Author’s Guidelines for Publication

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Preparing for Publication in the Medical Literature

No matter how strong your conviction that some aspect of your practice deserves attention by the medical community, preparing an acceptable manuscript may be daunting. The editors of Surgical Physician Assistant have assembled practical guidelines for publication in Surgical Physician Assistant and other medical journals.

There are three main formats used in the medical literature: the research paper, the clinical case report, and the review article. It is important to establish which of these formats best suits your subject and its message. In some cases it will be quite obvious, in others it may emerge only after you have asked yourself some basic questions.

The message

Before you begin writing, be sure that you have a clear idea of what you want to say and why you think it is important. The ability to state your message in a single sentence is a powerful predictor of whether your paper will have a clear and strong impact.¹

An effective paper will first raise a question, then provide an answer by adequately and clearly stating the evidence. Submissions for publication most likely to catch the attention of journal editors are those that will answer important questions for readers.¹ Although the originality and scientific validity of your work are its strongest recommendations, editors are also interested in papers that bring a fresh approach to an older subject or new interpretations of previously published findings.²

Once you can clearly state your message, it is helpful to look at it objectively. Is your message really important; if so, to whom? Will it change any concept or shed light on some aspect of clinical practice? Once you are satisfied that you have a valuable message, identify your potential audience and the medical specialty they represent. Determine if all or a limited number of practitioners find your message interesting or useful. Then focus your message on them.

Format

In some cases, your message and your content may determine your format. In other cases, the best format may not be initially apparent. In the latter case, it is important to review the components of each of the three main publication formats (the research paper, the clinical case report, and the review article) to determine which one best serves your message.

Choosing the shortest format is often the wisest approach.¹ If your message does not lend itself to an entire article, consider shorter formats often used by medical journals, such as the brief report, clinical notes, or short communications.

Once you have determined the best format:

1. Scan a few issues of the journal(s) you are considering to be sure that they will accept the format you intend to use.

2. Check the information-for-authors page to see if the format you have chosen is listed among the acceptable formats.

Research

It is essential to conduct a search of the existing liter-
ature before you begin to write. If you are planning to report an unusual case, you must determine if similar cases have already been described in the literature. If so, ask yourself if your report contains new and potentially useful information.

If you are writing a review article, extensive familiarity with the literature is essential. If similar reviews have been published recently, take into account whether they have already adequately answered the question your work will address. Consider, too, whether existing reviews are out-of-date or have only been published in a foreign language. If so, an update or an English language version could prove useful.

Before you conduct your search:

Prepare a list of all the relevant subject terms, including synonyms and abbreviations.

Determine how extensive your search will be. Searches going back more than 5 years can sometimes be avoided by finding review articles and published biographies that have already covered the older literature. Most databases will allow you to limit your search to specific years.

Establish exactly how you will record the references from your search. Many authors find that references can be managed more efficiently by using the footnote or endnote format of your program file. In this way, you can easily move or alter footnotes. You may also choose to put reference material in brackets following the sentence to be referenced.

Decide which bibliographic databases you will use to conduct your search. In most cases, you can carry out an adequate search through the use of one or a combination of three major resources:

1. The National Library of Medicine’s MEDLINE,
2. Index Medicus, Science Citation Index, and
3. BIOSIS Previews.

Because the main indexes vary greatly in their structure, they require different search methods. Be sure that you are familiar with the basic format of the indexes and on-line database systems that you intend to consult. You may also recruit library reference personnel to help you.

Permission to print. Before writing, review all of your data. Then determine whether you will need permission to publish any part of your work. Letters of permission are usually required for:

1. Illustrations, tables, or extensive quotations from previously published text,¹ and
2. Publication of patient photographs.¹

Write or fax the publisher of the journal or book that contains the material in question. Include the name of the author, journal, date of publication, the page number(s), and a description or photocopy of the chart, graph, or photo. With few exceptions, permission is usually granted. You will be requested to include a byline with the material. Permission must be printed exactly as requested by the publisher or author.

If material is printed exactly as it appears in a previous publication, the publisher or author may require that the following line appear after the chart, graph, or photo:

Reprinted with permission from [first author’s name] et al. [appropriate reference number]

If material has been changed to suit your format or altered in any way, you may be asked to use the following line:

Adapted with permission from [first author’s name] et al. [appropriate reference number]

In some cases, you may be asked to include the year and page numbers.

Outline preparation. Before beginning to write, you must prepare an outline. Each of the three main

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publication formats employs a unique structural arrangement (see sections II through IV). Adhering to the prescribed format will help you to organize your information.

It is useful to:

1. make a list of the concepts and information necessary to present your message, and

2. determine where the information belongs in the outline.

Once you have satisfied these criteria in sufficient detail, you should have a working outline from which to begin writing.

References:


Suggested readings:


The Research Paper

The research paper may comprise original work or research that supports or refutes the results of existing work on the subject. Original research should be based upon a formally designed scientific study protocol.

Structure

Research papers usually comprise four sections: introduction, materials and methods, results, and discussion and conclusions.¹ Your paper should include:

1. question(s) you purport to answer,

2. methods you employed to determine the answer,

3. your findings, and

4. conclusions drawn from your work.

Introduction

As with all writing, how you begin has considerable bearing on whether it will catch the eye of an editor or a prospective reader. For this reason, the introductory text must clearly and concisely convey to the reader why the research was started and what questions it was designed to answer.¹

The length of your introductory text must also be carefully considered. It will ultimately convey your skill as both an investigator and as a writer. Introductory copy that is too long can irritate or bore a reader. Too brief an introduction may prove inadequate. Cite only relevant literature to state your case, and avoid including information that can be found in any textbook in your field.¹

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Materials and methods

In order to judge whether the findings reported in the results section reliably support your conclusions, the critical reader will want to know in sufficient detail exactly how your study was set up. Properly designed research has a logical sequence. Your materials and methods section should reveal the following:¹

- type of study design used
- types of subjects studied
- inclusion criteria for selecting patients
- interventions, such as treatments
- clinical parameters
- statistical methods used to evaluate the data

Study design and protocol. Some study designs are so well known that they need only be specified by name, whereas newer ones require detailed explanations.¹ Unusual designs that have been described in the literature should be explained in a brief phrase accompanied by citation of the source.¹

Study subjects. The subjects of well-designed studies are carefully selected to minimize variations stemming from characteristics of the subjects. Remember that your results can only be interpreted accurately when other variables, such as age, sex, or racial differences, are shown not to affect the findings.¹

Interventions. Drugs, hormones, other chemicals, and any agents used for experimental intervention should include description of the specific preparation of any drug used, dosage, and the route and method of its administration.¹

Observations and measurements. Standard methods for laboratory procedures should be identified by name only. Any variations of methods should be described in sufficient detail to enable another investigator to duplicate your results.¹

Statistical analysis. Specify the statistical methods used. Include information helpful in judging the power of the statistical assessment.¹

Results

The results section should give as clear an answer to the question posed for the research as the data from the study will permit. The evidence you need to answer that question may come partly from previously published work, but remember that your own observations and data should constitute the backbone of your results. This is particularly true if your research has been concerned with a new question or has used a fresh approach to answer an old one.

Discussion and conclusions

The discussion section should begin with the answer to your research question. The central conclusion to be drawn from the data presented in the results should be concisely stated in the first paragraph.¹

You may need to cite additional evidence from the literature to support your conclusion. Remember to cite your original source(s).¹ Similarly, published evidence refuting your conclusions should be presented and discussed. An honest discussion considers all evidence related to your argument.

There are several ways to close the discussion and conclusion section of your paper. The most obvious way is by simply stating the conclusion that your findings suggest. If, however, you cannot resolve conflicting evidence from your own trial and those of others, you can suggest how the discrepancy might be resolved through a new trial.

It is essential to disclose the limitations of your study, such as unavailable information. This may include undetermined type and dose or duration of previous drug usage in study subjects, inadequate study length during which to judge the effects of a drug over a prolonged period of time, undetermined

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withdrawal periods from previous drug use, and patient classification that could affect the mortality rate.

Articles reporting on original research are the most frequently published type of scientific paper. The most logical way to present the events surrounding your findings is in chronological order. Restate the salient points from the discussion section, identify areas and subjects for future research, and, in one sentence, the conclusion(s) of your findings.

Reference:

Suggested readings:


Clinical Case Report

Clinical case reports aim to shed new light on some aspect of clinical practice through experience with one or more unusual cases. To successfully achieve its objective, the clinical case report must be prepared with as much attention to the elements of critical argument as any of the other publication formats.

Several types of case reports merit publication. These include cases:

- that represent a previously undescribed syndrome or disease
- with an unexpected association to disease states previously undescribed in the literature
- that demonstrate an important variation from an expected clinical pattern
- with an unexpected evolution suggesting an adverse therapeutic or drug effect

Structure

Introduction. The reader caught by the title of the case report looks for information that justifies a report of the case(s). In one or two paragraphs, your introduction should provide a concise summary of:
- how the case came to your attention
- the main features of the case
- why it is worth reporting

The introduction should also briefly describe your literature search, including specific bibliographic databases used. A more detailed review of the literature should be reserved for the discussion and conclusions section.

Case Description. The clearest way to convey a case is through a chronological sequence of events and findings. The narrative may, however, require flashbacks to events which subsequently proved important.

Limit yourself to relevant data. Dates and times should be specified to establish a clear sequence of the occurrence of events. If your case requires a long description with a great deal of data, you may wish to present most of the detail in a table rather than in the text. An example follows:
Table 1. Principles of antiretroviral (ARV) therapy for HIV infection

**Established principles**

- Treat early to minimize immune system damage and maximize immune system recovery.
- Aim for complete suppression of HIV, i.e., suppression of HIV RNA levels below detection limits of current assays (<200 copies/mL for Amplicor assay or <500 copies/mL for Multiplex assay).
- Use potent combinations of ARV agents (no monotherapy or weak combination therapy).
- Ensure that ARV regimen is as easy and well tolerated as possible; compliance is crucial.
- Attempt to use ARV agents that penetrate all sanctuary sites (e.g., central nervous system).
- Use ARV regimen that can be expected to suppress all likely genetic variations.
- When changing ARV treatment due to failure, try to use at least two active drugs, not just one at a time; new drugs are preferable.
- Have decisions on ARV therapy made by persons who are experienced in the care of HIV-infected persons and familiar with the numerous ARV agents.
- Involve patients in treatment decisions.
- Provide access to research site conducting clinical studies.
- Carefully consider sequences of ARV treatment to keep options open; in particular, avoid reliance on ARV agents to which rapid resistance develops (e.g., lamivudine [Epivir] and nonnucleoside drugs).
- Use regimen likely to provide long-term suppression.
- Initiate ARV drugs within a short period to minimize changes for resistance.

**Evolving principles**

- Try to optimize levels of ARV drugs soon after starting.
- Consider genotypic analysis before starting therapy and in salvage therapy before choosing regimen.

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**Discussion and conclusions.** Although you must initially justify presentation of the case in the introduction, detailed evidence that the case is unique or unexpected belongs in the discussion section. Similarly, although the features of the case that justify the report should be covered in the case description, other evidence necessary to support your argument should be reserved for the final discussion portion of the paper.¹

Most of the additional evidence may come from a thorough search of the medical literature. In keeping with scientific principles of argument, any contradictory evidence you discover during your literature search must be cited and fully assessed.

If a literature search does not uncover similar reports, you must provide information on the extent of your search, including the indexes and search terms used, the dates of the literature covered, and use of foreign language publications.¹ Keep in mind that investigators researching the same problem may benefit greatly by the knowledge.

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Format. Although in most cases the case description can be followed immediately by the discussion and conclusion, other elements must occasionally be added. For example, in the case of a genetic disorder, a section may be included on relevant aspects of the patient's family health history. Similarly, if the initial case observations led to extensive laboratory studies, it may be necessary to add a materials and methods section or a section on treatment response, managing treatment failure, or other pertinent information before proceeding to your discussion and conclusions.

Reference:


Suggested readings:

One of the leading reasons for writing a clinical case report is to describe an adverse drug effect or a drug interaction. Useful discussions of the kinds of evidence needed in case reports of this type can be found in:


The Review Article

As the name implies, the review article is designed to answer a clinically relevant question by critically assessing the existing literature on the subject.

Structure

Although quite different in structure from the research paper, a clearly organized review is also built on the principles of critical scientific argument. The story of the review article is usually told by using a series of subheads to divide the text in sequence. The introduction. A well-conceived review answers a question or closely related questions. For example, it might discuss what is known or not known about a particular disease state. Rather than identifying a question to be answered, the writer should explain why a certain question should be raised.

For example, if you are writing a review on adverse drug effects, you might structure your first paragraph to include a statement on:

- the history and usage of the drug
- benefits of the drug
- reasons for reviewing the side effects profile

In preparing your review, it is important to establish your definitions (eg, diagnostic criteria) and identify any limitations (eg, age of patients studied, baseline findings, insufficient drug clearance before initiating study). In this way, readers can intelligently determine if your premise is valuable for them.

Body copy. Developing an outline before you begin writing a review article is essential because the sequence of topics is represented by sections of text.
The sequence should follow the lines of how the reader will want to look at the overall subject of the review.

A descriptive review of a disease should follow the sequence used in textbooks, and the body of the review should include the following main subheadings:

- Etiology
- Pathogenesis
- Manifestations
  - Clinical
  - Roentgenographic
  - Laboratory
- Diagnosis
- Treatment
- Prognosis

Topics might be presented from the general to the particular, or from the components of a system to its whole. For example, a review of adverse drug effects might proceed from the cellular effects to systemic effects as follows:

- Effects on cellular metabolism
- Effects on membrane structure and function
- Effects on myocardial contractility
- Hemodynamic effects
  - Blood pressure effects
  - Congestive heart failure

- Systemic effects
  - Fever
  - Dehydration

Another topic might run from the most frequent problems to the most rare. A review of hypercalcemia might include the following section headings:

- Metastatic malignancy
- Primary hyperparathyroidism
- Idiopathic hypercalcemia of infancy

Whatever sequence you employ, it should be elucidated by the subheadings you have established in your outline.

Discussion and conclusions. Your article should clearly present evidence from the literature. In some cases, your review may identify additional areas that require study.

Reference:


Suggested readings:
