What Do We Know about Editorial Decision Making?

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Speakers:
Drummond Rennie
Journal of the American
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San Francisco, California

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This session focused on research about how editors make decisions.

The first speaker was Drummond Rennie, deputy editor of the Journal of the American Medical Association (JAMA) and organizer of the International Congresses on Peer Review and Biomedical Publication (held at 4-year intervals since 1989). Rennie discussed problems in the editorial decision-making process and summarized research, led by Kay Dickersin, of Johns Hopkins University, that he has helped to carry out on how editors make decisions.

Rennie said that little research has focused on the "cognitive processes used to reach decisions". Among examples he provided of issues that have not been researched are how journals detect and correct problems in research papers and the kinds of problems they tolerate in these papers. He said that evaluating peer review as one would a diagnostic test of sound research was "exceedingly difficult" because a "gold standard" was lacking, and attempts to define the operating characteristics of this test appeared futile.

Rennie described two studies in which he was involved that evaluated editorial decisions. One showed that JAMA was not biased toward publishing manuscripts with positive results. The other investigated what editors discuss during editorial meetings at JAMA by classifying words and phrases used in editorial discussions. The study found that aspects of manuscripts that were discussed were related mainly to science, writing, and journalism (for example, study design, clarity of presentation, and expected public response to the research, respectively).

Describing some of the editorial decisions of John Maddox, former editor of Nature, as an example, Rennie concluded by stressing that besides evaluating the editorial decision-making process, editors have a responsibility to publish material that is "way outside [the box] to make readers think".

The second speaker, Kirby Lee, focused on a large, prospective cohort study that he carried out with Elizabeth Boyd and Lisa Bero to understand the editorial process at three biomedical journals—Annals of Internal Medicine, BMJ, and The Lancet. The purpose of the study was to identify criteria for manuscript evaluation, predictors of publication, and evidence of publication bias (specifically, a tendency of journals to publish studies that had positive results). For each journal, the researchers noted characteristics of the editorial meetings (for example, number of editors and frequency of meetings) and of the peer-review process (for example, number of peer reviewers and whether the identities of authors and reviewers were disclosed to each other). The researchers used qualitative methods (for example, interviews with editors) and quantitative methods (for example, regression models to identify predictors of publication).

The researchers found that editors used novelty, clinical impact, methodological soundness, and reader appeal to evaluate studies. Editors tended to prefer papers that reported research that used randomized trial designs, that stated the source of their funding, and whose corresponding authors were in the same country as the journal. They were not biased, however, toward publishing studies that had statistically significant results.

The last speaker, Ellen Weber, editorial board member and reviewer for the Annals of Emergency Medicine, discussed the role of peer review in the editorial process. Topics discussed included the use of a "reviewer quality score" to evaluate reviews, the absence of definitive evidence on whether concealing the identity of reviewers or authors affects the quality of reviews, and the characteristics of "good reviewers" (for example, one study found that the only predictors of good reviewers were age under 40 years and affiliation with top academic institutions or university hospitals). On the basis of studies conducted thus far, Weber said that it is unclear how much peer reviewers influence editorial decisions. She speculated that peer review may serve as a source of "reassurance" for editors faced with the decision to reject a manuscript. She concluded by stressing the need to evaluate the usefulness of the "arduous" peer-review process and suggested subjects for future study, such as variations in editors' use of reviewers.