Guidelines for the Preparation of Abstracts

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Research Workshop III: Objectives

To understand the purpose and process of writing an abstract that will:

a. Grab the attention of the reader
b. Conform to standard abstract writing principles
c. Be succinct and logical in organization

What is an Abstract?

• A very brief written summary of your research or findings
• An independent statement that briefly conveys the most salient and essential information of a manuscript, text, poster, or presentation

Purpose of an Abstract

• Enables your work to be evaluated for presentation at scholarly meetings
• Helps readers decide if they should read an entire article, listen to a particular presentation or view a particular poster
• Helps readers remember key findings on a topic
• Helps readers better understand a manuscript, text, presentation, or poster

Abstract Styles

• Research
• Clinical Vignette (Case Report)
• Patient Safety/Continuous Quality Improvement (CQI)

Challenge: Condensing months/years of work or a lengthy clinical case into 250 to 300 words

Abstract Styles

• Regardless of abstract type it should be concise, clear, and direct
• Readers do not expect the abstract to have the same sentence structure flow of a complete manuscript

• ACP website-link to writing a research or clinical vignette abstracts:
  https://www.acponline.org/membership/residents/competitions-awards/abstracts/preparing/writing
  https://www.acponline.org/membership/residents/competitions-awards/abstracts/preparing/vignette
INTRODUCTION: Women presenting to the ED, who had not had a recent screening mammogram, were given educational materials and referred to free mammography. We then measured their rate of scheduling a mammogram within 1 month of discharge.

HYPOTHESIS: Providing at-risk women with educational materials and referral for free mammography will not improve their rate of obtaining a mammogram within 1 month of discharge.

METHODS: In this prospective, controlled study, a survey regarding mammogram use, and breast cancer awareness was verbally given to women over 40 in the ED, and 1 month later by phone. The intervention group (n = 200) received pamphlets about breast cancer prevention plus phone numbers for a free mammogram at community health departments; awareness posters were also placed in the ED waiting room. A similar group (n = 200, controls) also responded to the survey in the ED and 1 month later by phone, but without any intervention.

RESULTS: Of the 131 women needing mammograms enrolled in the educational intervention, 97 (74.0%) were reached by phone, and 21.6% had obtained or scheduled a mammogram in the month after discharge. Of the 111 women needing mammograms enrolled in the control group, 88 (79.3%) were reached by phone, only 3.4% had obtained a mammogram in the month after discharge (Fisher’s Exact Test, p < .0005).

CONCLUSIONS: At-risk women less likely to have access to reliable health care responded to an educational intervention and awareness of free/reduced cost resources by complying with ACS breast cancer screening guidelines. The ED provides a unique setting in which to promote such preventative measures to women most in need.
Study Design/Methods

A. Briefly describes the general design of the experiment or study
B. Describes the methodologies in chronological order of appearance
C. Includes the use of controls, inclusion/exclusion criteria, patient populations, numbers per group, type of model or cell line(s) used, how data was analyzed
D. Italicize organism names and Latin terminology such as E. coli, *in vivo*, *in utero*, etc.
E. Avoid cluttering the design section with too much minutaee
F. The methods section should be a narrative not a numbered list of procedures
G. Indicate any trademarked devices, drugs or reagents used and use generic names for drugs. If you must use a proprietary name, identify the company
H. Convince reader that they can trust your results because the study design was appropriate and that you knew what you were doing

Results

A. May be either in narrative, graphical or tabular form
B. Be sure to adequately label the axes of all tables and graphs
C. Tables and Graphs should be interpretable exclusive of the other sections
D. Results should appear in a manner that is chronologically consistent with the study design and methods section
E. Include statistical support for any data that is stated as being either significant or non-significant (P values)
F. Include appropriate units for any numerical data

Conclusions/Summary

A. Address each study objective described in the Objectives section
B. Provide a sentence that synthesizes all the data presented and relates it to your hypothesis
C. Provide a summary sentence that relates this work to the "big picture" (optional)
D. Address any limitations or shortcomings of the experimental design or treatment of data
E. Indicate whether or not further work is needed

References (optional)

Indicate referenced statements with a number in parenthesis or superscript that correlates with the full reference at the end of the text

Examples of how to cite literature

Article

References (optional) cont.

Book/Edited Book

Chapter in book

Acknowledgments (optional)
• Recognize a company for providing study drugs, reagents or devices
• Recognize a sponsor for funding or grant support
• Recognize individuals or who have served as a consultant or otherwise assisted in the work (e.g. Colleague, Pathologist, Research Associate, Statistician, etc.)

Instructions to Authors
Abstracts intended for inclusion in manuscripts, medical conferences or scientific meetings will have specific restrictions on the number of authors, on font size, abstract size or word count, etc.

STRICTLY adhere to these guidelines or risk having the abstract returned or rejected outright.

The technical specifications of the abstract are defined in the “call for abstracts” section in most Professional Society meeting application booklets or in the “Instructions to Authors” section for a given journal.

Abstract Size is Limited by Word or Character Count

How Do We Shorten Abstracts?
1. Use active voice
   Patients were saved by the treatment
   Treatment saved patients

   Enzyme levels were lowered...
   Enzyme levels dropped

Ways to Shorten Abstracts
2. Don’t use “empty” constructions
   In order to determine...
   To determine...
   There were 87 patients enrolled in...
   87 patients enrolled in...

Adapted from AMWA listserv postings by:
  tom.langon@aol.com
  joanmnewyork@aol.com

Find Plain Language Guidelines at: http://plainlanguage.gov/howto/

Ways to Shorten Abstracts
3. Choose stronger, shorter words
   In addition        Also
   Not later than     By

4. Remove phrases with prepositions
   In the month of May  In May
   With the exception of  Except for
Ways to Shorten Abstracts
5. Compare groups in parallel
Patients who received therapy had a median life expectancy of 7.0 years, compared to 2.3 years for those who did not receive therapy. (23 words)
Median life expectancy was 7.0 years for treated patients and 2.3 years for untreated patients. (15 words)

Ways to Shorten Abstracts
6. Start with “Of” or “Among” when reporting proportions
84 subjects were enrolled in the study and 58 completed it. (11 words)
Among 84 subjects enrolled, 58 completed it. (7 words)

Which Would You Read First?
A B C D

Tips on Writing Good Abstracts
• Use bold face fonts to highlight headings
• Ensure sufficient time to compose the abstract—at least 5 or 6 hours (it takes longer than you think!)
• Strictly adhere to abstract guidelines, format requirements and deadlines
• Use 12pt font or greater to facilitate reading and photocopying (check meeting/journal guidelines)

Tips on Writing Good Abstracts cont.
• The use of “I” and “we” are not preferable to the third person and the passive voice ("the Authors, it has been shown, etc.")
• Describe the methods and results in the past tense
• Discuss the conclusions in the present tense
• Have several people independently evaluate the abstract for content, completeness, grammar, punctuation and spelling

Tips on Writing Good Abstracts cont.
• Avoid large blocks of uninterrupted text (use paragraphs, indentions, spaces, bold font headings)
• Be clear, concise and brief
• If abbreviations are necessary, define them when they first appear within the text. (e.g. Lippopolysaccharide (LPS))
Qualities of a Good Abstract

• Uses one or more well developed paragraphs; these are unified, coherent, concise and able to function independently
• Avoids using unnecessary adverbs, adjectives
• Provides logical connections or transitions between the information included
• Follows the chronology of the work

Leading Reasons why Abstracts are Rejected

a. Abstract was incomplete or did not conform to guidelines (word count, font size, organization)
b. Significant flaws in study design
c. Poorly powered study (e.g. not enough subjects)
d. Statistical analysis not appropriate
e. Abstract was not internally consistent
f. Study was incomplete (e.g. no data)
g. Abstract was poorly written in general
h. Study was not appropriate for intended audience
i. Abstract submitted past the submission deadline

Authors and Ethics

• The primary author is the individual who has contributed the greatest amount of work and intellectual effort to the project
• The primary author should be listed first and the name should appear in bold face font/underlined (in keeping with the indicated abstract format)
• Keep the number of authors to a minimum. The maximum number may be defined by the journal or society
• All authors appearing on the abstract are responsible for the content of the abstract and the veracity of the work it describes

Authors and Ethics cont.

• Only individuals who have made a substantive contribution to the work should appear as an author-ghost authorships are not appropriate
• Decide in advance who will appear on the abstract and the order of their appearance
• Generally, only original abstracts not previously presented at other meetings or published will be accepted-check with the individual medical society for exceptions to this
• Beware of “cut and paste” plagiarism

Scientific Abstract Checklist

1. Due date for abstract is ____________
2. Number of copies needed ______________
3. Presenting author is listed first author
4. Presenting author meets eligibility requirements for the meeting
5. Author affiliations are listed
6. Abstract clearly organized into Introduction, Methods, Results, and Conclusion
7. The conclusions are supported by data presented in the abstract
8. Completed abstract meets word limit requirements or fits into formatting box
9. Abstract printed with correct font size and style (if stipulated)
10. Abstract has been reviewed by others for content, style, grammar, and spelling

References: Shamelessly lifted from the ACP website
Thank You For Your Attention!
Any Questions?

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