

# Guidelines to Case Report Writing for Naturopathic Doctors

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## ABSTRACT

Case reports play an important role in disseminating information to the medical community. Given the wide variety of naturopathic clinical practice, case reports offer an excellent opportunity to share clinical insights from naturopathic doctors. Typically, unique and rare events or patterns are depicted regarding different aspects of a case, including: symptomatology, pathophysiology, treatment(s), and outcome, including adverse effects. In this paper we elaborate on what a case report is, why one is conducted, and provide a brief set of guidelines on how one is written. We hope to encourage clinicians to write case reports and to submit them for publication. The case report is a well-respected venue for sharing valuable knowledge and generating questions derived from practice. The production of this form of clinically relevant evidence should be actively encouraged within the naturopathic community.

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The peer-reviewed medical literature contains articles that cover virtually all topics within medicine including research on therapies used by naturopathic doctors (NDs). The literature is growing at an incredible rate and there is plenty of opportunity for both dedicated researchers and clinicians to participate in this process. Complex studies such as randomized controlled trials, systematic reviews, and large observational trials can be daunting to the practitioner who has little training in research methodology and too little time. The role of the clinician in private practice is critical, however, for the introduction of important clinical information from the ground up. The strength of case reports and case series is primarily in their ability to inject new information into the medical consciousness and to generate hypotheses that can be tested in controlled studies.

Case reports provide a level of evidence that is often a starting point for further research. A classic example is the drastic teratological adverse effect of thalidomide on fetal development. A single case report opened the eyes of the medical community in the late 50s when thalidomide was being touted as an effective treatment for nausea and vomiting of pregnancy. This case report opened a floodgate of responses and the publication of further case reports that quickly led to the drug being pulled from the market (1). Ironically it is through the publication of case reports that thalidomide has been brought back into usage more recently as a treatment for certain dermatological pathologies (2).

Naturopathic medicine incorporates an incredibly wide array of modalities often combined in unique ways. The holistic, individualized and eclectic 'nature' of naturopathic medicine makes the case report an ideal place to showcase the benefits and also the potential adverse events that can occur within its bounds. The intent of this article is to provide an overview of a case report, the reasons for writing one, and guidelines for writing and publishing such a report. We hope that this paper offers motivation and some of the tools necessary to carry out this process. The clinician who sees patients regularly is intimately aware of what works in practice. This shared knowledge is a resource that can benefit clinicians, the profession and ultimately our patients. The case report is a well-respected medium that should be encouraged so that valuable information is not limited to a few practitioners, but can be widely disseminated amongst colleagues.

## WHAT IS A CASE REPORT?

A case report is derived from the detailed reporting of events that take place within the context of treating and observing a single patient (i.e. case). The report is an in-depth longitudinal examination that is essentially qualitative in nature although it may well contain quantitative data. A case report is anecdotal in that it provides informal observations that are uncontrolled, not subject to the scientific method, and cannot be independently confirmed. Although such anecdotal evidence is not regarded as strictly scientific, it is often regarded as an invitation to more rigorous scientific study (3). For example, in an analysis of 47 case reports detailing side effects of drug therapy, 35 were found to be "clearly correct" (4). Primarily a case report is a way of communicating information to the medical world through the elucidation of unique and characteristic feature(s) of a condition, complications, and adverse effects and benefits of specific interventions. Case reports may also serve as a valuable research and educational tool (5, 6). Robert Iles notes that most medical case reports consider one of five topics (7):

1. An unexpected association between diseases or symptoms
2. An unexpected event in the course of observing or treating a patient
3. Findings that shed new light on the possible pathogenesis of a disease or an adverse effect
4. Unique or rare features of a disease
5. Unique therapeutic approaches

## WHY WRITE A CASE REPORT?

The objectives for writing a case report are mainly to 1) inform/educate; 2) share new knowledge/insight; and 3) document processes and procedures. Furthermore, within the naturopathic context, case reports can serve as a method for building evidence for naturopathic healthcare practice and expanding our *Materia Medica*. Having well-written case reports published in a reputable medical journal adds to the credibility of the naturopathic profession.

The goal of a case report is to provide information of value to the audience (i.e. interesting and relevant). Information provided in a report should contain unique features about the condition, the treatment, the outcome, and anything else pertinent to the case. A case report differs from a clinical case intake in that a case report is systematic, and includes a greater depth of detail, in-depth analysis, literature support

and conclusions about the findings. Case reports can also provide findings that are hypothesis generating.

As naturopathic doctors, there will likely be a strong desire to maintain a humanistic and holistic approach to care. While called a ‘case’ report, do not lose sight that we are talking about people. After all, we do not treat cases; we treat patients with presenting symptoms. Case reports provide us with a great tool for learning. Thus, case reports should be written about cases with both positive and negative outcomes, with the emphasis being on learning. In fact, as practitioners, we know that we often learn more from the negative cases. Furthermore, by writing a case report, practitioners will likely add to their own knowledge base.

## DESIGN & METHOD – “HOW TO WRITE A CASE REPORT”

So you have a case, now what? First, gather your information in a clear, concise manner. A worksheet is provided here for reference (see appendix 2). Once the information is gathered, it needs to be put together. The components of a case report can vary, again depending on whom or where you are writing for and how much time and energy you have. At the very least, a case report should contain 1) an introduction, 2) a presentation of the case, and 3) a discussion. If you are writing for the purpose of sharing academic knowledge, then it should include 1) an abstract, 2) an introduction with literature support, 3) an in-depth analysis of the case, 4) the discussion with literature documentation, and 5) a conclusion with recommendations or hypothesis generating ideas (5). A final and important point is that the key to writing a good case report is to be clear about the “single message” that you want to deliver (3). What is the priority message that you want the reader to take away? Clear description of this and development of why this is so will provide a meaningful addition to the literature and offer real benefit to your colleagues.

### COMPONENTS OF A CASE REPORT IN DETAIL

1. The *abstract* provides a concise synopsis of your case report to allow potential readers a quick glimpse into the content of your article. Depending on the journal, the length of an abstract may be 100 to 250 words.
2. The *introduction* provides the background to why the case may be of interest to the reader. Literature support on theoretical or research basis of the case may be presented here.
3. The *case presentation* gives the detailed description of the case (i.e. presenting symptoms, treatments and outcomes) and analysis of the findings. However, this does not mean you should go on ad nauseam on the details of the case. The goal is to provide essential information and noteworthy features that may be of interest to your reader.
4. The *discussion* is the most important part of the case report. This is where the significance of the case is discussed; what the outcomes are, what features are unique and interesting to the reader, and why this case is important. Supporting literature that is relevant to the case should be included here as well as ideas for generating hypotheses for future research.
5. The *conclusion* gives a brief summary to what you have learned from the case, any implications to clinical care and recommendations that other clinicians could learn from.

### OTHER CONSIDERATIONS

A case report is the medical history of a person and the clinical/therapeutic approach used to treat the person and achieve the outcome. The bottom line is that it is about a person. Thus, as an author, it is proper etiquette for you to get consent from your patient. In fact, obtaining consent from the patient is not only good medical practice, but also mandatory for some journals (8). In the consent form, you can inform your patient about your intentions, the types of information being shared, and any known or potential risks/benefits. It is your responsibility to ensure your patient’s confidentiality and anonymity. For example, if photographs are used, anonymity may not be guaranteed. In such a situation, the patient needs to be informed. See appendix 1 for a sample consent form.

### PUBLISHING

Before beginning to write the final or even initial draft of your report, you may first want to choose where you intend on publishing. Most peer-reviewed journals have very specific criteria regarding length, structure, and formatting requirements that need to be carefully followed if you want your work to be published. Choosing which journal to begin with will depend on a number of factors. Primarily, what is the condition and context of your case? Journals often focus on a specific pathological condition so if your patient is suffering from coronary heart disease, you’re obviously not going to try

to publish in the Journal of Pediatric Hematology/Oncology.

In choosing a possible home for your case report, good places to explore can be found in the medical databases. The best-known medical database is PubMed, a massive collection of peer-reviewed articles provided free by the National Library of Medicine and the National Institutes of Health in the US. PubMed can be accessed at [www.pubmed.gov](http://www.pubmed.gov) and is relatively easy to navigate with some practice (a tutorial is available). Another avenue to take is to seek out journals that focus entirely on Complementary and Alternative Medicine (CAM). The benefit here is that these journals are mandated to publish CAM-related research and will likely be more open to accepting your submission. A short list of possible candidates includes:

- *International Journal of Naturopathic Medicine*
- *Journal of Complementary and Alternative Medicine*
- *Integrative Cancer Therapies*
- *Evidence-based Complementary and Alternative Medicine*
- *Complementary Therapies in Medicine*
- *BMC Complementary and Alternative Medicine*
- *Complementary Therapies in Clinical Practice*
- *Alternative Therapies in Health and Medicine*
- *Alternative Medicine Review*

When writing for your peers and a general medically astute audience, the art of medical writing requires clarity and brevity (5). The importance of proper language and grammar usage needs to be followed closely (6). Finally, it is not uncommon to be rejected from one journal and then warmly welcomed by another. If, in the more common scenario, a journal's editor offers 'acceptance pending revision,' be sure to heed the reviewers' comments closely and respond to each of their concerns even if you disagree with them.

The process of conceptualizing, writing, and submitting a case report does take some time and can appear quite daunting to begin with. That said, publishing a case report

is rewarding both professionally and personally. You will be surprised at the correspondence that may arise and you can be sure that others will also benefit from your efforts.

## SAMPLE CONSENT FORM

Subject of article or photograph _____	
I have read the article or seen the photograph to be published and I give my consent for this material to be used for publication in ( <i>journal name</i> ).	
I understand that the article or photograph will be published without my name attached and every effort will be made to ensure my anonymity. I also understand that complete anonymity cannot be guaranteed.	
The article or photograph will not be used for advertising or packaging and will not be used out of context.	
Signed _____	Date _____
Print name _____	
If you are not the person in the article or photograph, what is your relationship to him or her? _____	
Witness _____	Date _____

\*\*Modified and adapted from Canadian Family Physician, Resources for Authors, Guidelines for Articles, Clinical Review, <http://www.cfpc.ca/cfp/authors/PDF/Consent.pdf>

## APPENDIX 1\*\*

## REFERENCES

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## CASE REPORT WORKSHEET

### (Content of a Naturopathic Case Report)

- Author(s)
- Title
- 1) Abstract
- A. Clinical question/problem
  - B. Objective of writing case report
  - C. Overview of literature review findings
  - D. Summary
- 2) Case history/report
- A. Description of the patient
  - B. History of presenting condition
  - C. Physical exam
  - D. Relevant tests
  - E. Differential diagnosis and working diagnosis (dx)
    - i. Conventional/Western medical dx
    - ii. Naturopathic dx (include assessment by TCM, Ayurveda, homeopathy, etc. as relevant)
  - F. Treatment protocol (include length and schedule of treatment(s) and rationale)
  - G. Expected outcome
  - H. Actual outcome
- 3) Literature search
- A. Database(s) used
  - B. Search terms
  - C. Results of search (relevant citations, what types of studies you found)
- 4) Discussion (significance, why you're writing this)
- A. Relevant literature (if any)
  - B. Hypothesis (if applicable)
  - C. Diagnostic process/course of illness (if available)
    - i. Table of diagnostic process (if applicable)
    - ii. Figures, photographs, imaging (if available)
  - D. Outcomes
    - i. Resolution (or lack thereof) of case
    - ii. Interactions
      - a. Between naturopathic therapies
      - b. Between naturopathic and conventional therapies
      - c. Other (suspected/known)
    - iii. Adverse events
    - iv. Other conflicting outcomes/observations
- 5) Conclusions/recommendations
- A. Lesson(s) learned
  - B. Need for further research
- 6) References

*\*Adapted from McCarthy LH, et al. 2000 (5); modified for reprint; reprinted with permission.*

#### APPENDIX 2\*