

# JOURNAL USER GUIDE FOR REVIEWERS



## First answer these questions:

- Does the manuscript you are being asked to review truly match your expertise?
- Do you have time to review the manuscript?
- Are there any potential conflicts of interest?

## Looking for:

- Originality
- Structure
- Previous Research
- Ethical Issues

## 1. COMMUNICATING YOUR REPORT TO THE EDITOR

### Purpose of Peer Review

Thank you for the effort and expertise that you contribute to reviewing, without which it would be impossible to maintain the high standards of a peer-reviewed journal.

Peer review is a critical element of scholarly publication, and one of the major cornerstones of the scientific process. Peer Review serves two key functions:

- Acts as a filter: ensures research is properly verified before being published;
- Improves the quality of the research: rigorous review by other experts helps to hone key points and correct inadvertent errors.

It is a professional honor to be invited to review a scientific manuscript as part of the peer review process. Please take this job seriously. The journal's reputation depends in part on this peer review process.

The Journals for medical professionals, user guide for reviewers adheres to the PubMed/Medline Editorial System standards.

### On Being Asked to Review

- Does the manuscript you are being asked to review truly match your expertise?

The Editor who has approached you may not know your work intimately, and may only be aware of your work in a broader context. Only accept an invitation if you are competent to review the manuscript.

- Do you have time to review the manuscript?

Reviewing a manuscript can be quite time consuming. The time taken to review can vary greatly between disciplines and of course on manuscript type, but on average, a manuscript will take about 5 hours to review properly. Will you have sufficient time before the deadline stipulated in the invitation to conduct a thorough review? If you cannot conduct the review, let the Editor know immediately, and if possible advise the Editor of alternative reviewers.

- Are there any potential conflicts of interest?

A conflict of interest will not necessarily eliminate you from reviewing a manuscript, but full disclosure to the Editor will allow them to make an informed decision. For example, if you work in the same department or institute as one of the authors, if you have worked on a manuscript previously with an author or you have a professional or financial connection to the manuscript. These should all be listed when responding to the Editor's invitation to review.

## Conducting the Review

Reviewing needs to be conducted confidentially, the manuscript you have been asked to review should not be disclosed to a third part. If you wish to elicit an opinion from colleagues or students regarding the manuscript you should let the Editor know beforehand. Most Editors welcome additional comments, but whoever else is involved will also need to keep the review process confidential.

You should not attempt to contact the author.

Be aware when you submit your review that any recommendation you make will contribute to the final decision made by the Editor.

Normally, Journals for medical professionals, will expect to evaluate the article according to the following:

- **Originality/Importance**

Is the manuscript sufficiently novel and interesting to warrant publications? Does it add to the canon of knowledge?

Does the manuscript adhere to the journal's standards?

Is the research question an important, valid, significant one?

Are the results credible?

In order to determine its originality and appropriateness for the journal, it might be helpful to think of the research in terms of what percentile it is in? It is in the top 25% of manuscripts in this field? If the research has been covered previously, pass on references of those works to the Editor.

- **Structure**

Is the manuscript clearly laid out? Are all the key elements (where relevant) present: title, abstract, introduction, methods, results, discussion, conclusions? Consider each element in turn:

- **Title:** Does it clearly describe the manuscript?

- **Abstract:** Does it reflect the content of the manuscript? Are the originality and importance of the manuscript stated? Where graphical abstracts and/or highlights are included, please check the content and if possible make suggestion for improvements.

- **Introduction:** Does it accurately describe what the author hoped to achieve/how original is it, and clearly state the problem being investigated and its importance? Normally, the introduction should summarize relevant research to provide context, and explain what other authors' findings, if any, are being challenged or extended. It should describe the hypothesis(es) and the general experimental design or method.

- **Methods:** Are the design and methodology appropriate? Examine the methods to make sure that the authors knew what they were doing. Does the author accurately explain inclusion, and exclusion criteria, recruitment methods, intervention (if an interventional study) and how the data was collected? Is the design suitable for answering the question posed? Was an adequate follow-up interval planned, if appropriate? Is there sufficient information present for you to replicate the research? Does the manuscript identify the procedures followed? Are these ordered in a meaningful way? If the methods are new, are they explained in detail? Was the sampling appropriate? Have the equipment and materials been adequately described? Does the manuscript make it clear what type of data was recorded; has the author been precise in describing measurements? A power analysis, if appropriate was performed before beginning the research, in order to determine the sample size necessary to demonstrate the working hypothesis? Authors describe which tests were used to evaluate a specific data set and why, dependent variables, independent variables, comparisons, primary and secondary analyses, p value accepted as significant?

- **Results:** This is where the author(s) should explain in words what he/she discovered in the research. Are subjects correctly described: numbers approached, enrolled, excluded, characteristics? It should be clearly laid out and in a logical sequence. Are main analysis and secondary analysis results described? You will need to consider if the appropriate analysis has been conducted. Are the results supported by statistics? Are the statistics correct? Look to see if the statistical analysis seems to make sense. Are the differences reported in the statistical analysis of sufficient magnitude to be of biological/clinical significance? Sometimes, a small statistically significant difference between two or more groups of patients is so small as to be "biologically insignificant". If you are not comfortable with statistics, please advise the Editor when you submit your report. Interpretation of results should not be included in this section.

- **Discussion:** Are the claims in this section supported by the results, do they seem reasonable? Have the authors indicated how the results relate to expectations and to earlier research? Does the manuscript support or contradict previous theories? Are the strengths and weaknesses or likely biases of the study correctly described? Do the author(s) correctly explain the importance/originality of the study, how it is a valuable contribution to the international literature?

- **Conclusions:** Does the conclusion explain how the research has moved the body of scientific knowledge forward? Is the study's originality/relevance stated?
- **Language:** If a manuscript is poorly written due to grammatical errors, while it may make it more difficult to understand the science, you do not need to correct the English, but you may do so. You may wish to bring it to the attention of the Editor, however.

## Ethical Issues

Does the manuscript refer properly to work done by others?

Plagiarism: If you suspect that a manuscript is a substantial copy of another work, please let the Editor know, citing the previous work in as much detail as possible

Fraud: It is very difficult to detect the determined fraudster, but if you suspect the results in a manuscript to be untrue, discuss it with the Editor.

Other ethical concerns: Are you aware of any conflict of interest or breach to the Journal's Editorial policy (see Information for Authors)? For medical research, has confidentiality been maintained? Was there appropriate informed consent (human experiments) with documentation that a human or animal protection committee reviewed the protocol prior to the initiation of the study?

Has there been a violation of the accepted norms in the ethical treatment of animal or human subjects? If so, then these should also be identified to the Editor.

## Communicating Your Report to the Editor

Once you have completed your evaluation of the manuscript the next step is to write up your report. As a courtesy, let the Editor know if it looks like you might miss your deadline.

It is helpful to provide a quick summary of the manuscript at the beginning of your report. This serves the dual purpose of reminding the Editor of the details of the report and also reassuring the author and Editor that you have understood the manuscript.

The report should contain the key elements of your review, addressing the points outlined in the preceding section. Commentary should be courteous and constructive, and should not include any personal remarks or personal details including your name.

Providing insight into any deficiencies is important. You should explain and support your judgment so that both Editor and author(s) are able to fully understand the reasoning behind your comments. You should indicate whether your comments are your own opinion or are reflected by the data.

When you make a recommendation regarding a manuscript, it is worth considering the categories the Editor most likely uses for classifying the manuscript:

- Rejected due to poor quality, or out of scope
- Accept without revision
- Accept but needs revision (either major or minor)

In the latter case, clearly identify what revision is required, and indicate to the Editor whether or not you would be happy to review the revised manuscript.

## You are expected to:

Make direct observations, even if critical. It is easier for an Editor to overturn critical direct comments than to overturn favorable comments.

Justify all criticisms by specific references to the text of the manuscript or to published literature. Vague criticisms are unhelpful.

Do not repeat information from the manuscript, such as the title and author(s) name(s), since this already appears elsewhere in the review form.

Check the aims and scope of the Journal (see Information for Authors) to ensure that your comments are in accordance with journal policy.

Give a clear recommendation. Don't put "I will leave the decision to the Editor" unless you are genuinely unsure of your recommendation.

Number your comments so that the authors can easily refer to them.

Be specific - refer to line numbers where you wish changes to occur.

Be careful not to identify yourself by your comments or by the file name of your report if you submit it as a Word file.

Clearly, the more original the observations, the more likely that the manuscript should be accepted for publication. Peer reviewers are asked: Is the manuscript original, important, interesting; are the data valid; are the conclusions justified by the data; is the writing clear; and what is the priority and timing? Is it new? Is it true?

The Journal assumes the responsibility to reject a proportion of manuscripts before sending them out to reviewers because they do not fit the emphasis of the Journal, and the manuscripts will pass into “pre-screening” editorial process. Rejection at this stage does not imply that manuscripts are of poor quality; many can go to be published in other, high-quality journals.

The Journal assumes the responsibility that the time for revisions of the manuscripts to be as long as they need. The Editor does try to avoid delays and normally ask for reviewer’s Peer Review Form to be turned within two to three weeks. If the reviewer is in a special and unpredicted circumstance, which is probable to alter his/hers capability to respect the deadline, it is his/hers responsibility to contact the editor for obtaining an extension of that deadline – with no more than one to two weeks. This Editor has the discretion to allow it.

We think peer review as a “form of scientific quality control” or “an error detection system”. But for us, is a much more critical and dynamic process than many other forms of quality regulation.

Specific publishing requires very specific and substantive feedback about each manuscript, not just a “yes” or “no” decision. In this regard, all the comments should be made by specifying the lines from each manuscript, after the manuscript was numbered on each continuously line, e.g. line 23: the authors should change “regarding the meta-analysis” to “regarding the analysis”, line 84: the table 2 should be replace with a figure, line 48: the paragraph should be deleted etc.

## 2. REVIEWER’S QUICK GUIDE TO COMMON STATISTICAL ERRORS IN SCIENTIFIC MANUSCRIPTS

To have the sample size especially for human subjects, many studies are too small to detect even large effects. Although, in such cases, the Statistical Consultant of the Journal- will have the final decision.

- Clinical trials should always report sample size calculations
- Author(s) with ‘negative’ results (i.e. found no difference) should not report equivalence unless sufficiently powered, “absence of evidence is not evidence of absence”.

### **Bias**

Randomization is the best way of avoiding bias but it is not always possible or appropriate.

Some biases affecting observational studies

Treatment-by-indication bias: different treatments are given to different groups of patients because of differences in their clinical condition.

Retrospective data collection: availability and recording of events and patient characteristics may be related to the groups being compared.

Ecological fallacy: an association observed between variables on an aggregate level does not necessarily represent the association that exists at the individual level.

Some biases affecting observational studies and clinical trials

Selection bias: low response rate or high refusal rate were patients that participated different to those that did not?

Informative dropout, in the case of reasons connected to the primary outcome? If so, imbalance in dropout rates between the groups being compared will introduce bias.

### **Bias in clinical trials**

No-one should know what the next random allocation is going to be as this may affect whether or when the patient is entered into the trial. Using date of birth, hospital specialty, or simply alternating between treatments is therefore inappropriate. Central randomization is ideal. Unblinded assessment of outcomes may be influenced by knowledge of the treatment group.

## Look for:

- Appreciation and measures taken to reduce bias through study design;
  - Selection of patients, collection of data, definition and assessment of outcome and, for clinical trials, method of randomization should be clearly described;
- Number and reasons for withdrawal should be reported by treatment group;
- Appropriate analytic methods such as multiple regressions should be used to adjust for differences between groups in observational studies;
  - Authors should discuss likely biases and potential impact on their results.

## Method comparison studies

If different methods are evaluated by different observers then the method differences are confounded with observer differences. The study must be repeated with each observer using all methods.

## Analysis errors

- Failure to use a test for trend on ordered categories (e.g. age group).
- Dichotomizing continuous variables in the analysis (acceptable for descriptive purposes).
- Using methods for independent samples on paired or repeated measures data. An example is using both arms and legs of the same patient as if they were two independent observations.
- Using parametric methods (e.g. ANOVA, regression testing, or t-test) when the outcome or residuals have not been verified as normally distributed.
- Over using hypothesis tests ('p' values) in preference to confidence intervals.
- One-tailed tests are very rarely appropriate.
- Failing to analyze clinical trials by intention-to-treat.

Obscure statistical tests should be justified and referenced. Comparing 'p'-values between subgroups instead of carrying out tests of interaction is incorrect. Some may wrongly conclude from these results that: treatment, based on comparing 'p'-values.

## Multiple testing

Conclusions should only be drawn from appropriate analyses of a small number of clear, pre-defined hypotheses. Results from post-hoc subgroup or risk-factor analyses should be treated as speculative. If many such tests have been carried out adjustment for multiple testing should be considered. Comparing groups at multiple time points should be avoided, a summary statistics approach or more complex statistical methods should be used instead.

Further reading:

CONSORT: <http://www.consort-statement.org>,

Greenhalgh T. How to read a paper: Statistics for the non-statistician. I: Different types of data need different statistical tests. *BMJ*. 1997 Aug 9; 315(7104): 364–366

Available online at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2127256/pdf/9270463.pdf>

Bland JM, Altman DG. Statistical methods for assessing agreement between two methods of clinical measurement. *Lancet* 1986;1:307-310. Available online at: <https://www-users.york.ac.uk/~mb55/meas/ba.h>

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