

The Top 10 Reasons Why Manuscripts Are Not Accepted for Publication

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This article discusses why many research projects that have been presented in abstract form are never published as full articles, and lists 10 reasons why manuscripts are not accepted for publication in RESPIRATORY CARE. Some of these reasons are easily avoidable or readily overcome. Included in this category is submission of manuscripts that do not correspond to the kinds of articles the Journal publishes, either in subject matter or in format. Poor writing impedes peer review and is unlikely to prejudice editors in an author’s favor, although it is seldom the primary reason for rejection. Common deficiencies in the methods, results, and discussion sections prevent initial acceptance for publication but are at least potentially amenable to correction. More serious are fundamental defects in study design, which although correctable at the inception of a project, often doom the paper once the study has been completed. Two problems that are especially unfortunate for authors and potential readers alike are failing to revise and resubmit a manuscript after initial peer review and never preparing a full manuscript in the first place, after presentation of the work in abstract form. This special issue of RESPIRATORY CARE and other cited publications offer practical resources for authors to use in overcoming each of these problems. Key words: publications; publishing; research design; writing; research methodology; manuscripts, medical; communication; conferences and congresses; peer review. [Respir Care 2004;49(10):1246–1252. © 2004 Daedalus Enterprises]

Introduction

Most of the research presented in abstract form at scientific meetings is not subsequently published in the form of full papers in peer-reviewed journals. In the most comprehensive examination of this subject to date,

von Elm et al¹ analyzed 19,123 abstracts that were accepted for presentation at 234 meetings between 1957 and 1999, and found that only 44% of them were published as full papers in the subsequent 6 years. There is some variation by specialty, but even taking this into account, not more than about half of the work presented in abstract form is subsequently published.² Why this is the case is the subject of this article. I briefly review the literature on the reasons for not following up presented abstracts with full papers in peer-reviewed journals. Following this, I offer my own perspective on why abstracts presented at the RESPIRATORY CARE OPEN FORUM³ are not subsequently published, in this Journal or elsewhere. I focus on the field of respiratory care and RESPIRATORY CARE Journal because some aspects of the issue under discussion may be different in this context from those in other fields and for other peer-reviewed journals.

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THE TOP 10 REASONS WHY MANUSCRIPTS ARE NOT ACCEPTED FOR PUBLICATION

Table 1. Editors' and Reviewers' Most Common Criticisms of Submitted Manuscripts

<u>Importance of the Topic</u>
Rehash of established facts
Insignificant research question
Irrelevant or unimportant topic
Low reader interest
Little clinical relevance
Not generalizable
<u>Study Design</u>
Poor experimental design
Vague/inadequate method description
Methods lack sufficient rigor
Failure to account for confounders
No control or improper control
No hypothesis
Biased protocol
Small sample size
Inappropriate statistical methods, or statistics not applied properly
<u>Overall Presentation of Study and Findings</u>
Poor organization
Too long and verbose
Failure to communicate clearly
Poor grammar, syntax, or spelling
Excessively self-promotional
Poorly written abstract
<u>Interpretation of the Findings</u>
Erroneous or unsupported conclusions
Conclusions disproportionate to results
Study design does not support inferences made
Inadequate link of findings to practice
Uncritical acceptance of statistical results
Failure to consider alternative explanations
Unexplained inconsistencies
Inflation of the importance of the findings
Interpretation not concordant with the data
Inadequate discussion

(Adapted from Reference 4.)

What the Literature Says

Several investigators have looked into the reasons for rejection of manuscripts submitted to scientific journals for possible publication. Byrne⁴ queried editors and peer reviewers about the most common reasons for rejecting submitted manuscripts. He found a number of consistent comments, as summarized in Table 1. Deficiencies in the design of the study was the most commonly cited reason for outright manuscript rejection.

A recent study from the *Canadian Journal of Anaesthesia*⁵ examined the evaluations of 405 peer reviewers of 213 submitted manuscripts. Whether the manuscript was an original study or a case report, and whether it was clinical or laboratory-based, had no effect on acceptance

Table 2. The 10 Most Frequent Reasons for Manuscript Rejection in a Study of Research in Medical Education

1. Inappropriate or incomplete statistics
2. Overinterpretation of results
3. Inappropriate or suboptimal instrumentation
4. Sample too small or biased
5. Text difficult to follow
6. Insufficient problem statement
7. Inaccurate or inconsistent data reported
8. Incomplete, inaccurate, or outdated review of the literature
9. Insufficient data presented
10. Defective tables or figures

(Adapted from Reference 6.)

or rejection. The main determinant of the recommendation for acceptance or rejection of a given manuscript was the relationship between the experimental design, the results, and the conclusion. Inappropriate experimental design was again strongly associated with rejection.

Bordage⁶ reported on the reasons given by peer reviewers for rejection of submitted manuscripts. In that study an average of 4 reviewers evaluated each of 151 manuscripts submitted for publication in the proceedings of 2 annual conferences on research in medical education. Table 2 lists the top 10 reasons for rejection, in descending order.⁶ The author points out that some of these problems (such as use of inappropriate statistical methods and overstating the implications of the results) can be fixed, whereas others (such as poor study design and ineffective communication) are fatal flaws.

An editorial on why papers are rejected after submission to the *Journal of Professional Nursing* offered a subjective listing of 10 most common reasons,⁷ which included three that I will discuss below (submitting to the wrong journal, poor writing, and flawed methods), plus the failure to include new or original information, inadequate literature review, reporting outdated information, and addressing too narrow or arcane a point. Another reason cited by that author was submission of a class paper or speech. RESPIRATORY CARE sometimes receives manuscripts that are obviously either class projects or thesis reports. Though there is no categorical reason why a master's thesis or instructor-assigned paper could not be published, the format, length, and comprehensiveness of such documents are usually different enough from the Journal's requirements that they must nearly always be rejected.

Most research in this field has dealt with the reasons for acceptance or rejection of submitted manuscripts. Little has been published on why work presented in abstract form is not followed by submission of a full manuscript. Weber et al⁸ carried out a blinded review of all abstracts submitted to an emergency medicine meeting in 1991 and

Table 3. The Top 10 Reasons Why Manuscripts Are Not Published in RESPIRATORY CARE

10. Picking the wrong journal
9. Submitting a manuscript in a format that does not match what the Journal publishes
8. Not following the manuscript preparation instructions
7. Poor writing
6. Getting carried away in the discussion
5. Suboptimal reporting of the results
4. Inadequate description of the methods
3. Poor study design
2. Failure to revise and resubmit following peer review
1. Failure to write and submit a full manuscript after presenting the abstract

determined which of them were subsequently published as full manuscripts during the next 5 years. Authors of 223 (84%) of the 266 abstracts responded to a questionnaire about subsequent manuscript submission. Only 20% of the unpublished authors had submitted a manuscript of the work. There was no difference between accepted and rejected abstracts in that respect. Study quality, originality, design, sample size, and the presence of a positive outcome did not predict whether an investigator chose to submit a manuscript. Unpublished authors tended to be more pessimistic about their manuscripts' chances for acceptance, but the reason checked most often to explain the failure to submit a full paper was "lack of time."

A "Top 10" List for RESPIRATORY CARE

Although the principles of good science apply to all manuscripts and all journals, each journal is unique. RESPIRATORY CARE differs from its sister journals in pulmonary medicine, anesthesia, and critical care in important ways.⁹ Accordingly, I have prepared a list of 10 common problems that prevent manuscripts—particularly those based on abstracts presented at the OPEN FORUM³—from being accepted for publication in the RESPIRATORY CARE (Table 3). I have listed these problems in ascending order of seriousness, ending with those that I consider most important.

10. Wrong Journal

RESPIRATORY CARE sometimes receives manuscripts that are inappropriate for the Journal, regardless of their scientific validity or how well they are written, because they deal with something outside its scope of interest. This Journal deals with cardiorespiratory function, disorders, diagnosis, monitoring, devices, education, and management.⁹ It is a science journal, not a trade magazine or a forum for the exchange of unsupported opinions. Its focus

is ultimately on caring for patients, so there needs to be some clinical relevance to the material it publishes. A manuscript dealing with a different health care field, or with something completely unrelated to respiration, would be more appropriately submitted elsewhere. This cause for rejection can easily be avoided by actually reading the journal to which the would-be author proposes to submit a manuscript.

9. Wrong Format

Some authors submit manuscripts that are not like what the journal publishes in format, style, or length. RESPIRATORY CARE publishes research articles, case reports, review articles (and overviews and updates, which are similar but shorter), editorials, and letters to the editor. It also has several occasional features, such as "Test Your Radiographic Skill" and "Teaching Case of the Month," which have fixed formats. Examination of some recent issues provides a clear illustration of the types and lengths of the articles the Journal publishes. Prospective authors should become familiar with its contents before preparing a manuscript for submission. A "review article" that is 5 pages long with 8 references does not correspond to what is required in that category, and the same is true for a 30-page case study or an unreferenced narrative presenting the author's opinions on a topic. If in doubt about the suitability of a manuscript for the Journal, authors are encouraged to contact the editorial office (rcjournal@aacr.org) for advice prior to submission.

8. Not Following Instructions

RESPIRATORY CARE's manuscript preparation guide¹⁰ has been assembled to assist authors in meeting the Journal's requirements for each of its categories of publication. This guide is published in every issue, in addition to being posted on the Journal's Web site. It includes a point-by-point checklist for making sure that every component (such as an electronic copy of the manuscript, the signatures of all authors, and permission from the copyright holder of any borrowed material) is included at the time of submission. Not following the instructions would seem to be the easiest of these "Top 10 Reasons" to circumvent, yet all too many authors fall into this category. True, few manuscripts are rejected out of hand because of omissions on the submission checklist, but everything listed must be taken care of sooner or later if the paper is to be published, and a submission with everything in order from the beginning definitely puts the author on the good side of the editorial office.

7. Poor Writing

Stilted, flowery, or deliberately complicated writing impairs the reader's ability to grasp and appreciate an author's message. Some authors apparently believe that they must impress the reader (and the editor) with their erudition and mastery of multisyllabic words in order for their work to be given the appreciation it deserves. This is a mistaken notion. With scientific writing, as with most other forms of communication, the simplest and most direct statement of the intended message is always best. The following text often appears in English composition courses:

In promulgating your esoteric cogitations, or articulating your superficial sentimentalities and amicable philosophical and psychological observations, beware of platitudinous ponderosities. Let your communications possess a clarified conciseness, a co-efficient consistency and a concatenated cogency. Eschew conglomerations of flatulated garrulity, jejune babblement, and asinine affectations. Let your extemporaneous descantings and unpremeditated expatiations have intelligibility and veracious vivacity without rodomontade or thrasonical bombast. Sedulously avoid verbosity and vain vapidty either obscurant or apparent. Shun double entendre, prurient jocosity, and pestiferous profanity.¹¹

In other words, say what you mean, mean what you say, and don't use big words.

Health care workers use a rich and colorful assortment of acronyms, euphemisms, and jargon in both their conversation and their documentation of patient care. However, much of this folk culture is not appropriate for the scientific literature. Clinical slang, clichés, and purely local terminology should be omitted from a manuscript, as should pejoratives and unnecessary personal information about patients. Although abbreviations and acronyms facilitate moment-to-moment communication in the clinical context, they should be used as sparingly as possible when writing a manuscript. Authors should especially resist the urge to coin new acronyms and labels; such things typically do not survive peer review and copy editing, and much less often do they make it into general acceptance in the field.

Writing a manuscript consists of answering 4 simple questions:

- Why did you start? (the introduction, including background and hypothesis)
- What did you do? (the methods section)
- What did you find? (the results section)
- What does it mean? (the discussion section)

The paper should be as short as it can be and still answer those questions for the reader. The English need not be perfect if the message is communicated; fine-tuning will be done in the copy-editing process if the paper is accepted. A number of excellent resources are available to help authors with the writing aspect of manuscript preparation.¹²⁻¹⁴ Obtaining the help of someone more experienced with scientific writing can be especially helpful for first-time authors and those with less confidence in writing in English.

6. Getting Carried Away in the Discussion

In the discussion section the author explains what the results of the study mean.¹⁵ All studies are carried out in context. The data were collected in a particular laboratory or clinical setting, and the study was performed within the context of theoretical rationale, prior experience, and previous studies. The discussion interprets the findings as they relate to these contexts, explaining what the author thinks they mean and why. Few studies make discoveries that change the course of scientific progress or revolutionize understanding in a particular field, yet in the discussion section some authors attempt to "market" their findings as if this were the case. Rather than underscoring the importance of the work, however, trumpeting the findings in this manner tends to detract from the work's importance. Except for explaining how they fit in with previous work, pointing out their limitations, and speculating cautiously about how they may extend current understanding, the author should let the data speak for themselves.

In his survey of the opinions of editors and peer reviewers, Byrne⁴ found a consistent pattern of criticisms in the discussion sections of submitted manuscripts (see Table 1). Prominent among these were coming to erroneous or unsupported conclusions, drawing conclusions disproportionate to the results, uncritically accepting statistical results, and interpreting the findings in a manner not concordant with data reported.⁴ Also cited was failure to consider alternative explanations for the results and to acknowledge the study's limitations.

The appearance of excessive zeal should especially be avoided in manuscripts that have industry connections. Studies supported by industry, or even performed in a commercial context, can be perfectly valid and appropriate for publication, but authors of such studies should take particular care to be circumspect about the implications of their findings and to candidly acknowledge their studies' limitations.

Despite needing to include all the elements mentioned, the discussion will benefit from conciseness and should be no longer than necessary. Too often, authors ramble in the discussion and include irrelevant and redundant material. In Byrne's survey, of the various sections of the manu-

scripts studied, the discussion section was the one that was most often of excessive length.⁴

5. Suboptimal Reporting of the Results

This section should be a straightforward documentation of what was found. The results should be presented in a logical, consistent order, and should contain actual data rather than percentages, summary statements, or generalizations. Tables and figures may be the most-effective way to communicate the findings.¹⁶ If tables and figures are used, the text should summarize—not repeat—the data in the tables and figures. Results should be reported for every aspect of the study described in the methods, even if no significant differences were found or measurements could not be obtained. On the other hand, many studies generate huge numbers of individual measurements—too many to include in the space available for publication. The ability to group findings and to convey the overall results without overwhelming the reader with details is an important aspect of successful authorship.

A common author mistake that can unfavorably influence reviewers and editors is to slip interpretive comments into the results section of the manuscript. The second half of the sentence, “Six of the 20 patients required reintubation, illustrating the seriousness of this problem,” belongs in the discussion section.

Special mention should be made of the abstract. Serious discrepancies between the abstract and the body of the paper—such as data presented in the abstract that do not appear in the results, or data that are at variance from what is reported in the results—are surprisingly common in published articles.¹⁷ The abstract should be written last, after all the other sections of the manuscript are complete. It should be based entirely on what is in the text and must include no new material.

4. Inadequate Description of the Methods

If the discussion section tends to be too long, the methods section is most often not long enough. The methods section was cited by editors and reviewers as the section most often responsible for outright rejection of a manuscript,⁴ and failure to include enough detail on what was done is a common problem. The reader should be able to repeat the study if desired, and in order for that to be possible, the study design, apparatus used, and procedures followed must be made clear. A technique or protocol need not be described in complete detail if a description of it has been published elsewhere, but with this exception the methods must be thoroughly recorded. For a method or device evaluation, a photograph or detailed diagram of the experimental setup should usually be included. Manuscripts based on surveys should include the survey instruments

themselves. It is better to put too much information into the methods section than to be too brief: detail deemed unnecessary can always be removed prior to publication.

3. Poor Study Design

The problems listed so far have dealt mainly with proper manuscript preparation and submission, and all of them are potentially fixable. This one, however, tends to be a fatal flaw, at least once a study has been completed. No amount of rewriting, creative data presentation, or statistical manipulation can make up for the fact that the study used the wrong model or study design, collected data in a manner that would not allow a meaningful examination of the hypothesis, or made too few measurements to permit confident conclusions to be drawn.

This is a complex matter that cannot be reduced to a few handy rules. Avoiding study design problems is something that must be dealt with at the time the research is planned, not when the measurements have all been made and the investigator sits down to write the paper. Different types of studies have different requirements for acceptable design, some of which are discussed in other articles in this issue.^{18–22} The first-time researcher-author can go a long way toward avoiding design flaws by knowing what the existing literature on the topic says, by seeking advice from someone with more experience (not only in doing studies but also in getting them published in peer-reviewed journals), and by consulting a statistician on such things as sample size, units of analysis, and determinants of both clinical importance and statistical significance.⁴

2. Failure to Revise and Resubmit After Peer Review

Almost no unsolicited manuscripts reporting research studies or other original observations are published without revision. The peer-review process is not just an insurance policy against dissemination of unethical, erroneous, or potentially dangerous material. It also plays a vital role in ensuring that each published article conveys its message as accurately, unambiguously, and convincingly as possible. Reviewers are selected for their experience and knowledge of the manuscript's subject. They donate their time and expertise in reviewing the work, as part of the process of science. Their comments are often critical and can sometimes be harsh, but the number of reviews that do not provide ways to improve the manuscript is small. The majority of published manuscripts have been substantially improved as result of the comments of the reviewers.

If the editor indicates willingness to evaluate a revision, it means that the paper would be publishable if the reviewers' concerns could be addressed satisfactorily. Peer review is a 2-way street, and acceptance for publication may not require doing everything the reviewers say. However,

simply rebutting each of the reviewers' points as mistaken or ill conceived will not work. Again, taking the reviewers' suggestions into account when revising the work will nearly always result in a better paper.

When resubmitting the manuscript, the author should include a detailed letter to the editor, listing the points raised by the reviewers and how (or whether) each of them has been addressed in the revision. Including both a final version of the paper and a highlighted version showing where the changes have been made will make comparison and further peer review easier. It is better to thank the reviewers for their insight and helpful suggestions than to be passive-aggressive, implying that the manuscript was fine before and that the changes were not really needed.

1. Failure to Write and Submit a Full Paper After Abstract Presentation

Too many potentially useful contributions to the science and art of respiratory care have never been published simply because the investigator stopped after the abstract was presented. It is true that a good deal of work is accepted for abstract presentation that could not stand up under peer review because it is fatally flawed in some way. However, there are valid, potentially publishable studies that never make it to the editorial office as full manuscripts. The abstracts presented at many meetings are published, but such publication does not make the work available to the wider community of science, because it cannot be accessed via PubMed or other search engines. There are many hurdles to be overcome in preparing a manuscript for submission, and these can be especially daunting to first-time abstract presenters. However, help is at hand. Several articles in this special issue of *RESPIRATORY CARE*^{15,16,23-26} address these hurdles, and offer advice to would-be authors for bringing their projects to completion as full papers.

Summary

Manuscripts submitted for possible publication may be rejected for numerous reasons, most of which are potentially avoidable. A journal will not accept papers that lie outside its subject area or that are submitted in a style or format that does not match anything it publishes. Not following the Journal's posted instructions for manuscript preparation, or omitting some of the required elements, may preclude entry into formal peer review, and in any case will complicate and delay the process. Though poor writing may not result in outright rejection of a manuscript, it may well influence the overall impression of the work on the part of peer reviewers and editors alike. How the study's design and methods are described, the manner in which the results are presented, and how the study's

implications and limitations are addressed in the discussion will be important determinants of acceptance or rejection. Perhaps the most important of all reasons for rejection is poor study design, which may not be repairable. However, 2 problems that authors can and should overcome are failure to revise and resubmit the manuscript after initial peer review, and—worst of all—never writing the work up as a full manuscript in the first place, after its presentation in abstract form. Fortunately, helpful resources are available to authors for addressing each of those problems.

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