

Elements of Manuscript Submission

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When submitting scientific research manuscripts to any biomedical journal, authors must review and fully understand each journal's submission requirements. Journal editors may not consider submissions that do not meet their standard requirements, resulting in frustration and additional effort on the authors' part. Ideally, authors should know which journal they will be submitting their research to so that they can review that journal's guidelines to ensure that the manuscript is written for the proper audience.^{1(p28)}

In this third installment in our series on scientific writing,²⁻⁴ I outline the key elements of manuscript submissions and other important elements, such as references and permissions (*Figure*). These guidelines are in accordance with those set forth by the International Committee of Medical Journal Editors (ICMJE).

Cover Letter

Cover letters are generally authors' first point of contact with journal staff; thus, authors should use cover letters to make a good first impression. Cover letters should be written in standard business letter format and be addressed to the editor in chief of the journal. Scientific journals' guidelines typically state that cover letters specify whether the manuscript is a new or revised submission; what type of manuscript is being submitted; the corresponding author's full professional title, affiliation, and contact information; suggested preferred and nonpreferred reviewers; and information on duplicate publication or submission. Some journals, such as *The Journal of the American Osteopathic Association (JAOA)*, use an online manuscript tracking system that prompts authors for information that is usually included in a cover letter, which saves authors the trouble of composing a detailed letter.^{1(p121)}

Authors are typically encouraged to recommend reviewers for their manuscript, especially if the topic is unique or specialized. Recommendations are especially encouraged if authors want to submit to a general medical journal, whose roster of peer reviewers may not have expertise on the topic.

Authors should indicate if their manuscript has been previously published. Almost all scientific journals retain copyright of published articles, and duplicate publication breaches copyright law. Additionally, peer reviewers volunteer a considerable amount of time in the review process, and evaluating a duplicate submission or publication is a poor use of their time and resources. For these reasons, journal editors typically cannot consider any manuscript that has been submitted or published in print or online with another biomedical journal. Any duplicative materials such as abstracts should be noted at the time of submission.^{5(p151)} In general, authors can submit manuscripts based on research they presented at a conference so long as they indicate this information in the cover letter. If an author does not

Cover Letter
Identify whether manuscript is a new or revised submission
Identify the type of manuscript (eg, original research)
Provide the corresponding author's full professional title, affiliation, and contact information
Provide information on duplicate publication or submission
Suggest preferred and nonpreferred reviewers
Title Page
Provide full contact information for each author
Identify authorship criteria met
Disclose financial relationships and conflicts of interest
Manuscript
Include structured or unstructured abstract, as appropriate
Provide clinical trial registration number, if applicable
Include references
Provide high-resolution tables and figures
Other
Include permissions for acknowledged individuals, patient-models, and reprinted or adapted tables or figures

Figure.

Considerations for submitting a manuscript to a scientific journal.

disclose previous publication and it is later discovered, the author may be banned from submitting to that journal for a specified period.^{5(p152)} Any questions on what qualifies as previously published should be directed to the editorial office.

Title Page

Authors must submit a title page with the title of the work and all authors' names, affiliations, and full contact information. Journal staff usually interact only with the corresponding author, who is expected to submit the manuscript, address reviewer comments, submit revisions, work with

page proofs, and respond to any inquiries from readers.^{1(p52)}

For journals that use a single-blinded peer review process, this information is available to peer reviewers in case there are any conflicts of interest. For example, the oversight editor may not want to assign a peer reviewer who is at the same school or hospital as an author. If an author has changed affiliation since the completion of the work, the new affiliation should be indicated as well. The total word count should also be included.

In the past, the head of a laboratory or research group would be listed as an author on a manuscript regardless of level of participation.^{1(p45)} This practice is no longer acceptable, as many scientific journals' requirements are now in accordance with ICMJE guidelines,⁶ which state that all authors must meet the following criteria:

- Substantial contributions to conception or design of the work; or the acquisition, analysis or interpretation of data for the work
- Drafting the work or revising it critically for important intellectual content
- Final approval of the version to be published
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Many scientific journals request that all authors sign and submit an authorship form. Authors must agree on a corresponding author who will be the point of contact with the editorial office during the submission, review, and editing processes. The sequence of the authors listed should be decided unanimously, and authors' names should be presented according to importance to the research.^{1(p47)} Other manuscript contributors who do not meet the ICMJE author criteria may be acknowledged for their work (eg, data collection, research assistance, writing assistance).^{5(p140)} Many journals require written consent before publication from these individuals to have their name appear in the acknowledgement section.

Each author should disclose relevant financial relationships (eg, employment, funding, or stock ownership with the manufacturer of the product studied) and conflicts of interest (eg, any nonfinancial affiliation with a group that may benefit from the study, such as serving on a formulary committee or personal relationships with other people or organizations that could bias their actions) in accordance with the journal's policy.^{5(p171)} If authors do not have potential conflicts to disclose, they should make a statement to that effect on the title page or in the acknowledgment section. If authors are uncertain about potential conflicts, they should contact the journal's editorial office. Some journals may require authors to submit the ICMJE Form for Disclosure of Potential Conflicts of Interest (http://www.icmje.org/coi_disclosure.pdf).

As scientific journals and other entities have fought nondisclosure among researchers, scientists, authors, and other types of contributors over the years, progressively stringent disclosure requirements have been implemented. The Sunshine Act⁷ is one of the latest rules enacted to enforce full financial disclosures. According to the act, anyone receiving a single payment of at least \$10 or an annual cumulative payment of at least \$100 will be listed in a federal database. Disclosing this type of information in a manuscript does not mean the work should not be published, but failure to disclose this information can lead to publication of a correction or retraction.

Manuscript

Abstracts are arguably the most important element of an article. Many readers have access only to the abstract rather than to the entire article. Accordingly, the abstract must succinctly represent the published work. The format for structured articles differs from journal to journal, so authors must take care to review each journal's specifications. Typically, original contributions, systematic reviews, meta-analyses, and brief reports include structured abstracts, which are limited to 350

words. All other article types can be submitted with unstructured abstracts, which are typically limited to 200 words, though the *JAOA* limits such abstracts to 150 words. In general, abstracts should provide the study's background, purpose, basic procedures, results, conclusions, and funding sources. Randomized controlled trials must adhere to Consolidated Standards of Reporting Trials (CONSORT) guidelines for abstracts and include trial design, methods, results, conclusion, trial registration, and funding.⁸ Abstracts are not required for other manuscripts such as editorials and letters to the editor.

In accordance with ICMJE guidelines, many journals require that all clinical trials (ie, "any research project that prospectively assigns people to an intervention, with or without concurrent comparison or control groups, to study the cause-and-effect relationship between a health-related intervention and a health outcome") must be registered with at least 1 public registry.⁹ Authors must register their studies with any trials registry that is electronically searchable, accessible to the public for free, open to all registrants, nonprofit, and have a mechanism to ensure the validity of the registration data. ClinicalTrials.gov, sponsored by the National Library of Medicine, is the most prominent registry in the United States that meets these requirements. Authors should provide this information at submission.

References are required for all material derived from the work of others. Journals may require a minimum number of references for different article types. Reviewers and editors often check references, and by adding URLs (uniform resource locators) or DOIs (digital object identifiers) to open-access articles, authors can help facilitate the review and editing processes. Authors should also have copies of references to provide to the editorial office on request.

All tables and figures should be numbered and cited in the text. Tables and figures should include titles and be able to stand on their own apart from the manuscript.³ Authors should check a journal's minimum resolution, file size, and file format for figures (graphs, charts,

photographs, and illustrations). If figures are not submitted according to a journal's standards, the figures will likely be returned, resulting in a delay in publication. Authors may be asked to submit a higher resolution image. For example, if the resolution of a photograph is not high enough, the photograph will look grainy when published. Moreover, clarity in such images may be essential to understanding the case.

Some journals may request that data points be submitted with graphs so that a journal's designer may recreate them to ensure that the images are of reproduction quality.

Additional Documents

As previously mentioned, permissions must be obtained for any individuals acknowledged for their work in a manuscript, for identifiable individuals in photographs, and for any materials (ie, tables or figures) published elsewhere. It is advised that authors show the acknowledgment wording to individuals they would like to thank.^{1(p77)} Authors must cite where the tables or figures were originally published to avoid copyright issues. It is the author's responsibility to submit these permissions before official acceptance. When obtaining permission to reuse published materials, a cost may be set forth by the original publisher. Most journals, including the *JAOA*, do not provide financial assistance for this cost. Photographs of any identifiable individual must be accompanied by permission from that individual to have his or her image published.⁴ Authors may avoid obtaining permission from patients or other identifiable individuals in photographs if they can crop the figure to make the person unidentifiable. Authors and journals should protect patient confidentiality and anonymity.

Conclusion

Journals receive many manuscript submissions every day, and editorial staff may not process a manuscript that is not formatted in accordance with the journal's specifications. Before submitting a manuscript to a medical journal, authors must thoroughly investigate the journal's information for authors. In doing so, authors increase the chances of their manuscripts being accepted and published. (doi:10.7556/jaoa.2013.060)

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