How to Write a Case Report
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Case Reports

What is a case report?
- A description of a single case of a disease, treatment, adverse effect, or other finding or event of interest.
- Typically short: often 1000-1500 words (review author instructions)

What is the purpose of a case report?
- Disseminate important, new knowledge (but is prone to bias, because n=1)
- Generate a new hypothesis
- Describe unique or nearly unique cases:
  - New diseases or syndromes
  - Unexpected associations
  - Unexpected events (good or bad; eg, side effects of drugs)
  - New diagnostic techniques or treatment options
  - Corroboration of others' findings
- Shed new light on the pathogenesis of disease or an adverse effect
- Describe medical errors and how they were addressed
- Remind readers of an important clinical lesson
- Suggest additional studies
- Use as a teaching tool: Case Records (New England Journal of Medicine), Clinician's Corner (JAMA), Case Presentations (cases with discussion, eg, Masterclass in Annals of the Rheumatic Diseases)

Why do journals reject case reports?
- Unoriginal observation
  - Verify uniqueness of your case by performing a thorough literature search (include "case report" in the search terms)
- Inadequate documentation
- Wrong audience
  - Review author instructions, "Aims and Scope" or "About This Journal" page, and the table of contents from recent issues
- Sweeping generalizations, or grandiose statements of clinical implications (don't overstate your conclusions)
- Unacceptable length

- Poor writing

Title Page
- Like that of any journal article, except…
    - Includes only a few authors
    - Title makes the case obvious (eg, "Plasma Exchange for Urgent Apixaban Reversal in a Case of Hemorrhagic Tamponade After Pacemaker Implantation")

Abstract (if required)
- Short (eg, 100 words)
- Usually unstructured (ie, no headers)

Introduction
- Consists of 1 to 3 paragraphs
- Written in present tense unless describing someone else's work
- Includes
    - Background: the clinical issue being addressed in the report (but not a detailed review of the general topic)
    - 1- or 2-sentence description of the case
    - Other cases directly relevant to yours (if needed for context)
    - The strategy you used to search for similar cases (or put this in the Discussion)
- Chief purpose of the Introduction is to explain why the case warrants a report

Case Description
- Include patient information essential to the report, such as
    - Demographic characteristics
        - Include patient age and sex
        - Race, ethnic origin, or occupation, when pertinent to the case
    - Symptoms at presentation or reasons for referral
    - Brief medical history
        - Include only details that are most relevant to the patient's current condition
        - Make the time sequence of events as clear as possible; avoid flashbacks except at the beginning
    - Physical examination results
    - Lab test results (only those pertinent to the report)
    - Other test results
        - Report precise data for all results—not "within normal limits"
        - Focus on positive results and *only the most relevant* negative results
    - Treatment

- Give exact dosages of drugs
- Outcome
- Figures (images, photos, drawings), especially when readers are unlikely to have seen what you are reporting
- Include the patient's status at most recent follow-up
- Maintain patient confidentiality
  - Don't identify patients without their consent
  - Don't use the patient's initials
  - Get permission to include photographs
- Write mainly in past tense; use past perfect tense (eg, "had seen") if an event occurred before another event
  - A 35-year-old woman was admitted…She had undergone coronary artery bypass 5 years earlier…
- Emphasize symptoms, findings, or aspects of treatment that distinguish this case from others (and therefore make it worthy of a case report)

Discussion or Comment

- Focus on the case's importance or uniqueness
- Discuss the relationship of your observations to pertinent scientific literature
- Don't write a literature review, unless requested
- If reporting a new treatment approach, explain why conventional treatments were ruled out
- Summarize and give implications of your case for research, diagnosis, or treatment
  - If relevant, suggest a hypothesis for a future study

Conclusion

- Limit it to one paragraph
- Focus on what has been learned from the case

References

- Include 10 or fewer (depending on the journal)
- Cite mainly recent, peer-reviewed articles

Related Types of Papers

Case Series

- Usually describe 2 to 5 cases
- Report the same information for each case
- From the findings, form generalizations and conclusions about anatomic, etiologic, epidemiologic, pathologic, diagnostic, or therapeutic aspects of a disease

- Suggest experimental or statistical studies
- Obtain IRB approval if series includes 4 or more patients

Technique or Methods Papers
- Describe an innovative technique, instrument, or method
- Keep it brief
- Focus on a step-by-step description of the method
  - Use illustrations, photos, or video
- Submit to journals that have sections specifically for techniques, such as "Clinical Notes," "The Surgeon at Work," or "How I Do It"
  - Some journals publish these papers as letters to the editor
- Learn the format
  - Short introduction
  - Description of the new technique, technology, or method
  - Discussion
    - Explain the value
    - Describe your own experience

Image Papers
- Include a small amount of text (150-500 words)
  - Text briefly describes the patient's history, relevant physical and laboratory findings, clinical course, response to treatment (if any), and condition at last follow-up
- Include figure legends, if needed (in some journals, the text serves as the legend)
- Label all structures in the image, and explain the labels in the legend (or in the text, if there are no figure legends)

When Writing a Case Report, Keep the Patient in Mind

Avoid wording that
- confuses patients with body parts, diseases, or procedures
  - Bad: Cyclosporine is used to treat organ transplants.
  - Better: Cyclosporine is used to treat patients who have received organ transplants.
- makes patients seem like commodities
  - Bad: We managed the patient with penicillin.
  - Better: We managed the patient's infection with penicillin.
- implies that patients are to blame for their conditions
  - Bad: Five patients failed treatment.
  - Better: Treatment was ineffective in 5 patients.

Avoid emotionally charged words like "victim," "suffered from," "complained of," and "denied." Use "had," "reported," etc.

Don't define patients by their disease
- Bad: arthritics, diabetics
- Better: patients with arthritis, patients with diabetes

Use descriptors appropriate for human beings
- Bad: A 40-year-old <u>female</u>
- Better: A 40-year-old <u>woman</u>
- Bad: Patients <u>that</u> present with…
- Better: Patients <u>who</u> present with…

Avoid using "elderly" as a noun
- Bad: This disease is common in <u>the elderly</u>.
- Better: This disease is common in <u>patients older than</u> X <u>years</u>.