

## How much editing does a manuscript need?

Editors at a recent meeting of the Council of Biology Editors (CBE) enjoyed telling each other stories about difficult jobs they had done or unusual mistakes they or their colleagues had made. Surprisingly often they talked of what is called — rather clumsily — heavy editing. The editors seemed to be more concerned about doing too much editing than doing too little, perhaps because admitting to overdoing a job is an indirect way of claiming competence, but more likely because the goal of a good editor is to do as little editing as possible.

Heavy editing can cause stress for editor and author. The more the manuscript is edited the more it is changed, and the more it is changed the more likely the author is to challenge the editing with the age-old cry "My meaning has been changed!" Specific points can usually be cleared up by negotiation over the telephone, but occasionally publication is delayed or the paper may even be withdrawn because of fundamental disagreements between the author and the editor.

The governing principle of *CMAJ's* editing is that the vocabulary and reasoning of the published article must be clear to the general medical reader. Respondents to recent surveys of *CMAJ's* readers spend an average of about 45 minutes reading each issue. Given the wide variety of articles they encounter, these physician readers must spend most of this time reading outside their fields of specialty or major interest. When they do this they become "general medical readers".

As our editors read each sentence

of a manuscript, they have to stand in for these readers, deciding whether such expressions as "the patient appeared toxic", "broad dosing interval", "health care service delivery", "Canadian context", "a bag of blood", "light chains", "soft neurologic signs", "colloid and crystalloid"\* and thousands of others have been correctly used and are adequately explained in the text. If not, considerable care must go into improving the author's choice of words.

*CMAJ's* editors, like those of the other scientific journals represented at the CBE meeting, have concerns beyond making the scientific content clear to the reader: they take pride in having their names on the masthead of a journal that is written in good English. Some manuscripts require a great deal of modification to meet this standard. Even if the English is excellent, however, editors must impose consistency or "house style" in spelling, punctuation, headings, references, figure legends, setup of tables and other details.

A manuscript is edited in several stages at *CMAJ*. In our letter that requests revisions based on the reviewers' critiques we often ask for further revisions that will make subsequent editing easier. The scientific editorial staff check the accepted manuscript for clarity, flow of thought, agreement between the tables and text, and use of medical terms. Even after it is accepted the manuscript may be sent back to the author for further revision or clarification. After the technical editors

have edited the paper the scientific editors review their work by checking the edited copy against the author's original version. The retyped manuscript then goes to the author, invariably with further queries in the margins. At this stage the author may make additional changes as well as answer the queries and give final approval. It takes 2 to 4 hours of editing to produce each page of the scientific section of *CMAJ*.

Inevitably errors creep in. Recently I inexplicably substituted "electronic" for "ultrasonic" when rekeying part of a manuscript on my word processor. The author caught the error. A technical editor, devoted to replacing Latinisms with vigorous Anglo-Saxon words, inappropriately changed "anorexia" to "loss of appetite". Even the best typist has been known to render "adsorbed" as "absorbed" or, even worse, to change "now" into "not". There have been other lapses, of course, but almost all of them have been spotted and corrected before printing: scientific manuscripts are proof-read at least twice, once after retying and once when they come back from the printer as galley proofs. As well, the page proofs are reviewed by the deputy editor.

If Canadian physicians are spending tens of thousands of hours reading each issue of *CMAJ* it is our responsibility to do the editing required to make their reading as easy as possible.

PETER P. MORGAN, MD, DPH, DECH  
Scientific editor  
*Canadian Medical Association Journal*

\*The last three expressions were considered acceptable.