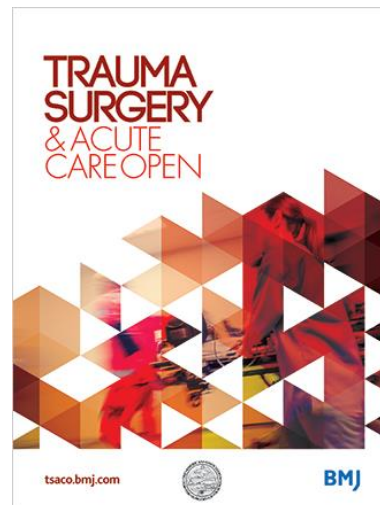


REVIEWING FOR *TRAUMA SURGERY & ACUTE CARE OPEN*

Why Review?

As academic surgeons active in research, we rely on the peer review system to ensure high-quality and accurate papers are published in our journals. The peer review process not only ensures an objective and ideally unbiased pre-review of the science but also provides authors valuable insights and constructive recommendations related to their work. As someone active in the field, agreeing to review the science is also a way to “give back” to a system that we rely on for feedback on our work as well.

Your review of an article will influence the trajectory of the field. Therefore, it is crucial that reviewers provide thoughtful, accurate, and objective reviews. The ability to provide a high-quality review, however, is not an inherent skill but a learned one. The goal of this didactic is to provide an orientation to peer review and a guide to writing high-quality scientific reviews.



This document is intended to provide our reviewers with an overview of how to approach reviewing for TSACO. We recognize that reviewers have different approaches but hope that this can help those who are new to the review process. We welcome your comments and feedback. Feel free to contact us at info.tsaco@bmj.com with any questions or comments.

When to Agree to Review

TSACO’s Associate Editors work hard to try and identify reviewers for an article. Your quick response to an invitation is very helpful because it enables the journal to provide prompt responses to authors seeking publication.

If you are invited to review, consider the following before accepting an invitation.

1. Are you qualified to review the paper? Is this an area of relative expertise for you so that you can provide an informed evaluation of the science? While expertise in every aspect of the article is not required (or likely possible), a reviewer should have reasonable experience in core topics of the research.
2. Do you have a conflict of interest? Conflicts of interest are variable but may include a close relationship with the authors, competing professional or academic relationships, or an inability to maintain objectivity,
3. Do you have time to complete the review in a prompt manner? Budgeting 2-3 hours for a review is reasonable, though the time and effort will vary depending on the submission.
4. If you are willing to review, respond promptly to editors. The same logic applies if you need to decline.

Critical Evaluation of a Manuscript

Various review guides will recommend reading a manuscript multiple times as part of the review process. This is certainly helpful but may or may not be practical depending on time available. In general, reading the manuscript twice is a reasonable and efficient approach to the review.

The First Read

The purpose of this reading is to understand the purpose of the study and to evaluate the authors' results and conclusions. After the initial reading, the reviewer should be able to assess the following.

1. Does this work meet the criteria of the chosen journal? Is the content appropriate for the journal? Does the quality of the work meet the requirements of the journal?
2. Is the paper written in a comprehensible manner? While the definition of "well-written" may be subjective, the reviewer should be able to note if the article is well-organized, written in a clear and concise fashion, and uses proper grammar. Correction of grammar, spelling errors, and typos, however, is *not* the responsibility of the reviewer!
3. Are figures and tables helpful and additive?
4. Are there any fatal flaws in the research? Fatal flaws may include an inappropriate study design, major interpretation errors, inadequately powered work, or ethical issues. A fatal flaw may result in a rejection or referral to the editor of the journal for adjudication.

The Second Read

The core evaluation of the manuscript should occur in the second reading of the manuscript. It is very helpful to take notes as you go, either electronically or on a paper copy, to keep your thoughts organized. If the reviewer has access to two monitors or computers, it is efficient to take notes directly in the "comments to authors" section of the journal review site.

When reviewing each section of the manuscript, the following should be considered.

Abstract

- Does the abstract accurately reflect the data in the body of the text?
- Does the abstract present a clear and concise summary of the manuscript?

Introduction or Background

- Does this study address an important question or a particular area of interest for the academic community?
- Does the introduction make a concise case for the need for the research presented? In other words, is the study original?
- Is there a clear hypothesis or purpose stated by the authors?

Methods

- A statement of IRB or IACUC approval should be included when appropriate.
- Are the methods used in this study defined clearly enough that another researcher could replicate the work?
- If appropriate, is the study adequately powered to answer the question?
- Are the statistical methods employed appropriate for the study question? The statistical analysis is particularly important but is often addressed in a cursory fashion. However, inappropriate test choice and failure to control for confounding variables may be fatal flaws that render results invalid. Additionally, the use of more advanced statistical techniques may be beyond the expertise of many reviewers. In these circumstances, the reviewer should recommend to the editorial staff that the submission be reviewed by a statistician.

Results

- Are the results presented in a concise and logical fashion?

- Are readers able to evaluate and understand the results presented in the tables and figures by themselves?
- Is there significant redundancy between the tables/figures and the text of the results? Some overlap may be useful, as in cases where a figure provides a clearer way to understand the data. However, complete overlap of data in the text and tables is not helpful.
- Are there any major discrepancies noted in the data?
- Note that discussion of results should be deferred to the discussion section and *not* included with the report of results.

Discussion

- Does the discussion allow the reader to understand the results and frame it within the existing science?
- Are significant limitations of the study both acknowledged *and* discussed? If significant limitation exists, does it invalidate the study or does the author help the reader understand the importance of their science despite the limitations?

References

- Are the references accurately presented?
- Are there any major omissions from the references?

Pulling the Review Together

Most reviews start with a 1-2 sentence summary of the research. Though this is optional, it may provide helpful information to the authors, because if the reviewer's summary does not reflect the author's intent with the manuscript, it is a message to the authors to reconsider how they have presented their data.

The reviewer's comments should follow the summary. The goal of every review is to help the authors present more accurate science, improve the contribution to the existing science, and improve the presentation so that readers better comprehend. Providing constructive criticism or positive feedback in a stepwise fashion will allow authors to revise and respond.

Confidential comments to the editor may be used to raise additional concerns in a more concise fashion. This is a reasonable place to discuss fatal flaws with the study, including concerns regarding plagiarism or other ethical violations or any other issue of which the editor should be aware.

Finally, providing a timely review is always appreciated. If in the course of your review you find you are unable to complete it, notify the editorial staff, who will try to accommodate any requests for extensions.

Some additional references regarding peer review of manuscripts are listed below.

- Stiller-Reeve M. "How to write a thorough peer review." *Nature* 2018.
- Pain E. "How to review a paper." *Science* 2016.
- Otto CM. "How to review a paper for Heart." *Heart* 2015;101:3-4.