Taiwan (Republic of China, ROC) has a strong track record in scientific research. The ROC's output of academic papers has increased by a factor of 5.4 in the span of a decade (from 1986 to 1996), the third highest growth rate in the world (1). As of 1995, Taiwan ranked 19th in terms of the number of articles cited in the Science Citation Index (SCI)—not bad, given the relatively small population of the island (roughly 22 million). However, the scientific publishing industry here is not as robust. Although there are excellent scientific periodicals on the island, local journals have difficulty in attracting high-quality research papers. In this article we will give a brief overview of medical editing in Taiwan from the perspective of journal editors and author's editors and discuss the problems encountered by each.

About 350 scientific periodicals are published in Taiwan, including roughly 100 medical journals. Only 9 of the medical journals are listed in Index Medicus, and one, the Journal of the Formosan Medical Association (JFMA), is listed in SCl. Most are published in Chinese with English abstracts, but some carry a mixture of English and Chinese articles, depending on the preference of the authors; these journals generally require both English and Chinese abstracts, regardless of the language used for the main text. At least 14 journals contain only English-language articles.

Only about 7 Taiwanese medical journals are published monthly; the rest come out bimonthly, quarterly, semiannually, or annually. Owing to financial and geographic considerations, the vast majority are published locally. However, the lack of international scientific publishing houses in Taiwan means that editors in search of top-notch publishers have to go off the island. Three Taiwanese medical journals are published in Hong Kong by Excerpta Medica Asia Limited (EMAL) and one is published in Switzerland by Karger. The journal published by Karger is listed under Switzerland in the Index Medicus List of Journals Indexed, and the 2 published by EMAL are listed under Taiwan.

Journal Editing

Editorial boards in Taiwan go through more or less the same processes as those in many Western countries and have the same goals: disseminating the results of high-quality research to the medical community. Articles received for consideration are assigned to an editor, who forwards them to (usually 2) referees. Editorial boards meet regularly to determine whether the articles are suitable for publication, require revisions, or cannot be accepted. Typically, chief editors are experienced medical researchers and, like their editorial boards, serve on a volunteer basis. Reviewers, however, often receive a small honorarium (roughly US$33/paper). Some journals with greater financial resources have editorial offices with full-time employees, but in most cases members of the editorial board do the bulk of the work, including selecting reviewers, tracking manuscripts, editing, compiling subject and author indexes, and arranging for layout, printing, proofreading, and distribution.

Copyediting and proofreading can be problematic for editors of English-language publications, and journals solve the problem in various ways. At the JFMA, for example, accepted articles are edited by a freelance medical editor for grammar, clarity, and conformity with journal style; the cost of this initial editing (usually below US$100) is billed as part of the page charges and is borne by the authors. Other journals follow a similar procedure but may cover or defray the cost of editing. Some journals ask that authors seek the help of a language consultant before submitting an article. At the JFMA, proofs are read by an in-house medical editor, but at most journals a member of the editorial board is responsible for this.

Most journals here are society publications and receive their operating funds primarily from membership fees and advertisements. The National Science Council of Taiwan provides grants to scientific journals and actively promotes improving the quality of publications by basing these awards on the fulfillment of various publication and editorial standards, which include items pertaining to journal format, article format, editorial work, frequency of publication, and whether the journal is indexed in international information services (2).

To the best of our knowledge, there are no editorial societies in Taiwan. Authors and editors are educated by more-experienced colleagues and through trial by fire (that is, submitting their work to international journals). Pharmaceutical companies sometimes host educational seminars, and well-known local editors are often invited to critique other Taiwanese journals or to give lectures to editorial boards, societies, or institutions. In addition, private medical-editing agencies hold occasional workshops on medical writing. These range from half-day lectures to 5-session interactive courses for authors who are writing papers, in which case the final product is a fully edited paper. Authors seem pleased with this approach; it provides them an opportunity to experiment with the language and various writing approaches, and it allows them to exchange ideas with colleagues.

Ethical considerations are, of course, important to journal editors in Taiwan. Although authorship has possibly not received the attention here that it has in many Western countries, it is still a concern. Many Taiwanese journals state in their instructions to authors that they adhere to the guidelines set forth in the “Uniform Requirements” (3) and require authors to verify that they fulfill the criteria for authorship.
Taiwanese journals expect that authors have obtained approval from their institutional review boards and informed written consent from subjects of human studies. Animals, however, might not have it so good. Although researchers appear to follow established guidelines for the care and treatment of experimental animals, many research institutions have not yet set up boards to regulate such experiments. This is a serious problem: articles are sometimes rejected because of flaws in study design that might have been spotted by an astute member of a review board.

Home or Abroad?
As in most other countries, doctors in research hospitals in Taiwan either publish or get passed over for promotion. That promotion-review committees look at the impact factors of the journals in which articles are published means that many of the better papers written by more-experienced authors are destined to be published abroad. The situation for Taiwanese journals is something of a catch-22: they cannot attract high-impact articles until they themselves become better recognized, but they cannot become better recognized until they start attracting high-impact articles.

The bright side of this situation is that publishing in local journals can be an educational experience for beginning authors. In many cases, the editors of Taiwanese journals are experienced authors themselves and are eager to share their expertise with younger researchers. The editor of one journal we spoke with mentioned that the journal has an acceptance rate of nearly 100% but that most articles go through a series of extensive revisions. Even at the JFMA, which has a rejection rate of about 60%, papers may be sent back for revision 3 or 4 times before being accepted. This slows the publication process and adds a substantial burden to the often-overworked editors, but the reward is that more high-quality papers can be published.

And with increasing editorial work, journals can hope to gradually improve their reputation and attract higher-quality original articles.

From the Author's Editor's Perspective
Being an author's editor in Taiwan can be both a pleasure and a pain. The pleasure is derived from the generally friendly and appreciative attitudes of the authors. The pain, of course, comes from struggling to revise what often appear to be nonsensical sentences without changing the authors' meaning.

Authors here tend to have a firm grasp of the IMRAD format (introduction, methods, results, and discussion), but their writing can suffer from a lack of clarity and cohesiveness. Moreover, the language barrier sometimes precludes useful author-editor exchanges. In many cases, the only way to revise a problem paper accurately is to read the entire paper through first to get a handle on its overall meaning, looking at tables and figures to see what was actually found. With luck, the sentences will then unscramble themselves, logical spots for paragraph divisions will appear, and topic and transition sentences will emerge—several hours and a few gallons of correction fluid later.

Another common problem is incomplete or vague descriptions of study design, especially with respect to selection of participants and statistical analyses. Reporting of confidence intervals for primary outcome measures seems to be the exception rather than the rule, and author's editors can help by pointing out errors and omissions that would otherwise be spotted by reviewers.

Authors often have a hard time understanding reviewers’ comments written in English and sometimes have to consult an English-speaking editor simply to interpret the criticisms. That does not always reflect on the author's poor English skills; sometimes the comments are written obscurely. The problem may be compounded when the reviewer is not a native speaker of English. So, journal editors everywhere, please keep this in mind when forwarding referees’ comments to nonnative speakers! Clear writing is essential in all aspects of the editorial process, not just the final product.

Finally, although some authors recognize the value of contributions from experienced medical editors, many do not. Until several years ago, Taiwan had no agencies specializing in medical editing, and authors and journal editors usually relied on English-speaking colleagues or teachers to edit their papers. Today, a number of local agencies specialize in medical editing, the largest of which handles about 100 papers per month. However, despite the reasonable costs of these services (most charge about US$10/page for substantive editing), many authors still feel that the prices are too high, and most journals do not have sufficient funds to cover these costs.

A Need for Editors Associations?
There is a definite need for an editors association in Taiwan. Although obtaining high-quality original research articles is a major concern for local journals, attracting and training editors can be just as difficult. Because of limitations of available time and resources, novice editors might not receive formal training in medical editing or even, in some cases, in the house style of the journal. This can obviously lead to inconsistent editorial decisions and nightmares for conscientious copyeditors. Editorial associations similar to the Council of Biology Editors and the European Association of Science Editors could raise Taiwanese journal editors’ awareness of current international trends in editorial policy, and this could result in improved journal quality.

References