

# HOW TO DO A GREAT MANUSCRIPT REVIEW: TIPS FOR PEER REVIEWERS

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*You have been asked to review an article – congratulations! This is both a testament to your expertise in the subject matter and/or your skills in critical appraisal. You are now part of the “academic jury” and participating in a critical part of the research process, peer review. This process is essential to ensuring only high quality and ethical research is published.*

## WHAT DOES A PEER REVIEWER DO?

- Summarizes the article briefly (e.g. 1-2 sentences).
- Identifies the contribution of the article to current knowledge.
- Provides a thoughtful evaluation of the article, including strengths and limitations.
- Makes suggestions the authors could use to improve their article.
- Makes a recommendation about whether to accept, revise or reject the article. Revision requests are typically made with a requirement for major or minor revisions.
- Sometimes you are asked to rate the article on a scale.

## WHAT DOES A PEER REVIEWER *NOT* DO?

- Decides whether to accept or reject the article. The Editor (or designate handling the article) will make the determination based on all the reviewer feedback, including yours. Reviewers should not make direct comments about accepting or rejecting the article for publication in the comments visible to the authors. For example, don't say: "I think this article should be accepted in the Journal of X." These recommendations are made in the confidential comments to the Editor.
- A detailed copy edit for grammar and spelling; this is done later in the process. If there are significant issues with language, it is useful to say something like: "This article could benefit from a [significant] review for grammar/spelling." It is not appropriate to make specific comments about 'use of English' even if this is the language of the majority of medical journals.

## OVERVIEW OF A REVIEW

**Typical components of the review include:**

- **Recommendation:** Options usually include accept +/-minor or major revisions; reject; uncertain.
- **Rating:** Sometimes you are asked to provide an overall rating of the manuscript (e.g. 0-100).
- **Comments to the authors:** Open text field is usually provided. These comments are typically blinded, i.e. the authors will not find out your name unless you include it there. This section forms the bulk of your review, and you should use a standardized structure (example below).

- **Confidential comments to the Editor:** This is a separate comment box where you can provide comments to the Editor that the authors will not see. This box should be used to highlight an unusual concern, if you want to recommend an additional statistical review or an accompanying editorial (for impactful articles), or for any other issue that you want the Editor to be aware of.
- **Timeliness:** Journals are under increasing pressure to return a decision to the authors as quickly as possible and value reviewers who return their reviews on time. Typically, you are given 10-14 days turnaround. If you cannot do the review in that timeframe, Editors greatly appreciate a quick decline of the invitation so they can find another reviewer, rather than no response which delays the process.
- **Conflicts of Interest:** Please ensure you disclose any potential conflicts of interest to the Editor. These can include collaborations or professional rivalry with the authors, or potential financial interests in the subject matter (e.g. consulting or speaking fees). These don't necessarily disqualify you as a reviewer as all potential conflicts cannot be avoided. However, upfront disclosure can help the Editor assess the risk.

## COMMENTS TO THE AUTHORS

### GENERAL COMMENTS

First, provide a brief summary of the study design, methods and results. Keep it succinct and precise, without being judgemental.

Next, highlight the strengths of the study. This is important. Often reviewers focus a lot of energy on what is wrong with an article, but it is important to take some time to reflect on what the research or manuscript might add to the literature. Remember that a lot of work goes into the preparation of each manuscript, so try to highlight this in your review. For example:

- "Thank you for the opportunity to review this interesting article on..."
- "This is a well-designed study"
- "The article is well-written and easy to read"
- "The research questions is interesting and timely"
- "I found this study intriguing/interesting/novel"
- "This study addresses an important gap in our knowledge..."
- "This study attempts to address weakness in prior studies, such as..."
- "This systematic review provides a useful summary of the available literature on..."
- "This review provides a comprehensive overview of ..."
- "I appreciate the work the authors have done to address..."

In the last part of this section it is useful to provide the most important 'big picture' limitations/issues with the manuscript. For example:

- Major issues with study design (e.g. question not novel, study underpowered, outcomes not previously validated, potential bias etc.)
- Incomplete reporting (e.g. primary/secondary outcomes not defined, methods or results need more detail)
- Data interpretation issues: most commonly this means the authors have overstepped in their conclusions, i.e. the conclusions are not supported by the results. Either they stray too far from what was actually studied (speculation) or they make sweeping statements (e.g. "X is caused by Y" when X is only associated with Y).
- Novelty can be a limitation. Sometimes the topic has multiple prior publications, or the gap addressed by the study is relatively unimportant. Sometimes the authors need to justify their study better in the introduction.

- Discrepancies with prior registration of protocols, e.g. [clinicaltrials.gov](http://clinicaltrials.gov) or PROSPERO for systematic reviews (or other country-specific trial registries). These need to be addressed.
- Rarely, you may need to include a concern with ethics, fraud or conflict of interest (e.g. disclosures, or perception of a conflict) here. This is not common, but important when they arise. Remember – peer reviewers are a part of the defense against academic misconduct and fraud although it can be hard to detect. Sometimes it simply requires more information, e.g. making COI statements clearer or clarifying the role of funders. If you have serious concerns, raise these directly with the Editor.

## SPECIFIC COMMENTS

Go through each section and provide detailed comments. The length of this section depends on the quality of the manuscript – some need more commentary than others.

Try to be as specific as possible so that the authors can locate and address your comments – e.g. start with: Page X, Lines X-X, and even “quote from the article” followed by the comment. Many journals insist on continuous line numbering to make this task easier.

You can make suggestions for rephrasing, but your job isn't to rewrite the paper; try to make *suggestions* rather than dictate a sentence. In general, if it is necessary to re-read a section multiple times to understand it, the text is not clear enough. Don't try to rewrite the article, simply say that it's not well-organized or hard to follow, and let the authors decide how to revise it.

Here are some examples of common feedback:

- **Abstract:** Primary/secondary objectives are unclear, results are missing or need more detail, conclusion should briefly outline their main findings and not speculate too broadly.
- **Introduction:** Too long (aim around 500 words), objectives are not clear especially primary vs secondary, hypothesis proposed do not correspond to the objectives. Review articles should clearly give the justification and scope of the review.
- **Methods:** Ethics statement must be at the beginning, typically with name of REB, date of approval, and study number. Most journals require that studies which randomize patients to treatment groups must be registered with a clinical trials database *prior* to recruitment of the first patient. The methods section should clearly explain the context (e.g. describe institutional setting). Subheadings are useful for organization, outcomes should be validated or referenced ideally, and all abbreviations must be defined. Statistical analysis should be detailed enough to allow the reader to understand all aspects of the analysis and should include a power analysis where appropriate. Make sure that no results are presented here.
- **Statistical analysis:** Depending on your background and comfort with statistical analysis, you can comment on specific issues. If you have concerns, but are not comfortable addressing these in detail you can state that review by a statistician would be useful, and/or make a confidential comment to the Editor that you have concerns with the analysis and would recommend further expert review.
- **Results:** Check for inconsistencies in the text and tables/figure/appendix; the text should not repeat information presented in the tables or figures. Tables and figures should be clear and neat. All statistical tests referred to in the results should have been described in the methods. The Results section should present all relevant data/new information but should not attempt to interpret or understand the data –that is for the discussion.
- **Discussion:** Disorganization and being too long are the common problems. The first paragraph should succinctly summarize the results in the same order as the objectives at the end of the introduction. No new

data should be presented in the discussion, which should compare the study data with existing data, discuss any discrepancies, as well as the implications of their study on future practice. There should be a paragraph describing the limitations of the study (make sure it includes everything you have pointed out in your review).

- **Conclusion:** This section should be short; it should summarize the study findings and highlight implications for clinical practice (if any) in the context of the study limitations. Future directions, such as the next study or future areas of research could be highlights. No new information should be presented here, and the conclusions need to reflect the results accurately.

## CONFIDENTIAL COMMENTS TO THE EDITOR

These are comments that only the editor(s) will see, not the authors. This is an opportunity to communicate concerns that you don't feel comfortable including in your review, and where you can be more direct about your opinion. Please do not put the bulk of your review comments here, as the Editor cannot share them directly with the authors, and already has access to your comments to the authors. These comments are helpful for Editors when making their decision

## RECOMMENDATION

You will be asked to make a recommendation on whether to accept or reject the manuscript; the options you can choose will vary by journal. They may include:

- **Accept as-is:** you have no further comments or suggestions at all. Typically, it takes 2-3 revisions to get to this point.
- **Accept with minor revisions:** issues are minor and should be easy to address.
- **Minor revision:** Needs a little more work than the above, but no major concerns identified by the reviewer.
- **Major revision:** the manuscript has a chance of publication but you recommend that substantial revision and re-review is required before a decision can be made.
- **Uncertain:** This is the middle zone, where you communicate that you cannot make a decision without further information and revision of the manuscript. Not all journals have this option.
- **Reject:** You believe the issues identified cannot be addressed sufficiently in a revision. For example, novelty or inappropriate study design are difficult to change in a revision.

Note: The Editor will make the ultimate decision based on all the reviews comments and recommendations, and occasionally after additional consultation with other Editors. If the reviews are very mixed, another review may be obtained.

## RESOURCES

Checklists and guidelines provide the essential components for different study designs. The authors should be following these checklists when preparing a manuscript, and you may find these useful when assessing a manuscript. <https://www.equator-network.org/>