

INSTRUCTIONS FOR AUTHORS

Updated January 24, 2020

ABOUT

The *American Journal of Pharmaceutical Education* (the *Journal*) is devoted to providing a forum for communication of relevant information for pharmacy and interprofessional educators and all others interested in the advancement of pharmacy education.

WHAT WE PUBLISH

To be considered for publication, manuscripts must relate to pharmacy education and provide useful information for the national or international audience of the *Journal*. If a submission has only local or regional relevance, its usefulness to most readers is limited and, thus, will not be accepted.

MANUSCRIPT REQUIREMENTS

All manuscripts must be typed in Times New Roman in size 11 font in English and double-spaced with page numbers and non-continuous line numbering (do not use page breaks to reset the line numbering).

Manuscripts submitted to the *Journal* should be unpublished and not under consideration elsewhere. The content should be scholarly, readable, clear, and concise. Standard nomenclature should be used. Manuscripts that were prepared for oral presentation must be rewritten for print. Excessively long introduction or discussion sections in research papers are discouraged.

TYPES OF ARTICLES

Research Articles. Research articles describe experimental or observational investigations that use formal methods for data collection and reporting of results of studies directly related to pharmacy education. This category also includes novel methods for professional and graduate student instruction

(lectures, laboratories, practice experiences, or courses) or manuscripts on programmatic and curriculum development.

- Abstracts should include a brief statement (1-3 sentences) for each of the following sections:
 - Objective
 - Methods
 - Results
 - Conclusion
- Word Count: maximum of 3,000, incl. words in appendices. Maximum of 4,000, incl. words in appendices for Qualitative Research Articles
- Tables and/or figures: maximum of 5
- References: maximum of 50

Reviews. Reviews are comprehensive, well-referenced, descriptive papers on teaching or research topics directly related to entry-level and graduate or postgraduate education and training or skill development. Reviews may be papers on the history of pharmacy education. Reviews should be systematic, include all relevant data, and should not be overly influenced by the opinions and biases of the authors.

- Abstracts should include a brief statement (1-3 sentences) for each of the following sections:
 - Objectives
 - Findings
 - Summary
- Word Count: maximum of 4,000, incl. words in appendices
- Tables and/or figures: maximum of 5
- References: maximum of 50

Integrative Reviews. Integrative Reviews synthesize practical applications from scientific evidence across different domains. The goal of these submissions is to inform readers about how to improve instruction, student achievement, scholarship of teaching, or other topics directly related to academic pharmacy. They

differ from Reviews in that they offer practical application of the evidence. They are not necessarily “how to” pieces but should be a compilation of evidence-based resources for researchers and instructors that can be used to improve academic pharmacy. Integrative Reviews should not exceed 4,000 words (double-spaced) for the body of the manuscript and appendices (excluding words in tables and figures). Reviews should not have more than 5 tables and/or figures and 50 references. Some examples include:

Method reviews. These reviews summarize a method or various methods valuable to educators or educational researchers (eg. Rivers, et al. Measuring Metacognitive Knowledge, Monitoring, and Control in the Pharmacy Classroom and Experiential Settings).

Present/Future reviews. These reviews may summarize the current state of knowledge in a given area and recommend future directions for research. These recommendations are more explicit and robust compared to ones that may be found in a commentary (eg, Cain, et al. A Primer on Audience Response Systems: Current Applications and Future Considerations).

Practical reviews. These reviews may summarize existing knowledge and translate it into practical recommendations (eg, Medina, et al. A Review of Strategies for Designing, Administering, and Using Student Ratings of Instruction).

Best Practice reviews. These reviews summarize best practices for educators or educational researchers (eg, Farland, et al. Best Practices for Implementing Team-Based Learning in Pharmacy Education).

Briefs. Briefs include small scale studies and/or pilot works of interest to others that may only be accompanied by limited outcomes data. Briefs may describe new and creative approaches to teaching and learning, curriculum, or evaluation that are of interest to others in the field, with limited assessment measures or outcomes data. For example, a brief may consist of a study at a single institution and/or include a small sample size or be limited to one cohort of students.

Outcomes data in a brief may include pre- and post-data (before and after the intervention) as well as follow-up data (6-12 months after the intervention). The data should include more than participants’ perceptions, level of satisfaction, or course grades alone. Concepts within Briefs should be timely and significant.

- Abstracts should include a brief statement (1-3 sentences) for each of the following sections:
 - Objective
 - Methods
 - Results
 - Conclusion
- Word Count: maximum of 2,000, incl. words in appendices
- Tables and/or figures: maximum of 3
- References: maximum of 50

Commentaries. These manuscripts are descriptive and intended to stimulate reflection and dialogue about issues in pharmacy education (includes previous categories of statements, special articles, and viewpoints). Commentaries are subject to peer-and/or editorial review. Authors may request editorial consideration of a proposed commentary by submitting to the *Journal* editor (ajpe@ajpe.org) a one-paragraph brief describing the proposed commentary for approval.

- Abstract: maximum of 150 words, do not use subheadings
- Word Count: maximum of 2,000, incl. words in appendices
- Tables and/or figures: maximum of 2
- References: maximum of 20

Letters to the Editor. Letters to the Editor serve as a forum for the expression of ideas that critique or expand on the information presented in (a) previously published article(s) in the *Journal*. Authors are required to identify themselves. The editor reserves the right to reject, shorten, excerpt, or edit letters for publication.

- Abstract: none
- Word Count: maximum of 2,000
- Tables and/or Figures: none
- References: maximum of 5

RESEARCH STANDARDS

All survey research must meet criteria established by the *Journal's* Editorial Board. Refer to the following articles for guidelines:

1. Persky AM, Romanelli F. Insights, pearls, and guidance on successfully producing and publishing educational research. *Am J Pharm Educ.* 2016;80(5):Article 75.
<http://www.ajpe.org/doi/full/10.5688/ajpe80575>
2. Anderson C. Presenting and evaluating qualitative research. *Am J Pharm Educ.* 2010;74(8):Article 141.
<http://www.ajpe.org/doi/full/10.5688/aj7408141>
3. Draugalis JR, Plaza CM. Best practices for survey research reports revisited: implications of target population, probability sampling, and response rate. *Am J Pharm Educ.* 2009;73(8):Article 142.
<http://www.ajpe.org/doi/full/10.5688/aj7308142>
4. Draugalis JR, Coons SJ, Plaza CM. Best practices for survey research reports: a synopsis for authors and reviewers. *Am J Pharm Educ.* 2008;72(1):Article 11.
<http://www.ajpe.org/doi/full/10.5688/aj720111>
5. Fincham JE. Response rates and responsiveness for surveys, standards, and the Journal. *Am J Pharm Educ.* 2008;72(3):Article 43.
<http://www.ajpe.org/doi/full/10.5688/aj720243>

MANUSCRIPT ORGANIZATION

All manuscripts should be arranged in the following order, starting with a new page for each section:

1. Cover Letter
2. Institutional Review Board (IRB) approval or exemption letter in English
3. Title page
4. Abstract
5. Manuscript
6. References in AMA style
7. Tables, Figures (upload .tiff files separately), and Appendices

MANUSCRIPT SECTIONS

Cover Letter. A cover letter providing any relevant context and addressed to the editor is required. The letter should explain unusual circumstances of a

submission, such as similarity to and differences from other work published or previously submitted.

Title Page. The title page should include the following information:

- Author(s) names
- Academic degrees. Do not include certification, registration, or fellowship abbreviations
- Institution, including city and state location
- Email and phone number
- Keywords (up to 5)
- Total number of manuscript words, tables, figures, and references. **Number of words in appendices count against the total number.**
- Any financial disclosures and/or conflicts (if none, specify none)

Abstracts. Abstracts should be structured with brief statements, as outlined above, specific to the manuscript category for which you are submitting. *Do not include p values in abstracts.*

Manuscripts should follow the arrangements detailed below.

Headings. Introduction, Objective, Methods, Results, Discussion, Conclusion, Acknowledgements.

Subheadings. One subheading or subtitle per section is acceptable in research articles. Excessive subheadings will be removed during the copyediting phase.

Introductions should provide the context for the article, the objective of the study, and the hypothesis or research question, how and why the hypothesis was developed, and why it is important. It should not exceed 3 paragraphs.

Methods should include study design or type of analysis and dates/period of study, details of the sample (eg, participants and setting from which they were drawn, inclusion/exclusion criteria), outcome measures or observations, and statistical analysis. This section should be written in the past tense voice.

Results should be specific and relevant to the research hypothesis. Characteristics of the study participants

should be followed by the presentation of results. Do NOT include implications or weaknesses of the study in this section but include validation measures if conducted as part of the study. Results should not discuss the rationale for the statistical procedures used. Data in tables and figures should NOT be duplicated in the text. See [Standardization of Statistical Reporting](#).

Discussion should be a formal consideration and critical examination of the study. The research question or hypothesis should be addressed. Results should be compared or contrasted to those of other studies. Limitations and generalizability of the results should be discussed, as well as mention of unexpected findings with suggested explanations. Type of future studies needed, if appropriate, should be mentioned.

Conclusion should include only conclusions directly supported by results, considering limitations but avoiding speculation and overgeneralization. The conclusion should also indicate whether additional study is required before the information should be used, along with giving equal emphasis to positive and negative findings of equal merit. Conclusions clearly articulate how the findings could impact student learning or the Academy.

Acknowledgments should appear after the conclusion or summary of the manuscript and explicitly state what the person being acknowledged has contributed to the manuscript. Funding/support and any other disclosures should also be included in this section.

References. The *Journal* follows the [AMA Manual of Style](#) for references. Whenever appropriate, authors should include citations relevant to the topic of the manuscript that appear in education-focused journals and other health profession-based publications. Excessive over-citation of articles from the *Journal* or reiterations of well-established historic literature should be avoided, as well as excessive self-citations. Studies mentioned in text should be referred to with author(s)' names (eg, "Smith and colleagues' study/review"), not with phrases such as "A recent study/review." References should be listed in numerical order.

Examples of AMA References:

1. *Journals. Online:* Gatwood J, Hohmeier K, Farr G, Eckel S. A comparison of approaches to student pharmacist business planning in pharmacy practice management. *Am J Pharm Educ.* 2018;82(5):Article 6279. <https://www.ajpe.org/doi/pdf/10.5688/ajpe6279>. Accessed July 14, 2018.
2. *Journals. Print:* Gatwood J, Hohmeier K, Farr G, Eckel S. A comparison of approaches to student pharmacist business planning in pharmacy practice management. *Am J Pharm Educ.* 2018;82(5):Article 6279.
3. *Books. Online:* Katzung BG, Trevor AJ. *Basic & Clinical Pharmacology*. 13th edition. New York, NY: McGraw-Hill Education; 2015. <https://www.amazon.com/Basic-Clinical-Pharmacology-Bertram-Katzung/dp/0071825053>. Accessed July 14, 2018.
4. *Books. Print:* Wells BG, DiPiro JT, Schwinghammer TL, DiPiro CV. *Pharmacotherapy Handbook*. 10th edition. New York, NY: McGraw-Hill Education; 2017.
5. *Websites.* American Association of Colleges of Pharmacy. ALFP program and session overview. <https://www.aacp.org/resource/alfp-program-and-session-overview>. Accessed July 14, 2018.

Tables. Tables should not duplicate information provided in the text. Instead, tables should provide additional information that illustrates or expands on a specific point the author wishes to make.

- Include detailed, self-explanatory titles to make the table stand alone.
- Tables should not break across pages but please avoid using page breaks.
- Tables should be numbered using Arabic numbers following the order to which they are referred to in the text.
- Tables should be created using Microsoft Word table formatting tools and should be in **Times New Roman, 10-point type, with footnotes in 9-point type** (do NOT use the tab key to form rows and columns of data as tab information is lost when the document is processed by the publisher).

- Except for lines to separate the title from the column headings, the column headings from the data, and the bottom row of data, do not include interior lines. See [Table Guidelines](#).

Figures. The *Journal* accepts only black & white figures. Figures should be numbered using Arabic numbers, based on the order in which they are presented in the text. Figures must be legible to readers. Include detailed, self-explanatory titles to make the figure stand alone. Large and/or high-resolution graphic image files, saved as TIFFS, should be uploaded to Editorial Manager as separate files from the manuscript text (which should be a Word file). See [Figure Guidelines](#).

Appendices. Should come at the end of the manuscript. All quotations within the body of the manuscript should be moved to the appendices. Although the *Journal* will consider publishing an appendix (only for manuscripts in Research Articles category), the publication of appendices will be the exception, not the norm, with the author needing to justify why the content is essential. **Appendices will count against word limits.** Any appendix should be standalone and non-duplicative of other information in the manuscript. The *Journal* considers the following items publishable or non-publishable as appendices:

Publishable	Non-Publishable
Items essential to transparency of model or method, such as regression analysis model	Survey/questionnaire Unvalidated tool or rubric Qualitative responses from study participants
Tool validated during the study	Raw data

Institutional Review Board. For all manuscripts reporting on research involving human subjects, the author must upload to Editorial Manager all relevant institutional review board (IRB) letters, which should indicate the research has been reviewed and approved by the appropriate human research or ethics review

committee, or that it has been exempted from such review. For research that has undergone such review and approval, a statement to that effect also should be included in the manuscript methods section. IRB letters must be in English.

Given that many institutions require Institutional Review Board (IRB) approval or exemption to be active until time of publication, IRB documentation must be current at the time of submission. If the original approval or exemption has expired, documentation showing an unexpired renewal must be provided or documentation from the IRB stating that they do not require renewal must be provided. Additionally, if exemption had originally been provided by the IRB because the project was considered quality improvement and therefore not considered research, a current IRB approval for publication of data must be provided since the project is now being submitted for publication.

STYLISTIC CONSIDERATIONS

Style specifications for the *Journal* must be thoroughly followed. Below are general guidelines for manuscript format and style. If in doubt about style, refer to the [American Medical Association \(AMA\) Manual of Style](#) or consult a recent issue of the *Journal*.

Word Style. Consult a current edition of Webster’s dictionary for guidance on spelling, compounding, and word separation. Foreign words, not in general use, should be italicized. For proper use of chemical and biochemical terms, mathematical equations and expressions, special symbols, subscripts, superscripts, or Greek letters, please refer to the [AMA Manual of Style](#).

Capitalization. When the word “journal” is capitalized and italicized as *Journal*, it can refer only to the *American Journal of Pharmaceutical Education*. In scientific writing, always capitalize the following:

- Major words in titles and headings of manuscripts, designators for tables, figures, and appendices (eg, Appendix 1)
- Eponyms (but not the noun that follows them, eg, Gram stain, Babinski sign)

- Names of tests (eg, Beck Depression Inventory)
- Genus names of organisms (but not the name of species, varieties or subspecies)
- Acts of legislation (eg, Medicare)
- Awards (eg, Nobel Prize)
- Proprietary names (eg, Xerox copier)
- The title of a person when followed by the person's name (eg, Chair John W. Jones)
- Official names of organizations and institutions (eg, Centers for Disease Control and Prevention)
- Geographic places (eg, United States of America)
- Sociocultural designations (eg, Republicans, French people)
- Historical events (eg, Vietnam War)

These words should not be capitalized when not followed by or part of a proper name (eg, University, School, Dean). Disciplines (eg, pharmacy practice or pharmaceutical science) should not be capitalized unless used in a proper name.

Abbreviations.

- Avoid using abbreviations in manuscript titles.
- Spell out or define abbreviations and acronyms on first use.
- Avoid makeshift abbreviations.
- In instances where repeated use of an organization or chemical name would become awkward, an official or accepted abbreviation may be substituted.
- The abbreviation should be placed in parentheses immediately following the first use of the name *in the main body of the text*.
- Abbreviations of common pharmaceutical associations or organizations do not require periods or spaces between letters (eg, AACP).
- Abbreviations of "eg," and "ie," should not be separated by periods.
- The names of countries and US states should be spelled out when they stand alone (eg, "...pharmacists throughout the United States...").
- The abbreviation "US" may be used as a modifier only when it directly precedes the word it modifies (eg, US health care). Otherwise, it should be spelled out.

- The names of all other cities, states, provinces, and countries should be spelled out when they occur within the text of the article.
- Abbreviations deemed "dangerous" or "forbidden" by the Joint Commission and/or the Institute for Safe Medication Practices should be avoided (eg, QD, SC, SQ).
- Refer to the [AMA Manual of Style](#) for additional rules regarding abbreviations.

Numbers.

- Numbers 0-9 should be written out in general.
- In statistical text, Arabic numeral can be used if appropriate.
- Arabic numerals should also be used with designators (eg, week 1, cohort 2).
- Numbers 10 and up should be written as Arabic numerals (unless they occur at the beginning of a sentence, in which case they should be spelled out).
- A number containing a decimal must be styled as an Arabic number.
- All fractions must be written as decimal equivalents.
- **For *p* values, do not include a leading zero to the left of the decimal point.**

Measurements. Use the metric system for all measurements; however, use conventional units instead of International System of Units (SI) units. Do not use periods when abbreviating units of measure.

Reference Numbers.

- Reference numbers cited in the text of a manuscript should be in superscript Arabic numerals placed at the end of the sentence, outside the final period or other punctuation.
- Reference citations should be numbered according to their order of appearance in the manuscript.
- Subsequent citations to the same reference must be indicated by the same number originally assigned to that reference.
- Do not put parentheses around reference numbers cited in text.

SUBMITTING YOUR MANUSCRIPT

Submit your manuscript as a **Microsoft Word file** – **not a PDF** using the *Journal's* Editorial Manager online tracking system.

Log in using your username and password and then follow the step-by-step instructions for uploading your files. If you do not know your username and password, send an email to ajpe@ajpe.org and a member of the editorial staff will respond to you as quickly as possible.

Tracking and Timeline. You may track your submission in Editorial Manager. If it has been over 5 months since your submission, and your status reads "Under Review" your submission is still awaiting a completed peer-review process. (see submission process).

KEYWORDS

When submitting your manuscript, you will be asked to provide keywords related to your manuscript. Selecting commonly used, yet specific terms, will assist in identification of reviewers and in searches by readers. These keywords are not only used by others who are searching the *Journal* for articles but by the *Journal's* editorial team to select reviewers.

Potential reviewers have entered keywords associated with their focus areas which are then matched to the keywords entered by the author. The use of esoteric or very broad keywords can delay successful identification of reviewers or reduce potential readers of your article.

SUBMISSION PROCESS

To ensure that only accurate and substantive articles are published in the *Journal*, all manuscripts undergo a technical check, a single blinded peer-review process and an editorial decision.

TECHNICAL CHECK/SCREEN PROCESS

Each manuscript will undergo a technical review for basic formatting structure. This technical check is to ensure that reviewers spend their time expeditiously reviewing the content and quickly providing feedback to specific areas of the text. **A manuscript that is not**

formatted and organized according to these requirements will be rejected and returned to the author.

1. The submission contains these items arranged in this order: a cover letter, IRB approval or exemption letter in English, a title page, abstract and the manuscript with all tables/figures/appendices appearing at the end of the manuscript rather than in the body of the paper.
2. Contains a correctly formatted title page that specifies the total number of words, tables, figures and appendices of the manuscript (do not count words in tables and figures as part of the total number of words but words in appendices count against the total number).
3. Contains a correctly formatted abstract page. Abstracts must not exceed 250 words. For research articles and briefs, the abstract should contain 1-2 sentences describing the objective, methods, results and conclusion of the manuscript. For reviews, the abstract should contain 1-2 sentences describing the objective, findings and summary of the manuscript. Manuscript sections follow AJPE format (see manuscript sections).
4. For research articles and briefs, the paper uses the following structure: introduction, methods, results, discussion, conclusion, references. Tables, figures and appendices appear at the end of the manuscript NOT in the body of the manuscript.
5. The manuscript includes NON-continuous line numbers beginning on each page.
6. The manuscript includes page numbers at the bottom center of each page.
7. The manuscript is typed double-spaced.
8. References follow AMA style.
9. Tables, figures, and appendices follow our formatting guidelines.

PEER-REVIEW PROCESS

If your manuscript passes the technical check process, it will move through our two-stage peer-review process.

Stage One: In this first, internal review, the editor-in-chief and/or associate editors consider the following questions:

1. Is the topic addressed by the article important and of interest to faculty and administrators of pharmacy or health science institutions?
2. Has the *Journal* recently published a number of articles on this same topic? If so, does this manuscript add something new?
3. Is the paper written clearly? Is it logically consistent?
4. For research papers (including briefs, if applicable), is the study size adequate? Is the research design appropriate and sound? Are the results appropriately interpreted? Is the topic original?

Manuscripts failing to meet these basic criteria are not considered further for publication, while those meeting the criteria at this stage proceed to Stage Two.

Even though the *Journal* is published online, space for publication is still a significant issue. Given the considerable competition for space, standards for publication are high, and we expect that approximately 40% of all submissions will likely be rejected at this first stage. Most manuscripts are rejected because topics are not appropriate for the *Journal's* readership.

Stage Two: Authors whose manuscript passes Stage One will not be notified; their manuscript will simply be sent out for peer review. Reviewers' guidelines can be found on the *Journal's* website. Authors should be aware that this process typically takes 2-5 months.

The typical process involves a list of potential reviewers arranged by the assigned editor. Initially, two reviewers are contacted from the list and given 7 days to respond to the request. After 7 days without a response, or if a reviewer declines the review, an invitation is sent to the person next on the list who also receives 7 days to respond. This process will continue until two quality peer reviews are provided, or possibly more per the assigned editor's discretion.

To allow time for reviewers to respond can prolong an individual manuscript's review time considerably,

sometimes taking several months for editors to find enough reviewers (see keywords).

EDITORIAL DECISION

Once peer review is complete, the editor or associate editor assesses the manuscript and the reviewers' assessment to make a final decision.

This editorial decision may be to accept, to accept with a revision required (major or minor), or to reject the paper.

A request for revision does not guarantee a manuscript will be accepted; rather, it allows the authors to improve the manuscript for further consideration. Often, a manuscript will be sent for an additional round of peer review at this point.

EARLY RELEASE

Once accepted, a manuscript will be published "in press" as an early release publication (formerly called published ahead of print/PAP). The *Journal's* staff will lightly format your accepted article with the goal of making your article appear format-ready for publication. No changes will be made to the content or context of the work itself unless they are minor proofing or grammatical changes. Author approval is not required at this time.

Once articles are lightly formatted, they are sent to our production vendor who will prepare a draft article and publish it to our website on the "Early Release" webpage.

Authors will then be notified that their article is now in press and will receive a digital object identifier (DOI). The PAP process takes approximately 2 weeks to 1 month from official acceptance to publication in press.

COPYEDITING STAGE

Prior to publication in the regular, final issue all manuscripts are copyedited for organization, style, and clarity. If our editors determine that your manuscript requires substantial copyediting, you may be asked to

make another revision or pay an outside vendor to get the paper up to acceptable standards.

The corresponding author will receive the copyedited version approximately 1 to 4 weeks prior to the scheduled publication date. The corresponding author will have 2 business days to review the edits, respond to queries, and make any changes. *Any extensive, substantial, or minor changes to titles or other parts of a manuscript must be made at this stage.*

All *Journal* style and formatting changes made to the manuscript by our editorial staff must be retained.

PROOFING STAGE

The corresponding author will receive an email with a link to an online galley proof (eProof) for review approximately 10 days prior to publication. Extensive edits including routine rephrasing of sentences or new additions are NOT permitted at this stage. Any new revision may be denied or assessed a fee. Alterations should be restricted to corrections of data or to serious changes in interpreting the text caused by editorial error. The *Journal* allows authors 2 business days to return eProofs.

COPYRIGHT FORM

Manuscripts submitted to the *Journal* should be unpublished and not under consideration elsewhere. Under the terms of the Copyright Revision Act of 1976 (Public Law 94-533), it is necessary to have the rights of the authors' transferred to the publisher to provide for the widest possible dissemination of professional and scientific literature. *The editorial office must receive this form before a manuscript can be published.* A link to the form will be sent to the corresponding author during the proofing stage.