

Publication in Otolaryngology and Neuro-otology: Dos and Don'ts

BJ Bailey,¹MD,FACS

Abstract

Introduction: Medical publication continues to be important to academicians, physicians in private practice, researchers and corporate sponsors. This article provides valuable dos and don'ts for authors. **Materials and Methods:** Literature review and personal experience of the author. **Results:** Advice is provided for understanding the publishing world, the peer-review process, duplicate publication, authorship, and dos and don'ts for successful authors. **Conclusions:** Publishing is a competitive art and science. The key to success is the submission of a proper manuscript that contains important, new, scientific information of value to the readers.

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Introduction

The interest in medical publication continues to grow each year, and one of the reasons is that publications in highly regarded journals with rigorous peer-review processes provide the most reliable information for the management of our patients. In addition, for academic faculty, the quality and number of publications is at the core of one's reputation and promotion. The phrase "publish or perish" has kept its place in academe through decades of enormous change in other features of academic life.

For the physician in private practice who publishes, there is personal satisfaction in going beyond the responsibilities of patient care and finding the challenges and rewards of scientific work.

And lastly, for the commercial sponsors of corporate research, such as those who market otic drops or particular otologic surgical devices, publication of positive study results is a key component of regulatory approval and a successful marketing campaign.

The world of medical publication is a dynamic, ever-changing field of great significance to many producers and consumers of important, new scientific information.

The purpose of this article is to provide insight into some of the important dos and don'ts of publishing in the specialty of otology and neuro-otology, but we hope the information will be useful to all authors as well.

Understanding the Publishing World

Authors must understand 3 important aspects of the world of medical publishing.

First, most medical journals are published as a commercial venture. The business side of the journal must maximise revenue by virtue of a product with value to the readers in order to attract subscribers. The costs of paper, printing, postage and staff must be kept in line, meaning in a practical sense that no journal has enough pages to publish all the good manuscripts that are received.

Second, there are rigorous standards in terms of the science, the literary quality, the relevance and the validity of the articles published by the journal. Authors must address each of these areas conscientiously if they wish to have their work published in a well-regarded journal.

Third, authors must remember that because editors receive more good manuscripts than they can publish, the process is competitive. To publish successfully in a good otology journal, or in any first-rate medical journal, you must have something of value to others to report. The bottom line here is that you must have important, new, scientific information (all 4 words are critical) that is useful to the readers of the journals in their medical practice or in their research.

One of the classic anecdotes among reviewers is the instance of an author who received the following comment when his manuscript was returned from the editor, "Your

¹ Department of Otolaryngology
University of Texas Medical Branch, Texas, USA

Address for Reprints: Prof Byron J Bailey, Department of Otolaryngology, University of Texas Medical Branch, Galveston, TX 77555, USA.

manuscript provides new and important information. Unfortunately, the part that is new is not important and the part that is important is not new.”

The Peer-review Process

The quality of the best journals in otology comes directly from the rigorous peer-review systems they have developed. Your manuscript will be sent to reviewers (usually 2 experts in the area of your topic) who will evaluate it critically and return it with their comments. Rarely, a manuscript may be accepted outright, but almost always, reviewers will recommend revisions or give the work a low priority for publication.

Authors should take the reviewers' comments to heart and see them as an important step in getting their work into print in the form that will be most helpful to readers and secondarily, most likely to enhance their contribution to the knowledge base of the specialty.

Physicians often find it difficult to receive criticism. When we have worked hard to produce a manuscript, we take ownership in every sentence. It is uncomfortable to have our ideas challenged, our interpretation of the data rejected or our manuscript shortened by half. While it is perfectly acceptable to send the editor a letter of rebuttal, it rarely does more than delay the eventual publication of your work. If your manuscript has been rejected on the basis of negative features pointed out by 2 reviewers, it is rather a waste of time to write to the editor with the theme that “the reviewers did not understand the manuscript”. If it was that confusing to 2 experts who probably studied it for at least an hour, how well would it be understood by a reader who can give it no more than 5 or 10 minutes?

Keep in mind as you are preparing your manuscript that it will be studied critically by others, so you are better off if you go over the final product very carefully yourself or with a critical colleague, before you send it in to the editorial office.

Important Basic Dos and Don'ts

The process of medical publication usually begins with the design of a study that will answer a question or test a hypothesis.

This stage is critical in terms of gathering the data that will form the message in your publication. DO put in the time and effort required to design the study properly, so that when you begin to draw conclusions from the study, they will stand up to challenges based on the data you have collected. DO consult a biostatistician while you are designing the study to establish clearly that you are investigating a phenomenon that is quantifiable whether it be in decibels of hearing restored, number of perforated tympanic membranes successfully repaired or some other

measurable result. DO calculate the size of the result of your intervention and the number of subjects that will be required to generate conclusive findings that are statistically significant. DO include an appropriate control group to deal with the placebo effect and use care to analyse your data with the proper statistical test. DON'T wait until the study is nearly done to consult a biostatistician.

DON'T assume that others have the same level of interest and knowledge in your area of investigation as you have. When you are writing your manuscript, it is essential that you explain the background of your investigation, why it is important, what you did exactly, how you did it, what you found and what it all means.

DON'T let someone else write your manuscript, write it yourself. This is particularly important in the case of investigations that are supported by a corporate sponsor. The pressure to achieve success in the economic realm has been the source of bias in articles published in the past that exaggerated positive features and downplayed negative aspects of a commercial product. The reputations of the authors suffered severely.

DON'T allow your personal enthusiasm for a procedure you may have developed or a product you prefer to bias your conduct of the study, your data analysis or your writing of the manuscript. Inflating the importance of your findings or putting a spin on your conclusions will ultimately work against the acceptance of your manuscript.

Remember that the highly prized pearl in the field of otology and neuro-otology is a solid randomised, stratified prospective clinical investigation. These are given much higher priority by journal editors than are retrospective studies, review articles and case reports. The latter type of articles are much less frequently accepted by the better journals.

Duplicate Publication

DON'T publish the same message more than once. To do so is considered a violation of an important ethical principle in medical publishing. If you have developed an operative procedure for otosclerosis and documented its value in a prospective study with 50 patients managed safely and effectively, DON'T publish another article a year later with 100 patients unless you have found something very new and very important.

Duplicate publication can take many forms, with the worst being the repeated publication of previously published paragraphs, figures or tables in a second or third article.^{1,2} It is an extreme violation of publishing ethics if the prior publication is not referenced in the later work. Other examples include publishing more than one article from a single series of patients or research animals or fragmenting the report of a study into several articles (“salami slicing”,

“least publishable unit”), thereby requiring the reader to go to several journals to get the complete story from the investigation.

Authorship Issues

One would think that after several thousand years of writing, we would know the definition of an author. Apparently, that is not the case in medical authorship.³

DON'T indicate authorship in a medical publication unless an individual has participated sufficiently in the writing of the manuscript to deserve recognition and to take responsibility for the content of the article.

DO include as authors, those who have been important in the concept, design of the study, and analysis and interpretation of the data, as well as the writing, revising and final preparation of the manuscript.

DON'T include as authors the departmental chairman or laboratory supervisor (unless they meet the other criteria), those who have provided resources only and colleagues who may have provided advice or patients, but were not involved heavily in the project.

Getting Your Message Across Clearly

DO remember that conveying complex biomedical information in otology and neuro-otology is a very challenging task. All too often, we read an article and find ourselves left with important questions the author failed to address. It is important that your manuscript make very clear to reviewers and readers all that is important in 8 areas:-

1. What is the purpose of the report?
2. What research design was used?
3. In what setting was the study performed?
4. Who were the subjects; how were they chosen; exclusions?
5. Exactly what intervention was done?
6. How were the observations and variables measured?
7. What results were noted?
8. What conclusions can be drawn?

Answering all of these questions allows the reader to track your work, especially if the answers are reported clearly and succinctly after you have introduced the hypothesis or the question you are answering in the opening paragraphs of the manuscript.

DON'T ramble on aimlessly about unimportant details, DON'T speculate about conclusions not supported by your findings and DON'T let bias creep into your study, your data analysis or your writing.

Pitfalls in the Discussion Section

DON'T let your enthusiasm for your work distort the writing of the Discussion section of your manuscript. In

reading some prior publications in otology and neuro-otology, we can see that authors have gotten carried away as they discussed their work with middle ear prostheses, surgical procedures for vertigo and even early cochlear implant devices.

DO beware the Discussion section, as it is the place where you may be tempted to “go beyond the data” with your rhetoric. It is easy to begin the process of “selling” your ideas in the paper at this point, an error which usually weakens your overall effort.

DO keep this section under control by following the suggestions of Docherty and Smith,⁴ who have suggested the following list of Dos:

1. State the principal findings objectively.
2. Point out the strengths and weaknesses of your study.
3. Describe how the study is stronger or weaker than others on the same subject.
4. Discuss the differences between your findings and those previously reported.
5. Discuss what your study means to the field of otology.
6. Conclude with a statement of the unanswered questions remaining and future research needed.

Remember that the 2 sections most likely to be read by the busy physician are the Discussion section and the Abstract.

The Importance of the Abstract

In some regards, the abstract is the most important and enduring element in your medical writing.⁵

First, for those reading an otology journal, the abstract can be an important device for pulling the busy reader into the text of your article when it is published. If the abstract content is appealing and catches their attention, casually interested readers may actually read your entire article (something they are not likely to do with every article in the journal, as careful readership surveys have shown).

Second, the abstract may be all that appears on Medline and other electronic versions of your publication. Interested readers and researchers in the field of your topic may read only a small number of complete articles following an extensive literature search. The better your abstract, the more likely it is to be among those chosen for reading, and then possibly for discussion, referencing and even incorporation into the important information base of your specialty.

DO read the instructions the journal provides for authors concerning preparation of the abstract. Most journals require a structured abstract with specific sections such as:

1. Objectives/Hypothesis
2. Study Design
3. Methods
4. Results
5. Conclusions

Summary of Dos and Don'ts

Based on personal experience as the Chief Editor of the AMA Archives of Otolaryngology-Head & Neck Surgery (1980 to 1992) and the Laryngoscope (1994 to 2004), I offer the following list of publishing dos and don'ts in an effort to increase your publication success rate and as a summary of the message of the preceding pages.

Dos

1. Have important, new, scientific information that is useful.
2. Publish your work once in a clear, concise, complete form.
3. State your hypothesis or question clearly.
4. Describe the study design, setting and methods clearly.
5. Report your data collection and analysis techniques.
6. Be sure that your data support your conclusions.
7. Indicate IRB approval, grant support and corporate sponsorship.
8. Credit key ideas, concepts and information to original sources.
9. Be certain all authors meet the criteria.
10. Include appropriate high quality figures and tables.
11. Double check any recommendations about drugs and dosages.
12. Present your findings objectively and let them stand or fall on their own.

Don'ts

1. Send case reports and review articles to the better journals.
2. Publish your work in a fragmented or repetitive manner.
3. Describe your study in general or vague terms.
4. Leave out details that would make it impossible for someone to repeat your work.
5. Inflate or exaggerate your data and don't use the wrong statistical tests.
6. Speculate on conclusions that go beyond your data.
7. Fail to identify any potential conflict of interest.
8. Imply that key concepts originated with you if they didn't.
9. Use gift authorship for personal gain or as a favour.
10. Overdo the number of figures and tables.

11. Don't fail to point out any off-label drug or device recommendations.
12. Don't inflate, exaggerate, spin or otherwise introduce bias.

Conclusion

Publishing in the field of otology and neuro-otology is both an art and a science. In spite of the proliferation of biomedical journals over the last 3 decades, there remain only a handful of premiere journals in each specialty field. These journals turn away more transcripts each year than they can publish, and the resulting competition for a finite number of journals pages can be intense.

Understanding the world of medical publishing and peer-review, following the guidelines of the journal to which you are submitting your work and adhering to the dos and don'ts we have provided will increase your chances of publishing success.

Most important of all, DO remember that the key to success is to submit a manuscript that is clear, and concisely and carefully written — and a manuscript reporting important, new, scientific information that is useful to clinicians and research scientists in their work.

Good luck!

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