SW, Fletcher RH. Manuscript quality before and after peer review and editing at *Annals of Internal Medicine*. *Ann Intern Med* 1994;121:11-21. ([www.acponline.org/journals/annals/01jul94/manuscript.htm](http://www.acponline.org/journals/annals/01jul94/manuscript.htm))  
(Author's note: This is a very important paper and apparently unique in its field. Curiously, these authors fell victim to two of the four dimensions found to be improved by peer review: The results section of the abstract tells the reader that "33 of the 34 items changed in the direction of improvement"; one has to dig deep into the text to find that only "four items showed statistically significant improvements.")