

# Authoring Scientific Papers for Publication

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# The likelihood of publication (where you would like) relates to:

- The question you set out to study
- The study methodology (design, data collection, analysis...)
- How you present your findings

# Starting to Write: Timing

- Avoid waiting for all the data to be in and analyzed!
- Start early with Introduction and Methods
- Plan major tables/figures; prepare these next once data available, followed by text of Results, Conclusions, Abstract

# General Guidelines

- Length -- 15 pages or less
  - Title page (1)
  - Abstract (1)
  - Introduction ( $\leq 1$ )
  - Methods (~4-5)
  - Results (~3)
  - Discussion (3-4)

# Introduction

- DO
  - Summarize briefly key background information that makes the study question important
  - Final sentence(s) should make clear the hypothesis you are studying (eg We designed a multicenter randomized trial to assess whether x is superior to y for the treatment of z...)
  - Usual length no more than a page (+/-)

# Introduction

- DON'T
  - Don't provide a detailed literature review of the history of work in the area (eg if you have 40 refs in the intro , it is too much!)
  - Don't assume that readers (many of whom will be outside your field) will know why the question is relevant
  - Don't use jargon (especially when writing for general audience)

# Methods

- DO include clear description of:
  - Primary and secondary aims (Should be clearly distinguished from post-hoc hypotheses)
  - Study design
  - Subjects (inclusion/exclusion criteria)
  - Data collected (including details of assays where relevant)
  - Statistical analysis (tests used; criteria for statistical significance; power/sample size calculation)

# Methods

- DO
  - Include statement re IRB approval and informed consent.
  - For industry sponsored trials, need to be clear re the role of industry. ie Note who (company versus non-industry authors) designed the study, collected the data, held and analyzed the data, wrote the manuscript, controlled the decision to publish; indicate explicitly whether investigators had full access to the data

# Methods

- DON'T
  - Don't leave out critical details (not sufficient to refer to another publication for important information- eg subject characteristics, etc)
  - Don't be too wordy

# Results

- DO
  - Think through which results are critical to show in detail
  - Present all relevant results in the results section
  - Use tables and figures to summarize findings
  - Include a table with subject characteristics (“Table 1”)
  - Make clear main findings in the text, with reference to the tables and figures .

# Results

- DON'T
  - Don't repeat all the numbers in the tables in the text
  - Don't include irrelevant data just because you collected them
  - Don't leave out results that you don't like!

# Discussion

- DO
  - Start by summarizing your main findings (1 paragraph)
  - Put these findings in context of relevant prior work
  - Note implications (1-2 paragraphs)
  - Address limitations
    - ?possible confounding or bias, ?small study or short follow up? Limited power for certain analyses? etc..
    - Where possible, note available data to suggest these are not major flaws...
  - Conclude with concise summary
  - Cover these points in no more than 4 pages

# Discussion

- DON'T
  - Don't make claims of priority ("This is the first..")
  - Don't include a comprehensive review of the literature (Manuscript should have 30-35 references max) – focus on directly relevant data
  - Don't make your focus a criticism of other studies (Those authors may be reviewing your paper!)
  - Don't ignore or be overly defensive re limitations
  - Don't speculate excessively
  - **Don't over-reach regarding implications of your results** (Conclusions should follow logically from the results)

# Abstract

- Background –why you did the study (1-2 sentences)
- Methods-- brief summary of the study design, population, what was measured (2-3 sentences)
- Results- Summarize major findings, with numbers/p values (3-4 sentences)
- Conclusions- Major take home point(s) (1 sentence)
- Overall  $\leq 250$  words

# Preparing for Submission

- Identify appropriate journal
- Follow instructions for authors
- All authors must meet criteria for authorship and must have signed off on manuscript
- Make editors aware/provide copies of related publications
- Address potential “conflicts of interest”



## EDITORIAL

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## Clinical Trial Registration: A Statement from the International Committee of Medical Journal Editors

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Altruism and trust lie at the heart of research on human subjects. Altruistic individuals volunteer for research because they trust that their participation will contribute to improved health for others and that researchers will minimize risks to participants. In return for the altruism and trust that make clinical research possible, the research enterprise has an obligation to conduct research ethically and to report it honestly. Honest reporting begins with revealing the existence of all clinical studies, even those that reflect unfavorably on a research sponsor's product.

Unfortunately, selective reporting of trials does occur, and it distorts the body of evidence available for clinical decision-making. Researchers (and journal editors) are generally most enthusiastic about the publication of trials that show either a large effect of a new treatment (positive trials) or equivalence of two approaches to treatment (non-inferiority trials). Researchers (and journals)

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# Criteria for Authorship (ICMJE)

- All persons designated as authors should qualify for authorship, and all those who qualify should be listed.
- Authorship (eg who will be one, and who will be senior author..) should be addressed as early as possible in the project
- Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. One or more authors should take responsibility for the integrity of the work as a whole, from inception to published article.

# ICMJE: Authorship credit should be based only on:

- 1) Substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data
  - 2) Drafting the article or revising it critically for important intellectual content; and
  - 3 ) Final approval of the version to be published.
- Conditions 1, 2, and 3 must all be met.

Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship.

# Redundant or Duplicate Publication

- Definition: publication of a paper that overlaps substantially with one already published.
- The bases of this position are international copyright laws, ethical conduct, and cost-effective use of resources.

# Secondary Publication: When is it ok?

- The authors have received approval from the editors of both journals.
- The priority of the primary publication is respected.
- The paper for secondary publication is intended for a different group of readers; an abbreviated version could be sufficient.
- The secondary version faithfully reflects the data and interpretations of the primary version.
- The footnote on the title page of the secondary version indicates that the paper has been published in whole or in part and states the primary reference.

# “Salami Slicing”

- eg study of a given intervention written up as multiple reports– eg effects on CVD, cancer, mortality, quality of life, toxicities, effects in men vs women, old vs young etc.....
- Strongly discouraged (with rare exceptions when reporting key results truly requires more space than permissible in one paper)
- Authors should inform journals of any related publications (including reports in press or preparation)

# Industry Sponsored Trials

- Editors need to know who sponsored the study and about authors' financial relationships with the sponsor
- Editors need to be assured that authors had a substantive role in trial design, data acquisition, analysis, and interpretation
- This requires authors to be both independent and accountable

# Industry Sponsored Trials

- Sponsorship weighs in the editorial decision making process
  - Study Design
  - Data Interpretation
- Aim to assure that all claims are supported and that all relevant information on side effects and toxicities are reported

# Cover Letter

- DO:
  - Briefly note relevance of the study (why should the journal want to publish this) and key findings
  - Include statements re authorship, and that not published elsewhere
  - Ok to provide suggestions for reviewers and also to note person(s) whom you prefer not review (in moderation..)

# Revision Process

- A letter that says something to the effect of “We are sorry to say that your manuscript was not accepted for publication. However , if you wish to submit a substantially revised manuscript that is responsive to the concerns of the reviewers and editors, we would be willing to consider it.....(without commitment..) ”

IS OFTEN GOOD NEWS

# Revision Process

- DO:
  - Address ALL concerns of the reviewers and editors.
  - Include a detailed cover letter noting each point made by editor/reviewers, followed by statement on how you dealt with it (include page number..)
  - Show all co-authors revised version and give opportunity for further input.
  - Aim to do quickly

# Revision Process

- Do not need to incorporate every reviewer suggestion into revision, if you have good reason for leaving out
- Make clear in your cover letter if you did not change manuscript to respond to given suggestion (s)
- Unless you are strongly opposed to addressing a given point in the manuscript, note that you would be willing to make the change if the editor prefers ...

# Revision Process

- DON'T
  - Don't simply write that you "have revised the paper" without providing point by point summary
  - Don't ignore comments because you consider irrelevant
  - Don't make revised paper overly long or wordy
  - If you cannot do something that editors request (eg request for more data..), worth asking editor if still makes sense for you to revise (versus submit to another journal)

# Summary

- Identify an interesting and focused question, for which positive or negative result of interest
- Enlist advice of others in study design/ analysis
- Attend up front to feasibility, power, potential methodologic limitations
- Determine authorship early
- Start writing early, and seek comments on drafts

# Summary

- Target to appropriate journal.
- Think about your intended audience
- Aim for concise and clear
- Don't take rejection personally/ be prepared to try another journal
- Expect to revise (often more than once)

# Preparing for Submission

- Identify appropriate journal
- Follow instructions for authors
- All authors must meet criteria for authorship and must have signed off on manuscript
- Make editors aware/provide copies of related publications

# Revising Manuscript

- Respond to all reviewer and editor comments in cover letter, and indicate precisely where changes were made in the text.
- Comments that appear relevant or were stressed by editors should be incorporated in text; those not addressed in text should be clearly addressed in cover letter
- All co-authors should be shown revised version and given opportunity for further input.
- Aim to do quickly

# Appeals

- Generally low probability of success
- If you feel that study was unfairly reviewed, or that rejection was on the basis of something that is addressable, consider contacting journal regarding interest in resubmission
- Positive reviewer comments are not sufficient grounds for appeal

# Summary

- Identify an interesting and focused question, for which positive or negative result of interest
- Enlist advice of others in study design
- Attend up front to feasibility, power, potential methodologic limitations
- Determine authorship early
- Start writing early, and have others provide comments on drafts
- Target to appropriate journal, and be willing to revise and submit elsewhere.

# Editors use the Reviews

- Once reviews are in the editor reads the paper and the reviews
- The editor, not the reviewer, makes the decision about the paper
- We value the reviewers' comments, but they are only consultants to our thinking process

# Editors are looking for work that is....

- Important
- Informative
- Novel
- Ethical