



# How and why to review articles for the *Jornal Brasileiro de Pneumologia*

Bruno Guedes Baldi<sup>1,2,a</sup>, Pedro Rodrigues Genta<sup>1,3,b</sup>

In 1731, the Royal Society of Edinburgh adopted a system of review of scientific articles by its members. That system is now recognized as the precursor of the peer review process. The peer-review system continues to be used by the entire scientific community, a major change, which was the invitation of peer reviewers from outside the scientific societies, being implemented in the second half of the twentieth century.<sup>(1)</sup> The peer review process is the driving force on which scientific publications depend.

The reviewer has the responsibility to improve the quality of the article and the clarity of the message conveyed by minimizing errors in various aspects, such as methodology, writing, and quality of language use, as well as the presentation and interpretation of results, thereby providing impressions that assist the editor in decision making.<sup>(2,3)</sup> Ideally, an article becomes polished through the review process, which encourages the authors to incorporate improvements in the format of the article and improve the scientific accuracy of the study.

This editorial aims to underscore the reasons for members of the scientific community to participate in the review of articles submitted to the *Jornal Brasileiro de Pneumologia* (JBP) and to summarize suggestions on how to evaluate a scientific paper.

## WHY REVIEW A SCIENTIFIC ARTICLE?

- To assist the scientific community: If you are a renowned author, you will be giving back to the community for the reviews you have received on your work and will be able to provide considerable support to a young scientist by offering guidance. If you are a young scientist, you will surely benefit by gaining experience. Regardless of your level of experience, you should recognize that reviewing articles is a fundamental activity for scientific publications worldwide, including the JBP. The availability of reviewers attuned to the purpose of the JBP will enable the journal to improve progressively by reducing the time an article awaits review, as well as by constantly improving the quality of the evaluations. The result will be the submission of progressively higher quality articles that reflect the maturing of our scientific community, which contributes to the evolution of science in the field of respiratory medicine and in similar fields.
- To stay up to date in your area of study: By reviewing articles, you will have the opportunity to review relevant literature and be exposed to current scientific production. In addition, you will be able

to learn new methods and different approaches to common problems.

- To improve your reviewing and critical analysis skills: Reviewing articles not only enhances your ability to evaluate and review scientific texts but also improves your article writing skills.
- To become co-responsible for the article: The reviewer becomes co-responsible for the article, and that in itself is a huge compensation.
- To gain prestige on the subject among your peers: Being listed as a reviewer for a given journal indicates that you are a trusted authority in the respective field.

## HOW TO REVIEW A SCIENTIFIC ARTICLE?

Recommendations for the review of a scientific paper are presented in Chart 1. Before agreeing to review an article, reviewers should check three fundamental points<sup>(2-4)</sup>: 1) if the article in question is in their area of expertise; 2) if they have any conflict of interest regarding the article; and 3) whether they will be able to meet the deadlines established.

In the review process, it is important to read the instructions to reviewers and to be aware of the scope of the journal. The reviewer must demonstrate care, transparency, ethics, and professionalism. Make constructive comments and provide explanations, bearing in mind that the main objective is to improve the quality of the article.<sup>(2-4)</sup> Be patient with less experienced authors, especially when you see potential in the research presented. Be respectful in your comments, because a discourteous review may be enough to cause a young researcher to lose sleep and become discouraged. Be clear and concise in your requests for changes and do not request significant modifications of the manuscript. A paper with too many deficiencies should be rejected in the first review.<sup>(3,5)</sup> Rejecting such a paper after an extensive review is very disappointing to the author.

Carry out an initial reading to familiarize yourself with the article and get a general impression of it. Next, proceed to a section-by-section evaluation, making comments as you go. In preparing the review, we recommend the writing of an opening paragraph that summarizes the main results. We suggest then dividing your evaluation, in a didactic way, into major and minor concerns, numbering each comment. It is essential to contextualize the results found in relation to existing knowledge and to observe the relevance and originality of the topic.

1. Divisão de Pneumologia, Instituto do Coração, Hospital das Clínicas, Faculdade de Medicina, Universidade de São Paulo – HCFMUSP – São Paulo (SP) Brasil.

2. Editor-Chefe do Jornal Brasileiro de Pneumologia – JBP – Brasília (DF), Brasil.

3. Editor associado do Jornal Brasileiro de Pneumologia – JBP – Brasília (DF) Brasil.

a.  <http://orcid.org/0000-0002-9609-5117>; b.  <http://orcid.org/0000-0002-6764-165X>

**Chart 1.** Recommendations for the review of a scientific article.

General comments
<ul style="list-style-type: none"> <li>• Check if the topic is included in your area of study, if you have is a conflict of interest, and if you will be able to meet the deadlines.</li> <li>• Be clear, concise, respectful, and ethical.</li> <li>• Avoid offensive comments.</li> <li>• Evaluate the methodological aspects, writing, quality of language use, and presentation/interpretation of the results.</li> <li>• Determine the relevance and originality of the work.</li> <li>• Carry out an initial reading to get a general impression of the article.</li> <li>• When writing the review, begin with an opening paragraph that summarizes the key findings, then dividing your evaluation into major and minor concerns, numbering each comment.</li> </ul>
Section by section
<ul style="list-style-type: none"> <li>• Title Should be objective and clear Should be consistent with the text</li> <li>• Abstract Should reflect the key points of the article</li> <li>• Introduction Should be brief (2-3 paragraphs) Should describe the scope of the problem and gaps in the literature Must be rational and should include the study hypotheses in the final paragraph</li> <li>• Methods Should be sufficiently detailed to enable replication Should present the study characteristics, including type, design, population, inclusion and exclusion criteria, outcomes, and sample size Should describe techniques appropriate to the topic Must describe the statistical analysis used, local ethics committee approval, and informed consent (if relevant).</li> <li>• Results Should clearly reflect what was presented in the methodology Should not include interpretations or speculations Should include illustrations (tables or figures) with appropriate presentation and quality Should not, in general, repeat information contained in the tables and figures</li> <li>• Discussion In the first paragraph, should summarize the results obtained Should contextualize the results in relation to findings in the literature Should included a paragraph on the limitations of the study</li> <li>• Conclusions Should be consistent with the results and the hypothesis put forth May address future directions</li> <li>• References Must be current and relevant Must conform to the standards of the journal</li> </ul>

### Title

The title should be objective, clear, and consistent with the content presented in the text.<sup>(2,5)</sup>

### Abstract

Begin by reading the abstract and determining the scope of the article. Check whether the abstract actually reflects what the article presents and provides sufficient details of the key points.<sup>(2)</sup> Make sure that it concerns a subject that you understand. Read it in full for an overview of the general quality of the writing, the relevance of the study, and the quality of the research.<sup>(2,6)</sup>

### Introduction

As a general rule, the introduction should contain two to three paragraphs that describe the scope of the problem and the gaps in the literature, as well as the rationale of the study.<sup>(5)</sup> The reader should be convinced that the work is original and relevant. A hypothesis that summarizes the objectives of the study is desirable.

### Methods

The methods should be described in sufficient detail to enable another researcher to reproduce the study. The type/design of the study, the population evaluated, and

the inclusion/exclusion criteria, as well as the primary and secondary outcomes, should be presented.<sup>(5)</sup> The techniques used should be appropriate for the purpose of the study and capable of producing precise, reliable results. The technique employed in calculating the appropriate sample size should be described in sufficient detail for the reader to reproduce it. It is recommended to describe in detail the statistical analysis and how the hypothesis was tested. When the reviewer deems it appropriate, further analyses may be suggested. Information regarding local research ethics committee approval and informed consent (if required) should be provided in this section.

### Results

The results section should reflect what was presented in the methodology, and the findings should be summarized in a clear, appropriate manner. Interpretations and speculations should be presented in the discussion rather than in the results section. The tables should be well organized, facilitating understanding of the results and analyses. In general, tables and figures should not repeat the results presented in the text.

The figures accurately reflect the quality of the article, whether it be the originality of the data presented or the manner, painstaking or otherwise, by which the figures were constructed. Make sure that you can clearly understand the data displayed in the figures.

### Discussion

In the first paragraph of the discussion, the authors are expected to summarize the main results of their

study. Subsequently, they should make a critical analysis of the main results of their study, comparing them with those of previously published studies. In the penultimate paragraph, the authors should outline the limitations of the study.

### Conclusions

Conclusions finalize the discussion section. The reviewer should verify that the results support the conclusions and are related to the hypothesis put forth. Future directions in relation to the topic may be included.

### References

Determine whether the references cited are current and relevant. Make sure that the authors have cited original articles, rather than review articles. Verify that the references conform to the standards of the journal.

Our journal depends on a strong, active editorial board and a sufficient influx of submissions, as well as on the availability and responsiveness of reviewers. We thank all of the reviewers who have participated in the review of the manuscripts submitted. We hope that new colleagues will be able to review articles for the JBP with care and excellence, an effective peer review process being fundamental for the improvement and international recognition of our journal. If you are interested in participating as a reviewer, please contact us, making sure to mention your area of expertise. The future of the JBP is in our hands.

---

## REFERENCES

1. Spier R. The history of the peer-review process. *Trends Biotechnol.* 2002;20(8):357-8. [https://doi.org/10.1016/S0167-7799\(02\)01985-6](https://doi.org/10.1016/S0167-7799(02)01985-6)
2. Hoppin FG Jr. How I review an original scientific article. *Am J Respir Crit Care Med.* 2002;166(8):1019-23. <https://doi.org/10.1164/rccm.200204-3240E>
3. Spigt M, Arts IC. How to review a manuscript. *J Clin Epidemiol.* 2010;63(12):1385-90. <https://doi.org/10.1016/j.jclinepi.2010.09.001>
4. COPE Council [homepage on the Internet]. Eastleigh: United Kingdom [cited 2019 Sep 1]. COPE Ethical Guidelines for Peer Reviewers. September 2017. [Adobe Acrobat document, 6p.]. Available from: [www.publicationethics.org/files/Ethical\\_Guidelines\\_For\\_Peer\\_Reviewers\\_2.pdf](http://www.publicationethics.org/files/Ethical_Guidelines_For_Peer_Reviewers_2.pdf)
5. Brown LM, David EA, Karamlou T, Nason KS. Reviewing scientific manuscripts: a comprehensive guide for peer reviewers. *J Thorac Cardiovasc Surg.* 2017;153(6):1609-1614. <https://doi.org/10.1016/j.jtcvs.2016.12.067>
6. Rochitte CE, Mesquita CT. What are the Characteristics of an Excellent Review of Scientific Articles? *Arq Bras Cardiol.* 2018;110(2):106-108. <https://doi.org/10.5935/abc.20180032>