Andre Miguel Japiassú[1]

How to prepare and submit abstracts for scientific meetings

Como elaborar e submeter resumos de trabalhos científicos para congressos

1. Instituto de Pesquisa Clínica Evandro Chagas, Fundação Oswaldo Cruz - Fiocruz - Rio de Janeiro (RJ), Brazil.

ABSTRACT

The presentation of study results is a key step in scientific research, and submitting an abstract to a meeting is often the first form of public communication. Meeting abstracts have a defined structure that is similar to abstracts for scientific articles, with an introduction, the objective, methods, results and conclusions. However, abstracts for meetings are not presented as part of a full article and, therefore, must contain the necessary and most relevant data. In this article, we detail their structure and include tips to make them technically correct.

Keywords: Abstracts and indexing as topic; Meetings as topic; Publishing/standards

INTRODUCTION

Submitting abstracts for meetings is useful for communicating the first results of a new study, just as submitting scientific articles to journals for publication is the best way of communicating the final results of a study. The submission of abstracts describing scientific studies for professional meetings encompasses a variety of goals. The study authors may be partly or fully evaluated by their peers, i.e., other professionals in the same field may provide feedback and suggestions to refine the method and results presented.[1] This is also an excellent way of pre-reporting a study, whether it is an observational or intervention study, promoting interaction between researchers interested in the same topic.[1]

Abstracts should only include the most relevant data from the study, with the goal of enabling the reviewer to assess whether the rationale and scientific context are appropriate to evaluate the topic.[2] Authors commonly clarify the details of the study, although this may result in a confusing and poorly structured abstract. An abstract must have sufficient impact to draw the reviewers' and readers' attention, i.e., maintain their interest while reading the text.

WRITING STYLE AND LANGUAGE

First, the instructions for writing the abstract and the deadline for its submission should be checked. The rules regarding the font type

and size should be followed. Abstracts have word or character limits (including or excluding spaces) that are often 250 to 300 words. Prior knowledge of this limit is important when writing the introduction and method sections of the abstract because these sections are more flexible and may be adapted to remain within the length limit. Clear and concise language is necessary for each section of the abstract. The use of abbreviations is usually not allowed, despite the necessary economy of words. Abbreviations may be used in very special cases that require the repetition of long terms. They should be written in full the first time the abbreviation appears in the text. Another tip is to avoid using adjectives or adverbs, maintaining strictly scientific language; articles (mostly the indefinite) may eventually be omitted. The use of the first person plural has become increasingly common and is now often the most appropriate form for scientific texts.[3] Overuse of the passive voice renders the text boring, repetitive and impersonal. Traditional thinking regarding the use of the first person as petulant is countered by the argument that researchers are indeed the ones performing the actions they describe and that they should be responsible for them. This new approach may be used in abstract writing, although it applies primarily to the article, and the use of passive voice is more common in abstracts, given the necessary economy of words.[3]

Misspellings should also be corrected because abstracts are frequently published in the annals of meetings without editing after submission. An up-to-date spell checker and word processing program should be used to correct grammatical errors and to count words and characters. The word count tools of the most common word processing programs, including Microsoft Word®, use different counting rules from most electronic submission sites. Thus, the count performed in word processing software often exceeds the limit on the website. Therefore, although the writing may be mainly accomplished using a software program, final adjustments should be performed directly on the submission website.

Title, authors and affiliations

The title, authors and their affiliations must be included, regardless of the form of submission, electronic or otherwise. The title should be catchy and self-explanatory. All unnecessary words should be deleted. There are essentially two standards: one in which the title asks a question relating to the study objectives and one in which the main finding of the study is given.[4] The latter format has recently become more popular. Ideally, the title should also provide information on the mechanism and the population to which it applies. Thus, "Effects of early use of antibiotics" sounds less interesting than when phrased in the form of a question, such as "Do antibiotics alter the outcomes of sepsis?", although both describe the objective of the study. Conversely, "Early use of antibiotics reduces mortality in patients with shock, but not in those with sepsis" is much more appealing and descriptive.

The format of the authors' names should comply with the rules of the meeting. Ideally, the full name should always be provided, without abbreviations, to avoid ambiguity or errors in the author indexing process, when the abstract is published in an indexed journal. However, writing a name with an abbreviated middle name or the author's last name first may be required. The format of affiliations should also be standardized, and the rules of the meeting should be followed. Usually, the name of the institution should be written out in full, indicating the city, state and country. Including all authors' e-mail addresses is commonly required in electronic submission systems.

ABSTRACT STRUCTURE

Abstracts may have different structures, depending on the rules established by the scientific committee of a meeting. They may be continuous or structured.[2] Usually, review articles and reports of clinical cases use unstructured abstracts, i.e., the text is not divided into sections and is written as a single block. All key parts are included, and the flow of the text is maintained. Usually, structured abstracts are divided into the following sections: introduction or rationale, methods, results and conclusions. Structuring abstracts in this form is advised so that they comply with the rules of the event, as the use of other sections may result in automatic rejection. For example, one of the most frequent errors is the use of an introduction section when only objectives section is required.

Introduction and objectives

The introduction or study rationale description is the first part of most abstracts for meetings. An introductory sentence on the general topic is welcome, especially if it describes something that is general knowledge (e.g., "Maintenance of blood pressure at very low levels has a negative impact on cerebral ischemia"). Next, the topic or question that the study will address is given (e.g., "The use of nimodipine in the treatment of cerebral ischemia reduces the effects of oxidation in neurons, although it may lead to hypotension").

The study objectives should be cited next. The objective(s) should be described as specifically and concisely as possible.[2] Try to avoid citing too many objectives, as in a scientific article, because the goal of the abstract is to inform the reader of only the main points of the study. As already mentioned, there may be no room for introducing the topic. In this case, the proper formulation of the objectives is even more critical.

Methods

The methodology should be based on a few main points: the study design; the study setting (intensive care unit, emergency unit or ward); the inclusion and exclusion criteria; the intervention applied (or the data observed) and the outcomes to be analyzed. How the study objective was developed, the topics of observation or intervention in the patients studied, and the methods of data analysis should be clarified. "Prospective observational study included patients over 18 years of age, admitted to the ICU and under mechanical ventilation for 48 hours, after signing the consent form" and "Patients in the period following thoracic surgery were excluded" are appropriate sentences. Note that the exclusion criteria are included in the universe of inclusion, e.g., for the first case above, there is no need to mention excluding those below 18 years of age. The intervention applied or the data collected to address the objective should be mandatorily described. There is no need mention all the data collected in detail, e.g., demographic data may be cited instead of age, gender and race, among others. The numerical form in which the data are shown, e.g., mean and standard deviation or percentage, and the main statistical tests used should be reported if there is enough space. The statistical analysis may be summarized or omitted if there are not enough words/characters available; the reviewers will likely assume that the statistical analysis was properly performed. Eventually, the authors should report more specific statistical analyses, including regressions and propensity scores. The most common error in this section is the inclusion of results, e.g., data or the number of patients included. Although a statement of the approval of the study by an ethics committee is mandatory in the body of the full article, it is not usually required in meeting abstracts due to a lack of space. As a result, all ethical rules are presumably properly followed. Some systems require the responsible author state that these precepts were fully met during submission of the abstract.

Results

The results constitute the main summary of the study, and the author(s) should save more words for that section.[3] The initial description of the population studied, followed by the analysis addressing the main objective, is the essential part of the results. The abstract must report the number of patients included because this information is necessary to judge the validity of the results presented. Tables or figures may be included in the abstracts for some meetings. Note that these tables and figures must be small and only show the most representative results, as abstracts are compact forms of publication. Large tables and complex figures can be difficult to read and comprehend. Finally, there is no room in this section for discussing and comparing the results with those of other studies.

Conclusions

The conclusions should be concise and impactful. The author(s) should include the answer(s) to the given objective(s) in one or two sentences.[1] The conclusion is the section that will be read most frequently, after the study title. Here, there is no room for discussing the results, which is a fairly frequent error. The most common error in the conclusion is to extrapolate the data evaluated by the study, which may result in the immediate rejection of the abstract, with no opportunity to resubmit.

The citation of references is recommended, although this may be difficult due to the inclusion of the number of words/characters in the references or the total word/character count, which is already limited.

ABSTRACT SUBMISSION

The abstract submission process also has steps that must be completed. Nowadays, most events use an electronic submission system, which facilitates the management of hundreds of submitted abstracts. From the authors' standpoint, these systems are also beneficial because they are usually self-explanatory and reduce the chance of inappropriate submissions.

Some additional considerations should be addressed. Choose the subject area that is most appropriate for your abstract; this will ensure that it is presented and discussed alongside studies of the same topic, which will benefit the author(s). Another point to be considered is that abstracts are presented individually and may be grouped in a session relating to the secondary objectives of the initial study. Reviewing committees may reject abstracts that discuss topics that are not included in the main study. Many meetings do not accept case reports and literature reviews, even in the form of systematic reviews and meta-analyses, because the original themes are given preference by the scientific committees. Other meetings accept these types of abstracts, but have different rules for them.

FINAL CONSIDERATIONS

The presentation of results from scientific studies at meetings is a key step in communicating science to those for whom the results are relevant. Furthermore, it greatly contributes to improving the quality of publications in their final format. Within this context, the development of a good abstract, according to the rules of good scientific writing, is essential. The tips outlined in table 1 may assist in this process.

Table 1 - Tips for preparing abstracts for scientific meetings

1.	Ideas based on experimental research, day-to-day practices at the ICU or a combination of both (translational)
2.	The structure of abstracts is quite rigid; ensure that you add a variety of new information in a small amount of text
3.	Provide sufficient information to reviewers, enabling them to assess whether it is appropriate to accept the abstract
4.	Remember to write impactfully
5.	Avoid abbreviations or symbols, except those with widespread use
6.	The introduction (if any) should flow directly into the study context and be limited to one or two sentences
7.	Include the main objectives of the study and focus only on the main goals of the research
8.	Report the type of study in the methods section; avoid describing all data analyzed or giving a detailed statistical analysis
9.	Briefly describe the traits of the study population and the results of the analysis performed
10.	There is no room for discussing the results
11.	The conclusion should be limited to one or two sentences only and address the study goal(s)
12.	Mind the character or word limit imposed for abstract and avoid excess articles, adverbs and adjectives
13.	Submit your abstract in the most appropriate category, enabling the study to be discussed in the proper context

ICU - intensive care unit.

RESUMO

A apresentação dos resultados de um trabalho é ponto crucial da metodologia científica, e o envio de resumo para congressos é frequentemente sua primeira forma de comunicação pública. O resumo contém estrutura definida e é semelhante aos resumos de artigos científicos, com introdução, objetivo, métodos, resultados e conclusões. No entanto, o resumo para congresso não é apresentado como parte de artigo completo e, por isso, ele deve conter as informações necessárias e mais relevantes. Neste artigo, detalhamos sua estrutura e algumas dicas para torná-lo tecnicamente correto.

Descritores: Resumos e indexação como assunto; Congressos como assunto; Editoração/normas

REFERENCES

1. Foote M. Abstracts for professional meetings: small but mighty. Chest. 2008;134(5):1103-5.
2. Foote M. Some concrete ideas about manuscript abstracts. Chest. 2006;129(5):1375-7.
3. Goodman NW, Edwards MB. Medical writing: a prescription for clarity. 3rd ed. Cambrigde: Cambridge University Press; 2006.
4. Wagner PD. Writing up your research results for publication. Chest. 2009;136(2):639-42.