

From Project to Paper
Part I - How to Write an Abstract
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Why bother with development of an abstract for submission for presentation at a regional or national meeting? Why not just write the paper?

Importance of Writing a GOOD Abstract:

- Selection of research for meeting presentation based on abstract quality
- The abstract is read more frequently than any other paragraph in an article.
- The abstract has become a stand-alone document; frequently the only part of the article that is read.
- Readers often use the abstract to determine whether or not to read the accompanying paper.
- A good abstract will assist readers in selecting articles of high relevance and quality
- A well-prepared abstract will set an article out from among many on the same topic.
- Abstract has been shown to influence clinical practice (Haynes RB. Ann Intern Med 1990)
- Poorly prepared abstract may lead reviewers/editors to question validity of the research.
- Research is hard work; want your hard work presented in the best possible light

How to Write an Abstract – Step 1

Develop a Good Research Project

- Development of a good research question
 - Must pass the who cares test
 - Should be novel
 - Concise and answerable question
- Good study design
- Meticulous study implementation
- Appropriate data analysis

The quality of the abstract will obviously depend upon the quality of the research!!

How to Write an Abstract – Step 2

Select the most appropriate meeting for presentation.

YOU WANT AN APPROPRIATE AUDIENCE!!!

- Primary Goals of Data Presentation –
 - Dissemination of information; educate the audience
 - Obtain feedback from other experts
 - Exposure to potential collaborators, mentors, funding agencies

YOU WANT AN APPROPRIATE PRESENTATION FORMAT!!!! Does your data lend itself better to poster or oral presentation.

- Presentation formats available – oral vs. poster
- Overall meeting content
- Requirement for paper submission prior to presentation.

Learn as much about the meeting as possible prior to selection. Go to the organization's web site. Review previous programs and presentations. Talk to people.

How to Write an Abstract – Step 3

KNOW THE RULES!!!!

- Deadlines
- Copies requested
- Suggested format
- Word or character limit
- Acceptability of tables or figures

Go to the organization's web site or to the journal and follow the instructions to the letter!!!

How to Write an Abstract – Step 4

Writing the Abstract

Before you sit down and write, make sure you KNOW THE AUDIENCE!!!!

Frame the abstract so it is *relevant* for the meeting's audience:

Example: Study investigating a novel agent for the treatment of intracranial hemorrhage to be presented at the Neuroscience vs. the SAEM Annual Meeting

The Structured Abstract

- 1950's – beginnings of the traditional abstract; a descriptive paragraph
- 1987 – structured abstract was introduced
- Structured abstract -

- Specified content headings
- Objectives of the structured abstract
 - Improve efficiency of lit reviews; aid readers in quickly assessing reliability and content of articles
 - Facilitate peer review
 - Improve accuracy of indexing and report retrieval from computerized databases.
 - Guidance to author regarding format and content
- Essential elements concisely reported using content headings:
 1. Objective/Hypothesis
 2. Methods/Material (design, setting, participants, intervention, statistical analysis)
 3. Results
 4. Conclusions

The Title of the Abstract

- The first thing the reviewer and reader see.
- Should grab your audience
- Should be descriptive and interesting

Example:

The Use of a Hemoglobin Based Oxygen Carrier for the Resuscitation of Combined TBI and Hemorrhagic Shock
VS.

Resuscitation with a Hemoglobin Based Oxygen Carrier Improves Outcome from Combined TBI and Hemorrhagic Shock

The Introduction of the Structured Abstract:

- Not always a separate heading for this
- Brief; 1 - 2 sentences
- Provides relevant background information
- Places your question/study in context.
- Statement of why this study is important
- Make it interesting; grab the reader

Example:

Trauma is a major cause of mortality in the U.S.
VS.

Trauma is the leading cause of death for individuals less than 44 years of age in the U.S.

The Objective/Hypothesis of the The Structured Abstract

- *CLEAR* statement of a *PRECISE*, and *REALISTIC* goal
- If more than one objective, indicate primary vs. secondary.
- Common mistakes:
 - nonspecific, ill-defined objectives; poorly developed
 - objective too broad to address in given study; not testable
 - methods and results do not address stated objective/hypothesis

Materials/Methods of the Structured Abstract

- Provide enough detail to allow reader to judge validity of the work
- Information to include:
 - study design
 - research setting
 - patients or participants
 - description of the intervention
 - listing of primary (and secondary) outcome variables
 - statistical methods

Results of the Structured Abstract

- Should flow logically from the methods
- FULLY address the stated objective
- DO NOT STRAY
- Include baseline characteristics of study pop'n.
- Include SD's or 95%CI's
- Do not bias the abstract – present important positive and negative findings
- If in the abstract, *must* be in the paper

Conclusions

- Should be fully supported by the data presented
- Should relate directly to the stated objective
- Do not overstate the conclusion!

Other Tips

- Strive for easy readability
- Use short declarative sentences
- Avoid excessive reliance on abbreviations
- Spell out abbreviations first, unless commonly recognized (i.e. BP)
- Do not use reference citations
- Do not procrastinate!!!!

Make Sure Your Abstract is Accurate!!

- Most likely portion of the article to be read
- Abstracts published independently in indexing and abstracting databases
- Abstracts do influence clinical practice
- Studies of abstract quality demonstrate deficiency and/or inaccuracy rates ranging from 25% to 68%.

JAMA 1999: Abstract Quality Criteria

- Abstract headings are consistent with structured abstract format.
- Data in abstract are consistent with text, tables, and figures.
- Data or information in the abstract are presented in the text, tables, or figures
- Years of study and length of follow-up are provided.
- Results for Main Outcome Measures are presented in Results section (avoid selective reporting).
- Results are quantified with numerators, denominators, odds, ratios, and confidence intervals where appropriate.
- Absolute differences rather than relative differences are presented wherever possible (e.g.. “Mortality declined from 6% to 3%” rather than “Mortality declined 50%).
- For randomized trials, analysis is identified as intent-to-treat or evaluable patient analysis.
- For surveys, response rate is provided in Results or Design.
- For multivariate analysis, factors controlled for in model are briefly summarized.
- Conclusions follow from information contained within the abstract.

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