

The Process of Writing a Case Report

Jared Kusma, Tracy Marko, Nisha Wadhwa, Joshua Davis, Lauren Nelson

APPROACHING THE PHYSICIAN

Identifying a unique or exciting case is the first step towards writing an excellent case report. The next step tends to be the most difficult for students, approaching the physician. It is important to realize that most attendings enjoy being asked to assist with a case report because it shows that the student is interested and wants to learn. The following are the key things to keep in mind when approaching the attending:

- **Ask early.** If the case seems like one that would make a good report, it is important to ask early so you can gather information while taking care of the patient. It will make things easier when you begin writing the report.
- **Do not be afraid to ask. The worse outcome is that they say no.** Most physicians in teaching hospitals are widely open to allowing students to publish case reports.
- Try to find a **unique case** and have a **goal of your report** in mind (see below).
- Tell the supervising physician **WHY** you think this case fits into one of the goals below or would make a good case report. Even if they say no this time, they may offer insight into what would be a better case.
- Make sure to ask them how they want to be involved, i.e., if they want to be a co-author, review the report, or not be involved at all. Each attending has his or her own preference.

OBTAINING CONSENT

Once you have the permission of the physician, the next step is to approach the patient. It is not only important, but **in most cases legally necessary to obtain consent**. There are a few cases where obtaining consent is not required by law, but it should still be pursued from an ethical standpoint¹⁻². The following will provide you with information on how to explain the benefits and importance of a case report, how to obtain consent, and the necessary information you have to provide to the patient.

- Explaining the importance of case reports
 - Why do you want to publish it?
 - Who may it help in the future?
 - If the patient had a long road to the diagnosis or trouble with treatment, a case report may be the first step in helping future patients avoid those troubles.
 - A case report is the first step in helping to find key signs and symptoms to make future diagnoses simpler.
- Information the patient needs to know
 - Explain that any **identifiable information that is not essential to the report will not be included**¹.
 - If the disease is rare or the case report is read broadly, explain that this could potentially lead to identification of the patient, even though no identifiable information is included².

- Obtaining documented consent
 - Many institutions require specific consent forms, especially for videos or photographs of patients.
 - Have the **patient sign the release form** that your institution provides.
 - If the patient is deceased, you must have consent from the patient's estate.
- What if the patient refuses?
 - Ask the patient, "May I ask why you are refusing?"
 - **DO NOT** argue with the patient. In the end it is their right to refuse and you must respect that.

GOALS OF A CASE REPORT

Writing a case report is a great opportunity to share an interesting case with your peers. An appropriate case could be a rare disease you've encountered, but could also be an unusual presentation of a common illness. The idea is to present a unique topic that could be of benefit to the reader. Doing a quick literature search beforehand may help you determine if your case is unique. Importantly, a case report is a wonderful way for a medical student to try their hand at scientific writing, and perhaps gain a publication in the process!

While case reports are somewhat falling out of favor within the medical literature community, they do serve as an important source of anecdotal, but nevertheless meaningful, knowledge to help anchor important teaching points. Furthermore, the case report format is generally more flexible and conducive to covering holistic patient care topics³. Certainly, the things we remember best are often attached to patient stories. Below are a few guidelines regarding the goals of a case report divided into cases that focus on different categories: diseases, diagnoses, treatments, and systems⁶.

- **Diseases.** A number of criteria can be helpful to think about when selecting an appropriate case to write up; consider selecting a patient with a disease of unknown etiology, an atypical clinical course, or a rare disease.
 - In pediatrics, congenital defects or previously uncharacterized anatomical anomalies are of particular relevance.
- **Diagnoses.** If the path to diagnosing your patient was particularly challenging or there were a few pitfalls in the work up, your summary of this process could help others avoid the same mistake. While the goal is not necessarily to write a case in the same style as a "morbidity and mortality" case presentation, walking readers through the errors made and how they were identified and addressed may prevent similar errors by other clinicians.
 - Providing the reader with the original differential diagnoses considered and before arriving at the final diagnosis increases the utility of the report.
- **Treatments.** Similarly, a case in which the treatment had an unexpected effect, or in which the setting of care was unusual, may be a good candidate for a case report. Adverse or unexpected drug reactions would also be appropriate. Lastly, consider selecting a case that captures a clinical situation that would be impossible to replicate

due to ethical reasons. For these scenarios, case reports are a particularly important learning source.

- Consider the novelty of the information being presented. For example, if considering a drug reaction as your case, review the literature to ensure this reaction was not already known or that a drug within the same class resulted in similar effects.
- **Systems.** The American College of Physicians advises to “consider presenting a case if it increases awareness of a condition, suggests the proper diagnostic strategy, or demonstrates a more cost-effective approach to management⁹”. Cases that are rich with learning points, even regarding the systems healthcare professionals much navigate to provide quality care, are valuable and worth sharing.

Remember that ultimately, case reports should be educational in nature. The most useful reports cover a particular patient story, but branch out into broader teaching points that help provide that particular case with context and meaning. Even as a student, you have the ability to contribute to the medical education of your colleagues.

WRITING THE REPORT

Now that you’ve decided on a case, it is time to gather all of the relevant information into one place, including history and physical exam notes, labs, and imaging. If follow-up visits and reports are available, they are incredibly helpful in creating a complete story, even if the patient has been followed for a prolonged time period and has had no complications. If the patient is available, speak to them specifically regarding the case report, trying to gather information about their experience that will supplement your clinical information.

Sitting down and writing a draft is the hardest part! **Break your draft into appropriate sections (Table 1) and start with bullet points.** Obtain feedback from others on your team and your mentor, and when you feel like you have a complete case, start putting it together into paragraph form. Remember this is **not a patient’s note**. Take care not to have fragments, especially in the history: **a subject and verb needs to be in every sentence**. “No rales, rhonchi, or wheezes,” is not a sentence.

The sections of the paper vary depending on where you are submitting your case report. **Before you start drafting your report, investigate the requirements for your journal of interest.** Typically, they include some combination of the following: abstract, keywords, introduction, H&P (presenting concerns, clinical findings, timeline), diagnostic focus and assessment, therapeutic focus and assessment, follow-up and outcome, patient perspective, discussion, and patient consent^{3,5,6}. **Although the abstract is listed first, this should be written last, as it will incorporate elements from each of the other sections.** When submitting a case for a poster session, typically only the abstract is required. Identify the components that will be expected in the poster and construct your abstract from bullet points in these sections. Again, the structure of the abstract and word count will vary based on journal/conference.

Reading case reports from your target journal, *New England Journal of Medicine*, and *Pediatrics* can give you some guidance on the presentation and language of your case report. The abstract is a short summary of the case that includes important lessons learned. The

introduction shares the background of the disease, the patient, or the situation in which the patient was encountered. This is also where you can discuss what has been previously reported in literature. When presenting your case, use medical language and follow the traditional medical documentation: H&P, diagnostics, diagnosis, and prognosis. Be selective with the information you include that helps create a focused story and leads the reader to the goal of your case report. The discussion is where you can explain the importance of the case. This is when you expand on your findings and how the case should direct future practice if something similar is encountered in the future. Why is this case important? In the conclusion, summarize the case and the lesson(s) you have learned.

Table 1: Sections of a Case Report^{3,5,6}

Abstract	Short summary of the case.
Key Words	2-5 words that assist in searching for the case report.
Introduction	Background of the disease. Background of the patient. How the patient was encountered.
H&P	How did the patient present?
Diagnostic Focus and Assessment	What were the steps that led toward the diagnosis? What was the thought process? What were the test results?
Therapeutic Focus and Assessment	What therapies were tried? What were consultant recommendations? What worked, what did not?
Follow-up and Outcome	What was the final result? What adverse results were noted? How did the patient adhere to treatment?
Discussion	Discuss the summary of the case and its results. Discuss the importance of the case.
Conclusion	Summarize the case. What are the important lessons learned?
Patient Perspective	What was the patient's experience?
Patient Consent	State that the patient provided informed consent.

After you have completed the case report, have your team and mentor edit the report. It is also valuable to ask someone outside of your team to read your report for an external perspective. This is a good opportunity to identify areas that need further explanation to someone who is not familiar with your patient.

SUBMITTING THE REPORT⁴

The general information needed for submitting your case report to *Pediatrics*, the official peer-reviewed journal of the AAP can be found at http://www.aappublications.org/content/pediatrics-author-guidelines#case_report but for simplification a summary is provided below:

- Necessary for Submission: Guidelines for each can be found on the website provided above
 - Cover Letter
 - Title page
 - Contributors' Statement Page
 - Conflict of Interest Statements
- Format (from the AAP Publication website)
 - Times New Roman font, size 12, black
 - Title Page, Contributors' Statement Page, Abstract, Acknowledgments, and References should be **single-spaced**
 - Only the Main Body Text should be **double-spaced**
 - Main Submission Document as Microsoft Word or RTF file (no PDFs)
 - Do **not** include page headers, footers, or line numbers in new submissions.
 - Do **not** include footnotes within the manuscript body. Footnotes are allowed only in tables/figures.
- Specific for a Case Report (from the AAP Publication website)
 - Abstract → 250 words or fewer
 - Article Length → 1600 words or fewer
 - Author Limit → 7 or fewer
 - Criteria for submission: Must meet at least 1 of 3
 - Challenge an existing paradigm
 - Provide a starting point for a novel hypothesis
 - Focus on a topic pertinent to a pediatric generalist
- Submission → Case Report should be submitted to Manuscript Central (<https://mc.manuscriptcentral.com/pediatrics>). It will provide you with step-by-step instructions on the final submission process

REFERENCES

1. Case Reports - Health Sciences Campus Institutional Review Board. Health Sciences Campus Institutional Review Board.
<http://viceprovost.tufts.edu/hscirb/policies-regulations/case-reports/>.
2. Gibson E. Publication Of Case Reports: Is Consent Required? Paediatrics and Child Health. November 2008:666-667.
3. Majumder K. A young researcher's guide to writing a clinical case report. Editage Insights.
<http://www.editage.com/insights/a-young-researchers-guide-to-writing-a-clinical-case-report>. Published June 8, 2015.
4. Pediatrics Author Guidelines. AAP Gateway.
http://www.aappublications.org/content/pediatrics-author-guidelines#case_report.
5. Presenting a Clinical Vignette: Deciding What to Present. American College of Physicians.
<https://www.acponline.org/membership/residents/competitions-awards/acp-national-abstract-competition/guide-to-preparing-for-the-abstract-competition/presenting-a-clinical-vignette-deciding-what-to-present>.
6. Riley D. Case Report Writing. Case Reports: a little structure goes a long way.
<http://www.care-statement.org/case-report-writing-template.html>. Published June 18, 2014.
7. Rison R. A guide to writing case reports for the Journal of Medical Case Reports and BioMed Central Research Notes. Journal of Medical Case Reports.
<https://jmedicalcasereports.biomedcentral.com/articles/10.1186/1752-1947-7-239>.
Published November 27, 2013.
8. Weimer S. Publishing A Case Report: What, Why, And How?
9. Writing a Clinical Vignette (Case Report) Abstract. American College of Physicians.
<https://www.acponline.org/membership/residents/competitions-awards/acp-national-abstract-competition/guide-to-preparing-for-the-abstract-competition/writing-a-clinical-vignette-case-report-abstract>.