

How to Write a Case Report

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A case report is the collection and publication of important, detailed information about an individual, authored by the practitioner for publication in a peer-reviewed journal. It presents the clinical features, diagnosis, investigation and/or the treatment of unusual problems or the previously unreported presentations of known clinical conditions. Discussed here are the different types of case reports and the stages involved in writing a case report. There are two types of case reports: Prospective and Retrospective.

The six stages of writing a case report are: 1. Selection of a case, 2. Literature search, 3. Collecting information related to the case, 4. Choosing a journal, 5. Writing and summarizing, 6. Final review and editing. When published, the case reports have the following sub-headings: Case description, Discussion and Conclusion, followed by References. It is important to note that case reports do not provide cause and relationship, so its authors and readers should refrain from making any causal inferences from the findings of a case report.

Despite the limitations of case reports, they are valuable resources of new information, useful to generate new hypotheses for future large scale trials. Case reports are under-represented in the acupuncture literature and there is a need to expand the number of reports to understand the role of acupuncture in new and emerging diseases. A well-written case report with sufficient support literature and detailed description of the management of the case has the greatest chance for publication.

Types of Case Reports

Retrospective: Information is provided from the patient's record such as history, examination findings, results of investigations, if any, diagnosis and the actual details of intervention and follow-ups. It is written after the care has been provided. While a simpler method than the prospective case reports, often pertinent information, such as valid and reliable diagnostic criteria and outcome measures, might be missing. In such cases, reviewers might reject publication of the case report.

Prospective: Prospective case reports are planned well in advance. They follow all the steps of a clinical trial, from writing a brief proposal to collecting data in a systematic manner. The planning includes determination of objectives, logistics of data collection, standardized outcome measures, details of study intervention, and data analysis methods. Although the

prospective case reports require a great amount of work initially, the early planning and preparation makes it easy for publication later.

Note: Regardless of the type of case report, it is necessary to obtain consent from the patient. Approval from an Institutional Review Board (IRB) or Human Ethics Committee might be required for some prospective case report writing. Clinicians are recommended to refer to the Human Subject Protection guidelines provided by the Office for Human Research Protections (OHRP) within the US Department of Health and Human Services (DHHS) and also contact an IRB for clarification purposes.

Stages in Writing a Case Report

1) Selection of a Case

- Identify a compelling and interesting case to report. This may be someone who was treated in the past or is yet to be treated. A specific purpose for reporting this case must be contemplated at this stage.

2) Literature Search

- It is essential to do an extensive literature search. Include searches in PubMed (National Library of Medicine Database), MEDLINE, CINAHL (Cumulative Index to Nursing and Allied Health), AMED (Allied and Complementary Medicine Database), Acubriefs.com (comprehensive database of references on acupuncture established by Medical Acupuncture Research Foundation) as well as using Google in the search for information on the topic of interest. Many educational institutions subscribe to the above databases or/and online journals, and full-text articles are available for a flat fee per article. If the search results are very few, this indicates the condition is rare and stands a good chance for publication (Anwar, 2002). A thorough and critical review of literature provides the background and the current status of the topic as well as significance of the case report.

3) Collecting Information Relating to the Case

- A detailed history of the subject's present illness must be collected from his/her records. This includes onset, severity, aggravating and relieving factors, examination findings, laboratory results, radiographs, photographs, treatment, and outcome. Treatment outcomes supported with an objective measure are highly recommended.

4) Choosing a Journal

- The decision on where to publish the case report is an important step before writing it. Each journal has different requirements regarding topics of interest, length, and formatting. Most acupuncture and Chinese medicine journals provide instructions and submission guidelines to authors. Some also provide acceptance criteria. To prevent rejection, it is

important that the case report strictly follow these guidelines. Two important things to consider in journal selection are whether it is a peer-reviewed journal and whether its readership includes the target audience intended for that case report.

5) Writing and Summarizing

- Case report writing is one of the best ways to begin medical writing. For acupuncturists who come across unusual outcomes or presentations of their clinical cases, it would serve them well to consider case report writing for publication.
- Once all the material has been collected, it is best to begin by writing a rough draft of the case history and then develop the literature review and discussion sections. Some of the issues to consider during this stage are the number of tables, figures, formatting, and the minimum number of references that will be required to provide complete information about the case. Furthermore, the number and order of authors should be decided at this stage. If you have a question about who must be considered as an author, refer to Uniform Requirements for Manuscript Submitted to Biomedical Journals (www.icmje.org/index.html).

6) Final Reviewing and Editing

- It is important to assess and improve the quality of the writing. After the report is drafted, read the report three times. Attention must be paid to unnecessary punctuation, jargon words, length of sentences, spelling, grammar and adherence to the journal's requirements. It is also wise to evaluate the case report using checklists that are available exclusively for this purpose.

Formatting a Case Report

- The **TITLE** should be short, descriptive and must draw the reader's attention. It must include the words "case report" or "case study."
- The **ABSTRACT** is a summary of the case report which provides a succinct description of the case, the intervention and the outcome. It should contain 100-250 words. The main purpose of an abstract is two-fold. First, it provides easy retrieval from electronic databases. Second, it gives a glimpse of what information the case report contains and thus requires the author to convince the reader to read the full-text.
- For the **INTRODUCTION**, one should clearly define the purpose of the case report. It should also provide background information about the patient's condition supported with sound references. This information should include one or two sentences each about the disease incidence and prevalence rates, etiology, current treatments, etc. A brief

literature review is required in this section. Any unusual terms must be defined in this section as well.

- The most important section of the case report is the **CASE DESCRIPTION**. Begin with patient demographics such as age, height, weight, sex, race and occupation.
 - Put the patient's history of present illness, past illnesses, family history, personal history, etc. into a concise narrative form. Following this history, list all the patient's laboratory and diagnostic data with normal values along with examination findings.
 - The management plan needs to be described in detail using STRICTA criteria. These guidelines require acupuncture rationale that explains why the particular chosen treatment, point selection, diagnosis and treatment procedures were used. It also requires description of needling details such as depth, unilateral or bilateral, *de qi* sensation, stimulation of needles, and the number of points. Other requirements include treatment regimen, co-interventions, practitioner's background, and control intervention (if any). For a case report, there is no control group for comparison. Therefore, a detailed description enables replication of the procedures if desired.
 - The patient's data must be described using a reliable outcome measure and should indicate the change in the values, but it is not necessary to discuss the values in this section; this should be done in the following section. Finally, adverse events, however mild they can be, need to be recorded and reported in this section. Remember, the patient must always be described as a "person" and not as a "case."
- For the **DISCUSSION**, the patient's condition and the result (change in the outcome measure) need to be detailed. The patient's condition must be presented as to why the case was unusual, rare, or important. This should follow with a discussion on the differential diagnosis and how other diagnoses were refuted. Explain the outcome with other possible mechanisms such as regression to the mean or any influence of co-interventions. Briefly discuss the rationale for choosing the management plan used and compare it with others.
- The **CONCLUSION** should provide a statement on how this case report contributes to the relevant body of knowledge, but avoid drawing conclusions that indicate a cause and effect relationship because of the inherent weakness of the case-study design. Usually a sentence on recommendations for future studies on the topic is allowed here.

- All **REFERENCES** must be from peer-reviewed journals or other peer-reviewed sources. Although there is no definite number, 10-15 references are standard. There can be more, but usually not less. For formatting the references, refer to the journal's author's guidelines. Software such as EndNote and RefWorks are useful to format the references according to the journal's requirements.

Checklist for Case Reports

Introduction		Yes	No
1	Is the rationale for reporting the case adequately explained?	<input type="checkbox"/>	<input type="checkbox"/>
2	Is the rationale for reporting the case adequately substantiated by references?	<input type="checkbox"/>	<input type="checkbox"/>
Case Description			
3	Is the case described adequately?	<input type="checkbox"/>	<input type="checkbox"/>
4	Is the case described briefly?	<input type="checkbox"/>	<input type="checkbox"/>
5	Is the case described clearly?	<input type="checkbox"/>	<input type="checkbox"/>
6	Are the results of less common laboratory investigations accompanied by normal values?	<input type="checkbox"/>	<input type="checkbox"/>
Discussion, Comments			
7	Is the evidence to support the author's diagnosis presented adequately?	<input type="checkbox"/>	<input type="checkbox"/>
8	Is the evidence to support the author's recommendations presented adequately?	<input type="checkbox"/>	<input type="checkbox"/>
9	Are other plausible explanations considered and refuted?	<input type="checkbox"/>	<input type="checkbox"/>
10	Do authors indicate directions for future investigation or management of similar cases?	<input type="checkbox"/>	<input type="checkbox"/>

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