

Chapter 4. A Case Report

Dean Seehusen, MD, MPH

“To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all.” – Sir William Osler

Objective: To outline a straight forward method by which a learner may adapt, write and work to obtain publication of a case report in 3 to 6 months.

Why write a case report?

There are many potential reasons why one might write a case report. Educating your peers is the most obvious. Case reports are an excellent mechanism to bring a novel clinical experience to the attention of a wider audience¹. It is through them that many important clinical entities come to be recognized². When Meyer and Lundberg published *Fifty-one Landmark Articles in Medicine*, 5 of the 51 pieces of literature they identified were case reports³. Published experience with a difficult scenario or rare complication may serve as a guide for future clinicians facing similar circumstances. Lastly, case reports are a great way to break into the medical literature serving as an important addition to your professional resume.

What makes a case report?

Case reports are not always, in fact are not usually, the very first described case of a new disease. We have all heard the adage that a case report is “a rare presentation of a common disease or a common presentation of a rare disease”. But this definition is too narrow.

The use of a novel therapy for an old disease, or a previously unpublished complication for a common therapy would also constitute a case report. A case report could focus on a new technique for performing a procedure or performance of a procedure for new indication. Cases that prove to be exceptions to clinical “rules” or that defy currently accepted theory would certainly qualify as case reports. An unusual combination of diseases in the same patient would also make a good case report because they may represent a common underlying pathway.

While some case reports are a record of rare events that could never be studied, some good case reports suggest a scholarly question amenable to inquiry. The most important case reports suggest either a change in practice, or a best practice, related to a particular medical condition.

What should I do if I think I have a case report?

If you are faced with a clinical scenario that may qualify as a case report, there are several important steps you should take. First, obtain permission from the patient to write the case up. Most patients, if they understand that the purpose is to advance the science of medicine, will be willing participants. Obtain a written consent from the patient – your institution will have a

standard consent form; many medical journals and conferences require these to even submit case reports. In the event of a patient's death, the next of kin can sign the consent form.

Second, it is important to make sure that your diagnosis is correct. Any alternative diagnoses should be explored in detail. This may mean doing a few additional tests in order to more definitively establish your diagnosis. This is acceptable within limits. However, it would be unethical to perform additional expensive or invasive tests just to make you case report stronger. For similar reasons, your history and physical examination should be even more thorough than usual. Obtain a good contact number in case additional information is needed later. Editors or reviewers may ask questions that you had not considered.

Third, perform a literature search (see chapter 3) to confirm that the scenario is as unique as you think it is. The search should be thorough but focused. Keep a detailed record of the exact search strategy you use so you can recreate it later and print it if desired by the journal. Next, combining the facts of your case with the literature review, formulate a hypothesis about the case. Determine what you think is the cause of the clinical scenario or how it adds to medical science. This hypothesis is the ultimate reason you feel the case warrants publication. Continue to refine this hypothesis until it is as simple and clear as possible.

Lastly, pick the journal to which you want to submit the case report. The best way to do this is to browse through a few back issues of candidate journals. Read the instructions for authors for guidance on the types of cases the journal is likely to publish. Look at case reports they have published recently and determine if you can envision your case among them. Your program director and your institution's medical librarian will also help find suitable journals. The table below lists several journals that frequently publish case reports.

Journals that frequently publish case reports:	
Archives of Dermatology	Clinical Geriatrics
Journal of Infectious Diseases	American Journal of Medicine
Medical Journal of Australia	Postgraduate Medical Journal
Southern Medical Journal	Family Practice
Journal of the American Board of Family Medicine	Military Medicine
American Journal of Obstetrics and Gynecology	Obstetrics and Gynecology
Journal of Abnormal Psychology	Mayo Clinic Proceedings
Journal of the American Osteopathic Association	Annals of Pharmacotherapy

The most difficult part of writing up a case report, or any type of medical literature, is getting started. Getting the first word on the page can be incredibly difficult for most people. I call this phenomenon “the inertia of the blank page”. Once this inertia is overcome, the rest of the manuscript will likely follow easily. Therefore, when writing the first draft, don’t worry much about grammar, punctuation or spelling. Just get your ideas on the page. There will be plenty of time to do revisions.

Make a timetable for completing your manuscript. Determine some landmarks along the way to publication such as “first draft written”, “first revision done”, “final draft done”, “submitted to journal” and assign deadlines to them. Backwards planning works well for this. These deadlines will serve as motivation to complete that step. For most case reports, it is reasonable to expect 3 to 6 months until you can submit your manuscript although this will depend on many factors including the complexity of the case and how busy you are with other responsibilities.

An outline is an extremely helpful tool for completing a case report. I use an outline modified from McCarthy and Reilly⁴. Filling out this worksheet will insure that you have addressed the important aspects of the case. It also serves as a complete but concise outline for writing your manuscript. By the time you turn the bullets on the worksheet into sentence and paragraph form, you will have a well-organized, nearly complete manuscript.

CASE REPORT WORKSHEET

Title _____

Abstract

Clinical question or problem _____

Analysis of literature review _____

Summary _____

(Continued next page)

(Case Report Worksheet, Continued)

Case history

Description of patient _____

History of presenting condition _____

Physical Exam _____

Relevant lab/X-ray/other tests _____

Initial diagnosis and treatment _____

Case outcome _____

Literature search

Search engine _____

Search strategy _____

Results of search _____

Discussion

Relevant literature _____

Relationship of this case to literature _____

Hypothesis _____

Diagnostic process/course of illness _____

Outcomes _____

Significance of case _____

Conclusion

Lessons learned _____

Recommendations _____

Areas of future research _____

References

When you compose your title, try to use MeSH terms so that your case report is more easily found using search engines like MEDLINE⁵. Some journals will request an introduction rather than an abstract. If given your choice, however, an abstract is preferable. Abstracts are included in a MEDLINE reference while introductions are not. Having the abstract available increases the chances others will read your work. Focus on pertinent positives and negatives when writing the case history and only include significant laboratory and radiographic data⁶. Always document what therapy was initiated and what the outcome of the case was. Cohen has published a terrific list of considerations if your case describes a new medication interaction or side effect.⁷

It is best to include your exact search strategy in the manuscript so that editors, reviewers and readers can reproduce it if they wish. Avoid doing a comprehensive literature review in the discussion phase. Only describe how the case fits into the existing medical literature or changes how we should think about a condition. In describing your hypothesis about the case, be brief and clear. Your conclusion should focus on lessons learned. You may also choose to make recommendations to clinicians who see similar cases or suggest areas of future research. Never conclude with “every physician should be aware of this condition”. That is a tempting, but unrealistic, conclusion for a unique case.

Expect that you will have to perform at least 3 or 4 revisions. Between revisions, put the manuscript aside and don't think about it for at least 48 hours. After, you will read your work with a fresh set of eyes and be able to identify areas needing improvement that you previously missed. Focus on repeated phrases and making sentences more concise. It is also important to find one or two independent peers to review the manuscript. It is important that these reviewers are honest and willing to provide constructive feedback. Reread the instructions for authors to insure you have conformed to the journal's standards, including word count, before you submit the manuscript.

Statistically speaking, it is not unusual to have even good case reports rejected by the first journal you send it to. If you get rejected, simply pick another journal. Use any feedback you get to improve your product and resubmit after reformatting to meet the new journal's standards.⁸

Summary

Family physicians are uniquely positioned to find case reports because of their breadth of knowledge and the high volume of patient they see. Published case reports are valuable additions to the medical literature and are excellent career development tools. Using the worksheet provided in figure 1, a case report can easily be ready for submission within a few months.

Summary Points:

- ❖ Case reports are an excellent mechanism to inform a wider audience about a clinical experience, aid in the identification of new clinical identities, and break into publishing in the medical literature.
- ❖ The definition of a case report is broad and includes cases that suggest a change in practice, a best practice for a particular medical condition, a previously unpublished complication of a common therapy, a rare presentation of a common disease or a common presentation of a rare disease.
- ❖ When writing a case report realize that your first draft is just that, a draft, and just get started writing (worry about grammar, punctuation and spelling later).
- ❖ Your presentation of the case should be brief and clear, and your conclusion should focus on lessons learned.

References

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