

Writing for the Clinical Literature: Step-Wise Guide for the Novice Author

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Introduction:

This step-wise guide is intended for use by junior faculty, residents and medical students who are beginning their journey to becoming authors for the medical literature. More senior faculty may use this guide to mentor novice authors and enhance the competencies of practice based learning and improvement and medical knowledge. As medical education is moving toward translational agendas in which physicians are encouraged to more readily publish their clinical experiences, this guide may prove to be a useful and practical tool for accomplishing this task.

Seven practical steps are described for this process. This process has been shared with dozens of novice authors for the last two decades. It has been successful; the success has been realized with more than 100 publications in various medical literature venues, including peer-reviewed journals, medical textbooks and peer-reviewed medical internet sites. Case reports and review articles in which the author engages in a thorough literature search are the two types of publications that will be addressed in this guide.

The Seven Steps:

1. Choose a topic

The first step is choosing a topic that is not only of interest to the author, but is also one that is not adequately addressed in the pediatric literature. A more senior colleague should be consulted if one is unsure about the uniqueness or marketability of a potential topic. A thorough literature search will reveal how unusual one's case truly is. A case report should discuss either a rare disorder¹⁻⁴ or an unusual presentation of a common disorder.⁵⁻⁷ Case reports accompanied by vibrant or unconventional images in the form of photographs⁸⁻¹¹ and radiologic^{8, 12} or other

studies are particularly marketable. The clinician should constantly be on the look-out for an interesting patient who would agree to be the subject of a published case report. Having a camera in clinic is a wise idea, so when an unusual, photographable physical examination finding appears, one is ready to document it visually. A phone camera may not allow for adequate detail. Signed consent for photographs must always be obtained when the published case report will contain any potential identifying features of the individual patient. It is prudent to obtain permission to submit a case, even if photographs are not being included.

Review articles are more difficult to get accepted for publication since typically journals will solicit national experts or editorial board members to write review articles. If the novice author has the great fortune to be offered a co-authorship with a senior colleague who is writing a review article, the opportunity should not be rejected. If the novice author will attempt to write a review article on their own, the recommendation is to contact the editor of the potential publication venue and inquire about the journal's interest in one's proposed topic for the review article. Some well-established journals have a special section that promotes the work of less experienced authors. The novice author's mentor should be able to provide guidance concerning this issue.

2. Choose a publication venue

Choosing the publication venue is an early step because it can help guide the writing process. In the twenty-first century, not only should hard copy journals be considered, but electronic publication opportunities should also be considered. Ideally, only peer-reviewed venues should be on the list. High quality, evidence based publications are most desired in the medical field. Choosing publication venues that are catalogued on "PubMed" or can be easily

located through search engines, such as “Google Scholar,” allow for verification of your publications works that you’ll list on your *curriculum vitae*. Academic faculty should consult their institution’s Promotion and Tenure (P and T) guidelines and committee to see if certain medical journals or publication venues are given more credit during the P and T process.

Each publication venue has its own submission instructions, with the specific criteria for the types of articles featured in the venue. The author should refer to those instructions which are usually located on-line or within a hard copy issue of the journal. Limits on the number of words, references and images are often included in the instructions. The journal “Clinical Pediatrics” has a “Brief Report” and “Resident Rounds” feature which may be the perfect venue for the novice author. If a review article will be written, it is recommended to contact the editor of the potential venue, as indicated in Step 1.

The possibility of acceptance of a piece of medical literature depends upon which publication venue is chosen. Since electronic internet sites are relatively new, the author will have a greater chance of acceptance of their work there. The most difficult journals in which to get accepted are those which have been in publication for the longest, those which have high numbers of submissions and those with high journal “impact factors”. The “Archives of Pediatric and Adolescent Medicine” is an example of a journal with a high impact factor.¹³ As its name implies, impact factors are reflective of how much impact a certain journal has in a certain field of study. Niche journals, like “Journal of Pediatric and Adolescent Gynecology” may have a low impact factor, but will reach a specific readership. Obviously, it would be ideal and an impressive accomplishment if the novice could get published in a journal with a high impact factor, but that is not always possible. Gaining experience in the writing process is the ultimate goal of publications early in one’s career, along with the prestige of having a published

piece of work in any peer-reviewed journal. Choosing a journal which is cited on “PubMed” would also be ideal; however, a journal not cited there, such as “Consultant for Pediatricians” reaches tens of thousands of readers, may open up other opportunities and still allows for one to hone their writing skills in the process.

3. Set deadlines

In the busy world of a medical student, resident and junior and senior faculty, the only way to complete a project is to set deadlines and keep those deadlines. The author must commit at least 1-2 hours/week every week for academic endeavors. Electronic reminders on one’s email calendar that pop-up at a set time interval are a practical means of keeping the deadline in mind. Personal reminders from the co-author are also effective; even more effective is the frequent reminders from the writer’s mentor or senior faculty member who can be instrumental in keeping a project moving toward completion.

4. Research

The internet has made this step a much simpler task than it was decades ago. Many search engines are available, like “PubMed” and “Google Scholar.” If the novice author is unfamiliar with these tools, it is recommended for one to get educated about all of their features which set limits during the literature search so more focused information is obtained. Libraries offer courses about the hows of effective literature searches, along with on-line tutorials.

Published references used to help write the discussion part of the case report should be primary references of the highest quality. A thorough literature search will reveal how unusual one’s case truly is. Case reports or review articles on similar topics will help, but the use of textbooks which may be out-dated or websites of unknown reliability are not recommended

sources. The referencing of other review articles about the same topic for the review article that one is in the process of writing is discouraged; the intent of a new review article is the creation of an original compilation of information obtained from one's scrutiny of primary references, not someone else's review.

5. Write, edit, write, edit.....

A simple outline that highlights the information that should be included in the discussion section of a case report or for a review article is listed in the Table. The process of writing and editing is fluid. Since the publication venue has already been chosen in Step 2, the author will know the required format and limit on word count, images and references. All of the requirements should be kept in mind, guiding the writing and editing process.

For the case report, the author should be as concise as possible to avoid the repetition of the same information in multiple parts of the patient presentation. Paring down the report to include only crucial information can be difficult to do, especially when there is a very complicated, convoluted history. A more senior author can help with this process. The names of all laboratory or other medical studies should be written out in full, the first time they are mentioned in the text. If a term will be used repeatedly, then the abbreviation for the term should be typed beside the term in parenthesis when it appears for the first time. For example, if the term "complete blood count" will be repeatedly mentioned in the text, when it occurs the first time it should be written as: "complete blood count (CBC)." When the term is needed subsequently, it is only written as "CBC."

When it comes to citations, authors must give appropriate credit to other authors' works that they are using to write their own literary work. The use of one's own original

wording is also crucial. The laws of plagiarism are beyond the scope of this guide, but the author should be well versed on what constitutes plagiarism. Keeping track of references is an important organizational part of this process. It is recommended that during this step, the author indicates a referenced piece of text by including the last name of the referenced author in parenthesis right after the part in the text that needs to be referenced. This way, when sentences including the accompanying referenced authors' names are rearranged in the editing process, the appropriate reference is included with the appropriate text. The final numbering of references will not occur until Step 6.

6. Finalize

After you have written, edited, written, edited and so on to the point that you are satisfied with your manuscript, you should find a trusted, experienced colleague author who would be willing to read and critique your work. The use of "track changes" as an editing tool should be employed. If multiple trusted authors will review your work, it is suggested to seek their help sequentially so that after each edit, more corrections are made before the next reviewer has a turn at reading and editing your work. After incorporating the experienced authors' suggestions, it may be helpful to ask a non-expert to review to ensure that your work is clear to the readers.

It's time to finalize after you've gathered all the input from the multiple sources. Numbering the references is the main part to this step. This task is left to the end because one has to ensure that all editing, which includes rearrangement of text, is complete before committing a number to a reference. The novice author will likely have a short reference list, so the completion of the reference list with assigned numbers for each

reference can be done manually. For large numbers of references, such as 30 or more, one can consider a computer program which may help with the process of numbering references in the text. The author should refer to the standard method of referencing that is endorsed by most medical publications¹⁴ or refer to the author's instructions for the chosen publication venue.

The final authors who will be listed on the piece of work should only include individuals who have truly contributed a substantial amount of work toward the project. More and more journals are posting authorship guidelines to ensure that each author has completed activities that qualify them to be an author on a piece of work. These guidelines should be reviewed and respected before submission.

7. Submit

Most publication venues have an on-line submission process which clearly guides one through the process. In order for a successful submission, all of the requirements listed in the journal's author's instructions section must be fulfilled. If there are too many words, characters, tables, images or references, more editing has to be done before submission. The novice author should be aware that a manuscript cannot be submitted to several publication venues at the same time; typically this will be stated in a journal's author instruction section. After submission, the novice author then waits for the journal's decision. Some decisions are made within a few weeks, while others may take several months. The typical decisions include outright rejection, outright acceptance (rarely), or acceptance with the need of some revisions. If a piece of work is rejected, the author can then find another publication venue and modify the work so it fulfills the new venue's submission criteria.

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Table: Sample Outline of Review Article or Discussion Section of a Case Report

- I. Introduction:
 - a. Brief background of the topic
 - b. Purpose of the written work
- II. Etiology/Pathogenesis
- III. Epidemiology
- IV. Clinical Presentation
- V. Diagnostic Evaluation
 - a. History
 - b. Laboratory Studies
 - c. Radiographic Studies
 - d. Other
- VI. Treatment
- VII. **References**