

Manual On Efficiently Writing Competitive Research Abstracts For Surgical Journals

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Abstracts are a key factor in successfully publishing or presenting surgical research. Correctly done, they crystallize what is best about a given research study. As C. H. Ogden of the Archives of Surgery has pointed out:

“Fundamental to what editors want and expect from authors is embodied in the structured abstract: a clearly stated hypothesis, design of the study, the setting, intervention studies, outcome measures, results, and conclusions (Ogden 2000, pp.1123)”

Most reviewers of papers submitted for presentations at conference would agree.

Unfortunately while journals and professional conferences typically require an abstract, and specify a specific length, they seldom provide detailed guidelines on either structure or content. This Brief Manual is designed to fill that gap and to assist you and other new researchers in efficiently creating and revising a quality research abstract for a conference or a publication. It is designed to help you effectively use a minimum number of words to summarize:

1. Why a clinical or research issue is important.
2. How you investigated that issue.
3. The main results of that investigation, and
4. Your interpretation of those results.

To do so, this Manual covers the following main topics:

1. The functions of an abstract
2. Basic types of abstracts
3. Parts of the abstract
4. Avoiding some common problems
5. Writing an abstract
6. Increasing the probability of acceptance

In addition, two Appendices are included to facilitate the generation and evaluation by peers of a quality research abstract. They are:

Appendix A: Form for Writing a First Draft. This form will help you create a first draft of your abstract.

Appendix B: Checklist for Evaluating a Research Abstract. Use this appendix to evaluate and obtain feedback on your work.

These Appendices are designed to support you in efficiently generating and editing a high quality abstract.

FUNCTIONS OF AN ABSTRACT

For a conference, the abstract is the main basis for selecting, or rejecting, a proposed presentation. With journals the abstract is often the first text carefully read by a reviewer or by a reader whose interest was sparked by an effective title. Taken together, abstracts and titles generate “first impression” expectations which can color the entire review process. Finally, after acceptance, the abstract is far more likely to be read than the entire article. Therefore it is important to submit a competent, persuasive, digest of your work.

Definition. According to the Merriam-Webster dictionary, an abstract is “a summary of points (as of a writing) usually presented in skeletal form; *also*: something that summarizes or concentrates the essentials of a larger thing or several things.” Thus, in surgical writing, the major challenge in writing an abstract is to distill the essence of a paper or presentation and communicate that essence clearly, succinctly, and powerfully. This communication must occur within a very tight and generally inviolate size limitation, commonly 200 to 250 words for a structured abstract or even less (100-150 words) for an unstructured abstract.

Limitations. In writing an abstract it is crucial to exactly follow the requirements of the journal or conference. Doing so will make your submission stand out since other surgeons may neglect this key step. For example, one recent study of submissions to a national surgical scientific meeting found that only 17% complied with all of the guidelines set by the meeting organizers (Mcnamara, Grannell M, Watson RG, Bouchier-Hayes DJ. The research abstract: worth getting it right. *Ir J Med Sci.* 2001 170(1):38-40. 2001). Here non-compliance acts to increase the probability of rejection.

Thus the *Instructions to Authors* are crucial and should be read very carefully. A resource in this area is the Medical College of Ohio Web Site on Instructions to Authors in the Health Sciences (<http://www.mco.edu/lib/instr/libinsta.html>). This site provides information from many surgical journals. If the Instructions are unclear, consult the *Uniform Requirements For Manuscripts Submitted To Biomedical Journals* available at <http://www.icmje.org>. Their *Abstract and Key Words* section succinctly states the general constraints as:

“The second page should carry an abstract (of no more than 150 words for unstructured abstracts or 250 words for structured abstracts). The abstract should state the purposes of the study or investigation, basic procedures (selection of study subjects or laboratory animals; observational and analytical methods), main findings (giving specific data and their statistical significance, if possible), and the principal conclusions. It should emphasize new and important aspects of the study or observations.

Below the abstract authors should provide, and identify as such, 3 to 10 key words or short phrases that will assist indexers in cross-indexing the article and may be published with the abstract. Terms from the Medical Subject Headings (MeSH) list of Index Medicus should be used; if suitable MeSH terms are not yet available for recently introduced terms, present terms may be used.”

The appropriate selection of key words is important because it will influence how easily your article will be found in a search of the literature.

Electronic Submission. Increasingly abstracts for professional meetings are being submitted electronically. Two recent examples of submission formats can be found on the Southeastern Surgical Conference (<http://www.sesc.org/2003AbstractForm.htm>) and the World Congress on Liposuction (<http://www.cosmeticsurgery.org/Calendar/abstract2002meet/abstract2002meet.asp?mn=sc>) web sites. Both illustrate a common problem in that little information beyond word limits is provided in terms of how the abstract should be structured.

Most importantly, remember that the strict word limitations mean that all of the aspects of your study cannot be discussed in the final abstract. Therefore your writing must focus on only the most important information. That information varies somewhat for unstructured and structured abstracts but in both cases every word must count.

BASIC TYPES OF ABSTRACTS

A research abstract summarizes the results of a study. A journal or conference can require either a structured or unstructured (also called an informal) abstract. In surgery, as in medicine, there is an increasing reliance on structured abstracts by journals (Squires 1990, Squires, Keith & Meakins 1992). For conferences, the abstract is typically used to submit a presentation or poster. Journal reviewers use it to initially assess the probable quality of a formal paper. This Brief Manual focuses only on research abstracts but you can find the JAMA criteria for both systematic reviews and meta-analyses at <http://jama.ama-assn.org/info/auinst.html#a8>.

It is important to note here that poor organization is a major factor in the rejection of submissions. Therefore, even for an unstructured abstract, it is useful to use the structured format described below to generate the first draft. Doing so tends to make the final writing and editing much easier because all of the relevant topic areas are being considered in a logical order.

Unstructured abstracts. These are increasingly rare for both journals and conferences. In general, they cover four areas:

1. An **introduction** presenting the overall purpose of the study and a summary of the question(s) being addressed.
2. A brief but complete **summary** of the basic procedures used including the selection of subjects and the observational and analytical methodology.
3. A brief presentation of the main **findings** including data, indications of statistical significance and of their interpretation.
4. An indication of the major clinical and/or research **implications** which highlights any new and important conclusions.

Structured abstracts. Journals vary in terms of the guidance they provide about the topics to be covered in a structured abstract summarizing original research. A common structure for research abstracts would involve answering the following questions:

Background: What is the overall clinical or research context?

Objectives: What are the main hypotheses or study questions?
Design: What is the overall design of this effort?
Location/Setting: Where is the work done and at what level of clinical care?
Patients/subjects: Who are the participants and how are they selected?
Interventions: What procedures or other interventions are used?
Outcomes: What is measured and how is it measured?
Results: What are the main results of the interventions?
Conclusions: What are the key implications for surgical use and future research?

As noted above, a particularly useful detailed summary of a structured abstract is found on the JAMA Website. In addition, Appendix A provides an efficient way to generate the first draft of a structured abstract and can also assist in generating an unstructured abstract. After you have a draft, Appendix B can be employed by you and peers to quickly evaluate this draft and to suggest areas that need to be modified. This form is also useful for evaluating a published abstract related to your study in order to identify key aspects that you should cover in your own abstract.

SECTIONS OF THE ABSTRACT

An effective abstract is like a good short story – it starts with an interesting title and has a beginning, middle, and end that logically evolve from each other. The introduction prepares the reader for the methods section that clearly summarizes appropriate ways of obtaining information on the problem defined in the introduction. Similarly, the conclusions at the end of the abstract directly address the clinical or other questions driving the research, and any conclusions are clearly based on the results of the intervention. And like a short story, an effective abstract requires considerable rewriting and editing.

Before you start, you should review the JAMA summary of the terms and content areas that need to be addressed in a high quality abstract. This information is available as part of the full set of *Manuscript Criteria and Information* requirements published at http://jama.ama-assn.org/fora_current.dtl.

Managing First Impressions.

The reviewer, and later the reader, first sees the Title and list of authors. For single-center research, shorter titles and lists of authors tend to create a better first impression. Long titles (beyond 15 words) and hoards of authors (beyond 5 or 6 for a typical study) can raise questions about the possible quality of the article unless both words, and authors, are directly relevant to the research question.

The Title. The title establishes some initial expectations in the reader. Write it last after the final abstract is done. Keep it as short as possible (ideally 10 to 12 words and a maximum of 100 characters and spaces) but be sure that it accurately indicates the scope and content of the article. Readers, and reviewers, dislike titles that mislead them about the content of the article or presentation.

In general, an effective title also (Byrne, 1998; Pruitt and Mason, 1998):

1. Is interesting, even eye-catching, but not “cute”.
2. Contains no unnecessary words like “A study of...” or “Development of..”
3. Avoids unexplained abbreviations unless they are commonly understood.
4. States the subject of the research but not the results.
5. Starts with a key term and is grammatically correct
6. Is worded to immediately attract one or more target audiences.

In some cases, the title can be a simple statement of the basic research question.

Authorship. This is an increasingly contentious area. According to the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" the major criteria here is that all the listed individuals should make enough of a contribution to be able to take public responsibility for the work. To justify authorship, contributions typically should be made in **all** aspects of the work including the overall conception, study design, data analysis, interpretation of results, writing, and editing. Anyone who does not significantly contribute should be listed, with their permission, in an Appendix or Acknowledgments section.

The order of authorship should be decided in advance; reflect the level and extent of individual contributions, and be justifiable if a journal editor or conference organizer raises a question in this area. Note that journals are increasingly requiring that submissions certify the contributions of every author.

Key words list (if required). Provide a short list of 3-10 words or short phrases preferably from the list of medical subject headings (MeSH) of the *Index Medicus*. If no specific terms are available, use ones that the intended audience are likely to understand. Key words are important because they lead potential readers to your contribution to the literature when they use a search engine.

Key Terms. The correct use of terminology is crucial in an abstract. **The** JAMA site provides a useful *Glossary of Methodologic Terms* at http://jama.ama-assn.org/content/vol290/issue1/images/data/125/DC5/auinst_term.dtl. Using key terms incorrectly may suggest to the reviewer that you have effectively mastered the area you are studying.

Main Sections

Like the research report itself, the abstract has four main sections and a variety of subsections.

Introduction (one to three sentences). Indicate in the first sentence the basic importance (clinical, research, or theoretical) of the study and of the key question(s) being addressed. Summarize the main objective(s) of the study but ignore the less important secondary objectives. If the study involved hypotheses defined in advance, describe the most salient ones here.

Design. Recap the basic study design. Describe procedures in general, commonly used, terms and leave the detailed specifics for the paper itself. Do indicate the linkage between your design and the points raised in the introduction. The specific topics you cover will vary with the type of study and the list below should be supplemented by a study of the JAMA requirements or of a similar resource.

Type of study. The terms you stress will depend on the type of study. The most common types include:

1. Intervention studies.
2. Studies of screening or diagnostic tests.
3. Studies of prognosis.
4. Studies of causation or association.
5. Descriptions of clinical features.
6. Formal economic evaluations.

Study Setting. Describe the setting of the study in ways that will assist the reader in determining if your study is relevant to their clinical or research concerns. Correctly indicate the level of care (primary care or referral center, private or institutional practice, ambulatory or hospitalized care, etc.).

Characteristics of Patient/Participants. Summarize clinical disorders, basic sociodemographic features, and how participants were selected and dropped. Provide enough detail to assure that the reader understands the nature of your sample but do not include all the information presented in the report.

Procedure. Briefly describe the method and duration of any procedure. Employ the common name for the treatment and use nonproprietary drug names. Be particularly careful to indicate if the procedure or other treatment is atypical in some way.

Outcome measures. Describe the main measurement procedures by their most generally used names, indicate if they are usual or standardized, and discuss any deviations from more typical uses.

Results. This is often the most important part of the abstract. Focus your writing on what the reader wants – the outcomes that are directly related to the issues presented in the previous sections of your abstract. Include the most relevant statistical information including the obtained values, P levels, and confidence intervals. A useful reference here is Lang, T. A. and Secic, M. *How to Report Statistics in Medicine* (Philadelphia, American College of Physicians, 1997). This is available in the library. Again, the JAMA Web site cites the appropriate statistical

reports for different types of studies. However, be careful to avoid the temptation to pack too much detail in this section by attempting to cover all your findings.

Conclusions. In this last section, indicate the major clinical and research implications and focus on conclusions that are most directly supported, or refuted, by the results. Briefly summarize any clinical implications and the need for further study. Note the implications of any major limitations of your design. Be especially cautious about what you claim here since the reader expects your statements to be fully congruent with the results you discussed.

Finally, before starting to write, review the following list of “Avoiding Some Common Problems”. This covers some typical pitfalls that can limit the chance of acceptance by a professional conference or journal.

AVOIDING SOME COMMON PROBLEMS

Pruitt & Mason (1998) provide information on how to increase the probability that your abstract will be accepted for presentation at a surgical conference. Similar information on submissions to journals is provided by Illes (1998) and Byrne (1998). The following draws on those resources to indicate are some areas where authors can experience difficulties.

Some General Considerations

Respect word limits. Journal editors and reviewers are generally quite rigid in terms of page and word limits. They reserve the right to reject any paper or abstract that exceeds these limits.

Write sentences not telegrams. Do not simply string together a set of short phrases in your abstract. Use complete, but short, sentences in each section.

Remember that quotations are not thoughts. One of the most common errors in writing abstracts is to directly quote key sentences from the larger paper. Doing so suggests to the reviewer or attendee that you did not take the time to write a proper abstract. This time-saving strategy also can generate an abstract that does not “hang together” well.

Write an abstract not an extract. Abstracts stand alone as a complete document and thus are more than a simple extract from the main paper. They should cover all of the major points of the larger effort.

Avoid errors. Incorrectly spelled chemical or surgical terms, misspellings in general, incorrect use of terms, missing words, misused terms, jargon, and the use of outmoded terminology will all detract from an abstract.

Cut surplus verbiage. A frequent problem is that the abstract is not tightly edited and includes words and phrases that contribute little to the communication of content. In the best possible abstract, no word can be left out without weakening the argument and no word needs to be added to strengthen it.

Use current terms, correctly. As an area of practice or research evolves, the terminology often shifts and some terms become more or less prominent. Use the key words that appear in the most recent publications or presentations. An occurrence of “outdated” terminology alerts the reviewer that you may not be keeping up with the most recent trends and findings and this is particularly true with respect to the title.

Limit the use of jargon or abbreviations. Be sure your terms are well known to your intended audience and define all acronyms and units of measure. These principles should be followed throughout the throughout the abstract.

No surprises. Statements that do not seem to follow from the previous sentences are “surprises” and should be avoided. In particular, avoid “surprise endings”, conclusions and/or implications not supported by the earlier sections. Reviewers expect a logical flow from beginning to end and do not appreciate the unexpected emergence of new areas of information.

Provide adequate, not overwhelming, detail. Avoid the temptation to attempt an extensive review of your work.

Clearly separate hypotheses and facts. Specify the hypotheses (research questions) first and move on the data related to those hypotheses.

Self-promotion. Too much reference to your own previous work or the work of close colleagues is unnecessary and unwelcome.

Title

Keep the title short. Try to use a maximum of 10-12 words and try not to exceed 100 character spaces (characters plus spaces). Have very good reasons for a longer title.

Enliven the title. What about the title suggests your creativity or enthusiasm for the topic? Cuteness, however, is to be avoided and a title which does not include key terms related to your study may mean that the article will be less likely to be read by others.

Title should not be incomplete or misleading. The title must give the reviewer or intended reader an accurate prediction of the content of the article.

Avoid acronyms. Avoid using them in the title if possible. Professionals outside your area of expertise may also be interested in your work but not be familiar with the acronyms you know so well.

Do not state results or conclusions. The purpose of the title is to motivate the reader to at least read the abstract. Giving the “bottom line” up front can prevent that process.

Introduction

Place question within a larger context. State exactly why the reader should pay attention to your effort. What broader issues are operating here?

Fully define the research problem. The basic research question(s) should be clearly specified so that the reader knows exactly what you are studying.

Avoid too many or too long hypotheses. Only the most important hypotheses should be stated, in a minimum number of words.

Beware of excessive detail. Too great an emphasis on the work of others, on one's own past studies, or on the details of the research, detracts from the needed clarity of an abstract.

Define acronyms. Use acronyms sparingly and do not assume that your audience knows what a given one means. So define each (unless they are widely known) in parentheses immediately after the first mention in the Introduction or elsewhere in the abstract.

Design.

Adequately describe the methodology. If the reader were in an institution similar to yours, would he or she feel that they could replicate your design?

Document appropriateness of methodology. The reader must immediately understand why the methodology you chose was particularly appropriate for the question(s) you initially raised. The same is true for the statistical techniques you used.

Results

Give adequate statistical detail. The statistical test ("t = " or "F =" etc.) should be stated along with the confidence interval and level of probability, if appropriate.

Design clear data tables. If a table is included in the abstract for a conference (not for a paper), make it easily read with clear headings. Use standardized symbols for units of measure and statistical results. Avoid complex, hard to read, tables that cannot be scanned quickly.

Do not misuse "significant". This is solely a statistical term and should only be employed when reporting statistical findings.

Conclusions and Implications

Separate hypotheses and findings. Clearly differentiate your results from the hypotheses stated earlier.

Describe study limitations appropriately. The limitations of your study, particularly what was “not done” or “not found”, generally should not be cited here unless they impact directly on your conclusions.

Avoid unsupported results and unwarranted implications. Your results must grow directly from your data analysis and your implications must not stray beyond the boundaries of your results. All conclusions should be well supported by the facts in evidence. Only clearly identified speculations should go beyond those facts. In general, extrapolating your findings too far is cause for immediate rejection.

WRITING AN ABSTRACT

Surgical writing is seldom easy to do but the following suggestions can make the process more efficient and less painful.

Writing the first draft. When writing either form of abstract it is often useful to start by simply writing one basic sentence for each of topic headings found on the Appendix A form. Even for unstructured abstracts it is useful to first use the structured abstract format in Appendix A to cover each of the main sections. At this point, do not worry about the number of words you are using. Later editing should reduce your abstract to the desired size.

Decide when to write your abstract. Depending on your style as a writer, the first draft of an abstract can be written before, during, or at the end of the process of writing the full report.

Before. Some researchers prefer to write the abstract first. Once they are satisfied with their effort, they use the abstract to structure the entire final paper. The assumption here is that an initial abstract requires a clear understanding of the contents of the paper and thus facilitates the writing process.

During. Other writers wait and write this section midway. This identifies problems with the structure of the article, facilitates later editing and aids in identifying points in the text that may be unclear.

After. The most common strategy is to begin writing after the data has been analyzed and fully understood.

In all three cases, assume that substantial time will be required to edit, re-edit, and rewrite your efforts in order to create a polished final abstract. Allow for at least three rewrites.

It is also generally a good idea to leave some time between edits and rewrites. Otherwise you can become enmeshed in the process of writing and become less able to spot areas of possible improvement. For the same reason, it is often advisable to have others comment on your drafts. You may not wish to include all their suggestions but outsiders are less entangled in this process and thus potentially able to provide useful suggestions and insights. However, avoid peers who seem more interested in playing “got ya” than in providing feedback.

Waiting until the last minute. Writing an abstract the night before submission, or even the week before, invites problems. You may be able to generate an acceptable abstract under such stressful circumstances but you are more likely to create an unkempt monster well able to bite you later.

Avoid premature submissions. An abstract promising that “implications will be discussed” or “results will be presented” is often unacceptable. It alerts the reviewer that the study is incomplete and raises the issue of just how finished the final product will be at the time of presentation or final submission.

It is sometimes acceptable to submit an abstract based on preliminary findings or work-in-progress if it is clearly identified as such. Submitting one before the work has been started is inherently dangerous because what you report may differ substantially from what you stated in the abstract. Such an outcome does not build your reputation with your peers particularly if you have to withdraw the paper at a later date.

Ignoring rules. Reviewers and editors expect that their rules will be followed, exactly! In particular:

Do not miss the deadline for submission. If you are submitting at the last minute, use Federal Express or a similar carrier so that you have a record of the date the manuscript was sent.

Carefully follow any requirements for type fonts, page margins, etc.

Use their format. Even if you think there is a better way, use their topic headings and content suggestions. This is particularly important for electronic submissions.

Some basic writing considerations. A number of simple writing strategies can increase the chance that your abstract will be selected.

Clarity of expression. Unclear, poorly written papers force the reviewer to spend additional time trying to figure out what you are saying. It is far easier for them to concentrate on other submissions that more clearly summarize the importance of the topic, procedures used, results, and implications.

Sentence structure. Long sentences overloaded with surgical terminology tend to lose the reader, and sometimes the writer as well. Use the Grammar Checker in your word processor to identify such sentences. Whenever possible, chop them into two or more shorter pieces. As I just did.

Paragraph structure. As with sentences, shorter paragraphs often aid the reviewer in evaluating your work.

Check carefully for errors and mistakes. The better your paper looks and reads, the more likely it is to be received favorably. Typos, spelling mistakes, bent pages, missing words,

dog slobber, etc., all should be avoided. If English is not your native language, have someone else read the final draft.

Make it attractive. Step back and look at how the abstract looks in total. An attractive appearance reassures a reviewer that you took care in the preparation of the abstract.

Send the original. Print your abstract on a laser printer or a very good dot matrix unit. The process of Xeroxing your paper can cut the quality and leave a bad first impression.

Use a ragged right edge. The process of “right justifying” text by clicking the “justify” button results in a page which is generally harder to read. An exception here is when this is a submission requirement.

Use a readable typeface. Microsoft Word, and other word processors, often give you multiple options to use different typefaces. In general, a sans serif (no tails on letters) type face like Ariel work best for headlines and a serif style like Times New Roman creates more readable text. Using the right typeface will tend to make your text stand out.

Chose a bigger font size. Microsoft word selects size 10 as its default size and this can be a bit difficult for older reviewers to read comfortably. Consider size 11 or, even better, size 12 unless the size is specified in the Call for Abstracts or if you exceed the space available.

Make it look typeset. Review your favorite journal. How do they use headings? Do they indent the first word of each paragraph?

Above all, check and recheck before submission. Many conferences will print your abstract exactly as received, errors and all.

INCREASING THE PROBABILITY OF ACCEPTANCE

The single most important factors driving acceptance are:

1. Evidence of a **positive outcome** indicating, for example, that the procedure did have the expected results. This is sometimes called “publication bias.” Negative outcomes such as a finding of “no difference” between treatments are generally of less interest unless they challenge conventional wisdom.
2. An indication of **originality** (“newsworthiness”) in the idea, or methodology, or analysis, or interpretation of results. The simple duplication of other’s efforts rarely intrigues reviewers.
3. **Importance** of the work to the intended audience – readers of the journal or participants at the conference as well as to broader audiences.
4. **Methodological soundness** including the correct overall design, the careful conduct of the study and the use of appropriate statistics..
5. **Organization and writing quality.** The abstract is clear, logically organized, and concise with few superfluous words.
6. **Direct Relevance** to the objectives of the journal or to the theme(s) of the conference or to the needs of the intended audience.

Your task is to highlight the evidence for these factors in your writing and cover letter. Some other considerations are listed below.

Select the right topic. Certain topics can have a higher probability of acceptance.

Be consistent with the overall conference theme. Submitting a paper that is congruent with the overall conference theme or the focus of a specific track will tend to increase the chances of acceptance.

Pick less popular areas. Evaluate different content or practice areas and pick one that is important and current but less likely to attract multiple submissions. A review of the previous year's Program or Proceedings can be useful here. If possible, tie a less common topic to the overall conference theme.

Avoid problematic areas. Certain areas of practice and research can become the nearly exclusive domain of specific experts, their students, or their educational institutions. You may face strong competition if you are not part of this group.

Controversy cuts both ways. A controversial issue can generate interest and be fun to research. However, always remember that your reviewer may be on the other side of the debate. So be a bit cautious in what you write here.

Remember, research is not the only path. Depending on the conference, abstracts may be submitted on a variety of topics. Reviews of a rapidly developing area of research or treatment, for example, may be of interest.

Finally, deal with the pragmatic issues involved in submitting an abstract.

Beat the deadline. Submit your abstract a few days before the deadline. Abstracts reviewed first tend to be remembered better and sometimes are less critically evaluated.

Stay within the box. For presentations, stay within the lines specified by the conference. Also, follow any requirements for font size and type.

Use a clear, well thought out submission letter. Help the initial decision maker to quickly select the appropriate reviewer for your abstract. A sample letter for a conference is shown below:

Name, Title, Address of conference contact person - correct in all aspects.

Dear Dr. :

Enclosed is the abstract of a study on (full title). It is being submitted for possible inclusion in the session on (conference topic area and date). Our review of the literature indicates that this may be a potentially important investigation of (brief description). New information on (this condition, surgical procedure) is important at this time because (provide a general context here).

In particular, this investigation (relates to, supports, etc.) the (more effective treatment of, further study of, the condition). We are submitting this abstract to (conference name) because these findings would be of particular interest to (give possible target audiences). This abstract is () words long and contains () tables and () figures. This study of (give number) patients was done at Mercy Catholic Medical Center, a large urban and suburban medical center in Philadelphia and Darby Pennsylvania. It has not been published, presented, or submitted elsewhere.

The authors have no close financial interests or other related commitments to any company mentioned in this study that might represent potential conflict of interest. Each has indicated in writing that they have reviewed this paper and agreed to this submission for presentation (or publication).

For additional information please contact (accurately give the contact person's name, mailing address, home and work phone numbers, fax number and e-mail address).

These phrases are presented only as guidelines – vary them to meet your needs.

Dealing with Rejection. Conferences typically receive more submissions than they can use and the same is almost invariably true for journals. You will, on occasion, get rejected. The following strategy can be useful:

1. Forget the rejection for at least two weeks. It can take that long for your emotional reaction to subside. Your initial anger, hurt, or feelings of humiliation are not a good basis for a possible revision.
2. Carefully review any reasons given for the rejection. If none are given, contact the journal editor or conference organizer for feedback.
3. Adopt those suggestions you consider appropriate and reasonable and rewrite the abstract. Take particular care to avoid the typographical or other errors that angry fingers can make.
4. Consider dropping or revising the project if the main feedback is that your work contributes nothing new or is rejected a second time.

Finally, Use the resources of Appendix A and B to more efficiently write, evaluate, and rewrite your abstract. If it is rejected two or three time, consider putting your effort elsewhere.

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**APPENDIX A:
Form For Writing A First Draft**

Completing the following can make writing the final abstract easier.

Title (10-12 words, 100 character spaces): The title is:

List of authors:

Original Research Abstract

Briefly summarize in one to two short sentences each of the following:

Background - The basic overall clinical or research issue was:

Previous research has indicated that:

The major remaining clinical or research questions include:

Objectives - The main hypothesis or study questions were:

Design - The overall design was:

Location/Setting – The study was done at:

And the level of care was:

Patients/subjects – The number and characteristics of patients/subjects were:

The criteria for selection were:

The number dropped or excluded was and the reasons were:

Interventions: The procedure or other intervention was:

Outcomes: Outcomes were measured by:

Results: The results were analyzed by:

The main results of the interventions were:

Conclusions: The main limitations of this study are:

The primary clinical implications are:

The main implications for further research or study (if appropriate) are:

**APPENDIX B
Abstract Checklist**

The following is checklist for the review of a draft abstract. Focus on the issues most directly related to your submission to a journal or a conference. This form can also be used to evaluate published examples from a conference or a specific journal. More importantly, Appendix B is a tool to be employed by colleagues to review your draft(s) and to suggest how to strengthen your submission.

ISSUE	ASSESSMENT AND COMMENTS
Title	
Effectively summarizes what was done.	___Y, or ___N, or ___?
Clear and concise.	___Y, or ___N, or ___?
Consistent with type of journal or conference theme.	___Y, or ___N, or ___?
Avoids abbreviations or acronyms.	___Y, or ___N, or ___?
Grabs reader's attention because: _____	
Target audience(s) appear to be. _____	

Authorship

All author's names, titles, and institutional affiliations are complete and correct.	___Y, or ___N, or ___?
All authors made a substantial contribution.	___Y, or ___N, or ___?
Presenter is first author or identified as the contact person.	___Y, or ___N, or ___?

Background:

Clearly states main research problem(s) or issue(s).	___Y, or ___N, or ___?
Effectively summarizes clinical or research context of the issue/problem being studied.	___Y, or ___N, or ___?

Objectives:

Clearly defines specific main hypothesis or study questions.	___Y, or ___N, or ___?
Relates problem/issue to specific clinical or research concerns.	___Y, or ___N, or ___?
Literature cited is directly related to the main concerns.	___Y, or ___N, or ___?
Objectives well supported by the literature review.	___Y, or ___N, or ___?
No major relevant areas are left out.	___Y, or ___N, or ___?

Design:

Design appears rigorous, and well thought out. ___Y, or ___N, or ___?

Design is a clearly appropriate way of answering
the basic questions being raised. ___Y, or ___N, or ___?

Location/Setting:

Identifies specific institution(s) where work was done. ___Y, or ___N, or ___?

Clearly defines level of clinical care. ___Y, or ___N, or ___?

Indicates type or physicians or other professionals involved. ___Y, or ___N, or ___?

Patients/subjects:

Defines number and basic characteristics of patients/subjects. ___Y, or ___N, or ___?

Indicates how the participants were selected and excluded. ___Y, or ___N, or ___?

Indicates why participants were dropped from the study. ___Y, or ___N, or ___?

A power analysis is done to assure that the sample size is
sufficiently large to detect a specified difference. ___Y, or ___N, or ___?

Procedures And Interventions:

Defines the intervention(s) used in sufficient detail. ___Y, or ___N, or ___?

Treatment choices grow logically out of main
hypotheses/study questions specified above. ___Y, or ___N, or ___?

Evidence that treatments were delivered in a standardized way. ___Y, or ___N, or ___?

Outcomes:

Measures chosen are appropriate for treatment(s). ___Y, or ___N, or ___?

Evidence that measurements are standardized in some way. ___Y, or ___N, or ___?

Results:

Statistics are adequately described and are appropriate
for the type of data collected. ___Y, or ___N, or ___?

Statistical assumptions are not violated. ___Y, or ___N, or ___?

Data is not over-interpreted statistically. ___Y, or ___N, or ___?

Potentially confounding factors are discussed. ___Y, or ___N, or ___?

Conclusions:

- The key implications for clinical use are specified. Y, or N, or ?
- Alternative explanations for the results are discussed. Y, or N, or ?
- Implications for future study and research specified. Y, or N, or ?
- Major limitations of the results are discussed. Y, or N, or ?
- Interpretation consistent with results. Y, or N, or ?

General Considerations

- Number of words allowed is: _____ words. Number in this abstract is: _____ words.
- Conference abstract fits within the allocated space. Y, or N, or ?
 - Argument logically flows from section to section. Y, or N, or ?
 - Uses subtitles to mark the paragraphs of the abstract. Y, or N, or ?
 - Defines all abbreviations including standard measures. Y, or N, or ?
 - Provides all information needed to fully understand study. Y, or N, or ?
- Overall clarity of writing (Circle 1): Very High High Medium Low Very Low

Feedback

- I would you rate this abstract compared to others in this area that I have read as (check 1):
- One of the best, Above average, Average, Below average, Well below average
- My specific recommendations on how to strengthen this abstract are: