

## The key components of the original article: which are them?

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### Introdução

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The adequate description of a scientific article contents, mainly concerning the itens that will allow the evaluation of its validity and applicability, is of fundamental importance, in face of the true avalanche of informations now available. One of the resources created to fulfill this demand was the structured abstract, describing all relevant itens in a clinical research, that also can function as a guideline for writing the whole paper.

Just after completing 10 years of its first version (Haynes, 1990), this paper is made aiming to disseminate even more the components and utilization of the structured abstract. These itens were reviewed by Haynes (1990), turning the abstracts into more informative texts.

### Keys Components

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*Context: Describe the importance of doing the research.*

*Objective: State the main question or objective of the study and the major hypothesis tested, if any.*

*Design: Describe the design of the study indicating, as appropriate, use of randomization, blinding, criterion standards for diagnostic tests, temporal direction (retrospective or prospective), and so on.*

*Setting: Indicate the study setting, including the level of clinical care (for example, primary or tertiary; private practice or institutional).*

*Patients, Participants: State selection procedures, entry criteria, and numbers of participants entering and finishing the study.*

*Interventions: Describe the essential features of any interventions, including their method and duration of administration.*

*Main Outcome Measure(s): The primary study outcome measures should be indicated as planned before data collection began. If the hypothesis being reported was formulated during or after data collection, this fact should be clearly stated.*

*Results: Describe measurements that are not evident from the nature of the main results and indicate any blinding. If possible, the results should be accompanied by confidence intervals (most often the 95% interval) and the exact level of statistical significance. For comparative studies confidence intervals should relate to the differences between groups. Absolute values should be indicated when risk changes or effect sizes are given.*

*Conclusions: State only those conclusions of the study that are directly supported by data, along with their clinical application (avoiding overgeneralization) or whether additional study is required before the information should be used in usual clinical settings. Equal emphasis must be given to positive and negative findings of equal scientific merit.”* (Haynes, 1990).

These eight items are key information to the critical evaluation, and make the basis for the construction of a structured abstract, and consequently of the original article. One should further extend their usefulness, using the same items to serve as a guidelines to make the research project. There are some evidences pointing out that the quality (Taddio, 1994; Castro, 1996) and the comprehension (Hartley, 1998) can be improved by adopting the structured abstracts.

Each adopted item is recommended by the International Committee of Medical Journals Editors and used by thousands of biomedical journals. Associated to the ICMJE, the Consort statement, is also adopted aiming to standardize the form to describe the randomized clinical trials. These articles are available in the internet, where there are three mandatory readings: a) Uniform Requirements for Manuscripts Submitted to Biomedical Journals (<http://www.icmje.org>); b) Instructions for Preparing Reports of Randomized Controlled Trials (<http://www.consort-statement.org>); c) Instructions for Preparing Structured Abstract (<http://www.acponline.org/journals/resource/90aim.htm>).

The abstract is the most important part of an article; it will be the most readed part of the original paper. Even a well planned, well executed study can be badly reported, leading the reader to classify it as a bad study. Our aim is to avoid this kind of situation, and all this effort is done aiming to improve the quality of the publication making the article a true picture of the real research.

Using each one of these items in the structured abstract, and expanding them on the text of the article, will allow the reviewers a better evaluation of the study, and to the reader to determine its applicability; and also facilitate a more accurate indexation.

The fast incorporation of the use of structured abstracts by the biomedical journals resulted in the duplication of such abstracts between 1989 and 1991, with 15% of clinical trials already been published with structured abstracts (Harbourt, 1995). The structured abstracts, however, still show mistakes, such as inadequate description of patients, follow-up, and statistical methods characteristics (From, 1996).

Aiming to test the hypothesis that providing authors with specific instructions about abstract accuracy will result in improved accuracy Pitkin (1998), 250 manuscripts were randomized, 13 were never revised and 34 were lost to follow-up, leaving a final comparison between 89 in the intervention group and 114 in the control group. Abstracts were defective in 25 (28%) and 30 (26%) cases, respectively ( $P=0.78$ ). Among 55 defective abstracts, 28 (51%) had inconsistencies, 16 (29%) contained data not present in the body, 8 (15%) had both types of defects, and 3 (5%) contained unjustified conclusions.

The above example illustrates the frequent incorrections found in abstracts, particularly inconsistencies between abstract and full text. Specific instructions to

authors are matly ineffective. Journals should consider including in their editorial processe specific and even active attention to abstracts.

Other papers already described models for the construction of structured abstracts, and can be useful as guidelines for writing original articles (*Ad Hoc Working Group for Critical Appraisal of the Medical Literature*, 1987; Huth, 1987), clinical and epidemiological studies (Naylor 1991), review articles (Mulrow, 1988), practice guidelines (Hayward *et al.*, 1993), and economical analyses articles (Mittmann , 1998).

The authors of original articles should pay carefull attention to the instructions on how to construct a structured abstract to report original articles on clinical investigation in humans. They should keep in mind that each one of the itens standardized the most appropriate form to report the research for publication. The São Paulo Medical Journal/Revista Paulista de Medicina (Atallah 1999) endorses the uniform requirement for manuscripts, the CONSORT statement and more informative abstracts because of their high relevance to publications in medical science, and suggests that potential authors should follow them when preparing articles for submission to any medical journal.

### Final comments

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Adopting these recommendations will facilitate the indexation of the article, and most importantly, offer data to the reader to decide about the validity and applicability of the study. In summary, the quality in the communication in the medical field will be improved.

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