Selecting a Case & Writing a Case Report

Purpose: To provide helpful tips in selecting a case and writing a case report

Audience: Early career or novice case report authors

Summary: The first section serves as an aid in selecting a case for a case report. The second section provides a checklist of common contents of a case report.

Section I: Selecting a case. There are two decisions that need to be made prior to writing a case report.

- 1. Determine if a case is well suited to serve as a case report
- 2. Establish the educational message of the case report

The following sections are designed to assist in the initial stages of writing a case report.

1. Determine if a case is well suited to serve as a case report

The following categories of case reports are based on a compilation of categories adapted from large reviews of case reports $^{(1, 2, 3)}$. These categories can help determine the potential applicability of a case to serve as a case report.

Category	Case fits category?
An original condition / new disease	Yes / No
Rare or previously sparsely reported condition	Yes / No
Unusual presentation of a common disease	Yes / No
Unexpected association between two relatively	Yes / No
uncommon symptoms / signs	
Impact of one disease process on another	Yes / No
Unexpected event in the course of observing or	Yes / No
treating a patient	
Impact of a treatment regime of one condition	Yes / No
on another disease	
Unexpected complication of treatment or	Yes / No
procedure	
New and/or unique treatment	Yes / No
Medical education and audit	Yes / No

Adopted from Chelvarajah & Bycroft, 2004

2. Establish the educational message of the case report

Upon the identification of a case having the potential to serve as a case report, the second step is to establish the educational theme. Popular educational themes for case reports often fit into one of the following categories.

Educational Theme	Case fits theme?
Raise awareness so that diagnosis may be	Yes / No
made more readily in the future	
Shed new light on possible etiology/ parthenogenesis of a condition or complication	Yes / No
Illustrate a new principle, or support or refine current theory	Yes / No
Elucidate a previously misunderstood clinical condition or response to a treatment	Yes / No
Inform on how a problem can be anticipated and avoided in the future	Yes / No

Adopted from Chelvarajah & Bycroft, 2004

Note: While the above tables provide examples of categories and themes, they are not considered to be all-encompassing. Further discussions with research and clinical methodologists can be of value in this early stage of the process.

Section II: Writing a case report.

A case report tells a story in a narrative format that includes the presenting concerns, clinical findings, diagnoses, interventions, outcomes (including adverse events), and follow-up. The narrative should include a discussion of the rationale for any conclusions and any take-away messages.

It's helpful to identify a journal prior to writing the case report for two reasons:

- 1. Ensure your case report topic is aligned with the journals Scope and Aim.
- Verify the required format of the case report. Many journals have specific format requirements and often provide guidelines and examples for the case report.

The following checklist is a modified CAse REport (CARE) guidelines checklist (4, 5, 6).

Title:

 A focus on the phenomenon of greatest interest (eg, symptom, diagnosis, test, intervention)

Keywords:

• The key elements of this case in 2-5 words

Abstract:

- Introduction—what does this case add?
- Case Presentation:
 - The main symptoms of the patient
 - The main clinical findings
 - The main diagnoses and interventions
 - The main outcomes
- Conclusion—what were the main "take-away" lessons from this case?

Introduction:

 Brief background summary of this case referencing the relevant medical literature

Patient Information:

- Demographic information (eg, age, gender, ethnicity, occupation)
- Main symptoms of the patient (his or her chief complaints)
- Medical, family, and psychosocial history—including diet, lifestyle, and genetic information whenever possible, and details about relevant comorbidities including past interventions and their outcomes

Clinical Findings:

Describe the relevant physical examination (PE) findings

Timeline:

• Depict important dates and times in this case (table or figure)

Diagnostic Assessment:

- Diagnostic methods (eg, PE, laboratory testing, imaging, questionnaires)
- Diagnostic challenges (eg, financial, language/cultural)
- Diagnostic reasoning including other diagnoses considered
- Prognostic characteristics (eg, staging) where applicable

Therapeutic Intervention:

- Types of intervention (eg, pharmacologic, surgical, preventive, self-care)
 - Administration of intervention (eg, dosage, strength, duration)
 - Changes in intervention (with rationale)

Follow-up and Outcomes:

- Summarize the clinical course of all follow-up visits including
 - Clinician and patient-assessed outcomes
 - Important follow-up test results (positive or negative)
 - Intervention adherence and tolerability (and how this was assessed)
 - Adverse and unanticipated events

Discussion:

- The strengths and limitations of the management of this case
- The relevant medical literature
- The rationale for conclusions (including assessments of cause and effect)
- The main "take-away" lessons of this case report

Learning Points:

3 – 5 bullet points (what do you want the readers to remember?)

Image / video captions

- Inclusion is recommended by many case report journals
- Typically requires informed consent

Patient Perspective:

 The patient should share his or her perspective or experience whenever possible

Informed Consent:

• Did the patient give informed consent? Need to provide if requested

References:

• See journal requirements for style (e.g., Vancouver style, APA, MLA, etc.)

Note: There is variability by specialty in the content of a case report. Discussions with physicians within your specialty can be of value in writing a case report.

References

- 1. Chelvarajah, R., & Bycroft, J. (2004). Writing and publishing case reports: the road to success. *Acta neurochirurgica*, *146*(3), 313-316.
- 2. McCarthy, L. H., & Reilly, K. E. (2000). How to write a case report. Family Medicine, 32(3), 190-195.
- 3. Vandenbroucke, J. P. (1999). Case reports in an evidence-based world. *Journal of the Royal Society of Medicine*, *92*(4), 159-163.
- 4. Rison, R. A. (2013). A guide to writing case reports for the *Journal of Medical Case Reports* and *BioMed Central Research Notes*. *Journal of Medical Case Reports*, 7, 239. http://doi.org/10.1186/1752-1947-7-239
- 5. Gagnier, J. J., Kienle, G., Altman, D. G., Moher, D., Sox, H., & Riley, D. (2013). The CARE guidelines: consensus-based clinical case reporting guideline development. *Journal of medical case reports*, 7(1), 223.
- 6. Sun, Z. (2013). Tips for writing a case report for the novice author. *Journal of Medical Radiation Sciences*, 60(3), 108–113. http://doi.org/10.1002/jmrs.18