

# Journal of Graduate Medical Education

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## **1. Journal Mission and Audience**

The *Journal of Graduate Medical Education* (JGME) disseminates scholarship and promotes critical inquiry to inform and engage the graduate medical education community to improve the quality of graduate medical education. It is a peer-reviewed, editorially independent journal published by the Accreditation Council for Graduate Medical Education

## **2. Criteria for Manuscripts**

The *Journal* publishes original research articles, educational innovations, narrative and systematic reviews, short reports, personal essays about teaching and learning, commentaries, editorials, and letters to the editor. Guidelines and word limits for each type of manuscript are shown in section 3 below.

Manuscripts should contain information important to the audience of the *Journal*, which is diverse in specialties, settings, and level of expertise in education. Our readership expects articles that have clear hypotheses/foci, with approaches/methodologies matched to the hypotheses/foci, and conclusions supported by evidence found.

For research papers, the study methods must be appropriate and the data, presented clearly, must be reliable and valid. Papers are selected on the basis of standard quality criteria for education scholarship.

Manuscripts submitted must not have been previously published in print or electronic format, nor can they be under consideration by another publication or medium. The *Journal* adheres to the Committee on Publication Ethics (COPE) Code of Conduct (<http://publicationethics.org/>) and authors should be familiar with these guidelines.

Submission of a manuscript to the *Journal* implies that all authors have read and agreed with the manuscript's content. It also denotes that any research with human subjects was performed with the approval of an appropriate ethics or review board. A statement to this effect must appear in the Methods section of the manuscript, and must include the name of the body that gave approval or passed judgment. When appropriate, informed consent should be documented. Manuscripts from countries where education research is not usually reviewed by an ethics committee will be individually evaluated by the Editors.

## **3. Categories of Manuscripts**

Please read the following descriptions and choose the one most appropriate for your manuscript. If in doubt, consult Kavitha Reinhold at [kreinhold@acgme.org](mailto:kreinhold@acgme.org) for assistance. Please follow the word count limits carefully; if there is a compelling reason to exceed these limits, include the reasons in your letter to the editor, as exceptions can be made.

Original Research: Studies of graduate medical education: curriculum, evaluation, teaching methods, or settings, with a word limit of 2,500 words. These studies will answer the question: can this study change educational practices?

Research articles require a structured abstract consistent with the Introduction, Method, Results, Discussion (IMRD) format. The manuscript should similarly follow this outline.

- Introduction. A clear hypothesis or question, and a brief literature review must be provided highlighting the knowledge gap(s) that the study will attempt to answer.
- Methods. Readers should be able to understand the who, what, when and how of the study with brief but clear narratives on setting(s), instruments, and subjects. If survey or assessment instruments are used, attention to prior evaluation of the instrument and appropriate literature citations should be included. If deviations from ideal methods are necessary, these should be explained and will not preclude acceptance. The methods need sufficient detail that the study could be reproducible by others.
- Results. Ideally, outcomes should be objective and match the study question. It is understood that some types of studies may provide self-reports or non-validated outcomes. Analysis of results should use appropriate statistical tests, with attention to multiple comparisons and  $\beta$ -error/power calculations when appropriate.
- Discussion. Beginning with a brief summary of the findings to the study hypothesis/question, the discussion must include a summary of the study limitations, which will not reduce the potential for manuscript acceptance.
- Conclusions. They should be reasoned, conservative, and follow from the results, although future directions and implications of the findings may be discussed.

Authors should refer to the recommendations of the Transparent Reporting of Evaluations with Non-randomized Designs (TREND) statement. (Am J Public Health 2004; 94:361-366) or <http://www.trend-statement.org/> and follow these recommendations as applicable.

Educational Innovation: A description of a new approach or strategy in medical education. The word limit will range from 1,200 to 2,500 words, depending on the complexity of the innovation and evaluation methods. From a pragmatic perspective, innovations should answer the question: should this innovation be tried (or avoided) in other settings or disciplines?

As with Original Research submissions, Educational Innovation articles require that the paper and abstract be structured using the IMRD format. Studies that focus on a novel educational strategy will have higher priority than those that apply a known strategy to a new setting or new type of learner. In this submission category a brief summary of pertinent literature must be provided to demonstrate that the innovation is indeed new. The background, including educational theory, to support the new approach should be described. The innovation should have potential for replication in other disciplines or settings, and must be described in sufficient detail (or materials available from authors) that others can replicate the new strategy.

Evaluations must exist but may be less objective (eg, self-reported feedback; analysis of obstacles or areas more difficult to accomplish; approximation of time/costs). In order to facilitate replication in other settings, evaluations must include feasibility information (time, costs/materials, acceptability) unless not relevant. Of note, the innovation does not have to be successful; it can be a strategy that others should NOT try.

Brief Report: A brief summary of (1) a new curriculum, assessment, or teaching method or (2) successful "best practices" for implementation of accepted educational interventions by experienced institutions/teachers, with a word limit of 1,200 words. Submissions should use the IMRD format if applicable. These studies will answer the questions: Is this educational idea of interest to other disciplines or settings? Or, will use of these best practices help others implement accepted educational interventions?

Brief Reports may have a more limited focus: a single setting, small number of trainees, single discipline, scanty outcomes, self-reported outcome measures – or all of these. Results may be preliminary in nature.

Reviews. Reviews include systematic reviews and narrative reviews on topics of interest to graduate medical educators, with a word limit of 3,500 words. An abstract should be included. Reviews will be of interest to at least 2 specialties.

- **Systematic review**: A formal (quantitative or qualitative) aggregation of the existing literature on a topic in graduate medical education. Systematic reviews should include a structured abstract with the following headings: objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; and conclusions. Systematic reviews of interventions should follow the guidelines in the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement (<http://www.prisma-statement.org/>).
- **Narrative reviews** will evaluate an educational topic by combining expert opinion with a thorough and fair review of the available evidence. Narrative reviews are most appropriate when the available evidence is scarce or the topic is extensive. The review will interpret and apply the available evidence to propose best practices and future directions for the topic. The manuscript should include a brief abstract.

Perspectives: Provide views and opinions on issues of broad interest to program directors, educators, researchers, and deans for GME. Perspectives will be evidence-based but will reflect the author's expert opinion as well. Perspectives will be approximately 2,000 words.

On Teaching: Personal essays or reflections, with a word limit of approximately 1,200 words. These articles may speak to the experience of teaching, learning, or other aspects of the physician experience, and will be of strong interest to multiple specialties. Both educators and learners are encouraged to submit articles for this category; the quality of the writing will determine acceptance.

Letters to the Editor: Have a word limit of 500 words and 5 or fewer references. Letters may be published in a shortened form at the discretion of the editor, and should be prepared according to the same guidelines as the other manuscripts categories.

#### 4. Manuscript Preparation

Authors may refer to the EQUATOR network website for comprehensive resources in writing their reports (<http://www.equator-network.org>).

**File formats.** The following word processor file formats are acceptable for the main manuscript: (1) Microsoft Word, (2) WordPerfect, (3) Rich text format (RTF). Do NOT submit a manuscript in PDF form. Users of other word processing packages should save or convert their files to RTF before uploading.

**Typography.** Text should be double-spaced, left aligned (unjustified), without hyphenating words at line breaks. Please number all pages of the manuscript. Capitalize only the first word, and proper nouns, in the title. You may include special characters (such as Greek letters). If you are unable to reproduce a particular special character, please type out the name of the symbol in full.

The following information should be provided for all articles:

(1) Title page listing all authors' degrees, affiliations, their roles at their institutions or organizations, and contact information for the corresponding author.

(2) References, which must be numbered consecutively in the order in which they are cited in the text, followed by any in tables or legends. Examples for a range of different types of documents to be referenced can be found here. All references must be provided as endnotes using super-scripted numbers (ie, "In a previous study,<sup>1</sup> Smith observed..."). For references in tables or figures, use super-scripted letters (ie, <sup>a,b,c</sup>). Please do not use symbols.

(3) Acknowledgments (if appropriate)

(4) List of abbreviations (if used)

(5) Tables, Figures, and Boxes with legends (if used)

(6) Description of additional data files (if any)

**Authorship.** Only persons who have actively participated in the research or writing of the manuscript should be listed as authors. This includes the development, conduct, analysis, and writing of the manuscript (<http://www.icmje.org/#author>). "Author inflation" is to be avoided; individuals that contributed to the manuscript to a lesser degree should be listed in the Acknowledgments. Further, anyone who contributes to the writing must be listed or acknowledged; no "ghost" authoring is allowed. However, this does not apply to writers who edit a manuscript solely to enhance style, grammar, or clarity.

**Sources of funding.** Sources of funding must be acknowledged. All authors will disclose conflict of interest information.

## **5. Tables, Figures and Boxes**

**Preparing tables.** Each table should be numbered in sequence using Arabic numerals (ie, Table 1, 2, 3, etc.). Tables should also have a title that summarizes the whole table using a maximum of 15 words. Detailed legends may then follow, but should be concise. Tables should be self-explanatory and not require discussion in the text.

Smaller tables can be pasted into the end of the document text file. The tables should be formatted using the “Table object” in a word processing program to ensure that columns of data remain aligned when the file is sent electronically.

Tabular data provided as additional files can be uploaded as an Excel spreadsheet (.xls) using appropriate file names and standard file extensions.

**Figures.** Figures should be provided as separate, individual files.

The following file formats can be accepted: Microsoft Word (version 5 and above; figures must be a single page); PDF (especially suitable for diagrams); .jpg, .tiff, .gif, .ppt

Figure resolution must be 200 dpi or higher. Each figure should comprise a single file. Figures will be printed in black and white only unless authors have arranged to pay for color charges. Consideration for color will be given on a case-by-case basis and costs will be determined accordingly.

Figures should be cited consecutively in Arabic numerals in the text with figure legends part of the text files. Legends should contain sufficient explanation so the figures can be interpreted without reference to the text. All figures are to be submitted in such form as to permit reproduction without additional retouching or typesetting. Lettering and labeling should be large enough to allow reduction for appropriate page layout.

**Figure legends.** The legends should be included in the main manuscript text file immediately following the references, rather than as part of the figure file. For each figure, the maximum word count for the figure legend is 200 words.

**Boxes.** All single cell tables, such as bulleted ideas or lists of key concepts or themes will be published as “boxes.” “Boxes” may be pasted with the text they accompany or at the end of the text document.

If figures, tables, or boxes have previously been published, it is the responsibility of the author(s) to obtain permission from the copyright holder to reproduce them in the *Journal of Graduate Medical Education*. Appropriate credit lines must be included in the figure legend. Documentation of permission to reproduce must be sent with the manuscript at the time of submission.

**Supplemental online only content.** The Journal encourages authors to share forms and interview outlines used for survey research. An author may wish to provide data sets, survey instruments or interview outlines, tables, movie files, or other information as additional information. These additional files will not be displayed in the final, published form of the article, but will be made available in the online version of the article.

These files should be uploaded as **Figure or Table files, with “Supplemental Content” descriptors** in the manuscript submission process. List all supplemental content consecutively at the end of the manuscript. This list should include the type of material submitted, should be clearly labeled as “supplemental content,” and numbered consecutively in the text. Papers not correctly formatted will be returned to the authors for correction and resubmission.

## **6. Manuscript Submission**

Manuscripts must be submitted by one of the authors of the manuscript at <http://www.editorialmanager.com/jgme/>. Instructions and support are available from the site. A user ID and password need to be obtained on the first visit.

The submitting author takes responsibility for the article during submission and peer review. To facilitate rapid publication, the *Journal of Graduate Medical Education* accepts all submissions via its online review system.

All parts of the manuscript must be available in an electronic format. During submission the submitting author is asked to provide a cover letter that discusses why the manuscript should be published in the *Journal of Graduate Medical Education*, and addresses any areas and aspects of the manuscript that are covered by the *Journal's* editorial policies detailed in the instructions for authors.

Questions about manuscript preparation and submission should be directed to Kavitha Reinhold, Associate Managing Editor, JGME ([kreinhold@acgme.org](mailto:kreinhold@acgme.org) or 312/755-7485).

Implicit in the submission process is that author(s) own all rights in the work except as indicated by permission grants, the article is original and has not been published previously, and the article is not under consideration by another journal. All rights are transferred to the Accreditation Council for Graduate Medical Education who will register the copyright per the copyright form authors submit before article publication.

## 7. Word Limit Summary

Category	Article	Abstract
Original Research	2,500	≤300
Educational Innovation	1,200 – 2,500	≤300
Brief Report	1,200	≤300
Review	3,500	≤300
Perspective	2,000	≤200, unstructured
On Teaching	1,200	No abstract
Letter to the Editor	500	No abstract

## 8. Editorial and Peer Review Processes

Manuscripts submitted via the online portal will be sent to peer reviewers following an initial screening to assure its concordance with the *Journal*. Statistical reviewers are invited as needed. Reviewers are asked to declare any competing interests.

The *Journal's* review seeks to evaluate the manuscript for its scientific merit which includes: (1) whether it addresses a topic of interest and relevance to the *Journal's* audience; (2) connection with existing literature/best practices in the field; (3) methodological rigor; and (4) whether the quality and clarity of the writing is acceptable. The final decision is based on reviewer recommendations and the *Journal's* Editor-in-Chief and Editorial Board.

Accepted manuscripts are edited according to the *Journal's* style, grammar, punctuation, clarity of language, and euphony, and returned to the author as page proofs for approval. The Editorial Board may select an article as especially noteworthy and have it receive greater prominence, external publicity, or a commentary.

After acceptance, authors will be asked to complete a copyright form.

## 9. Declaring Competing Interests

Competing interests exist in many contexts and it is not possible to completely eliminate them. Potential for competing interests may come from financial ties, including payment for research, ownership of stock and stock options, honoraria for consultations, speaking, and similar activities. Academic and institutional affiliations and competition among different researchers examining similar questions or innovations are other potential sources for competing interests.

- (1). Authors need to list the source(s) of funding for the study, for each author, and for the manuscript preparation, and must describe the role of the funding body, if any, in study design; collection, analysis, and interpretation of data; writing of the manuscript; and decision to submit the manuscript for publication. This should be provided as a separate section of the manuscript, to follow the acknowledgments section.
- (2). All authors, including the corresponding author, must indicate any conflicts of interest or competing interests in the manuscript as a separate section. The corresponding author will indicate any conflict of interest on behalf of all authors as part of the manuscript submission process (<http://www.editorialmanager.com/jgme/default.asp>). Potential competing interests that have been declared will be listed in the published article. If an author has no conflicts of interest or competing interests, the listing will read “The author(s) declare that they have no competing interests.”
- (3). Editors and reviewers also may have conflicts of interest or competing interests with a given manuscript and/or its authors, and will recuse themselves from the review if a conflict or significant competing interest exists.

Added guidance regarding competing interests can be found in the following publications:

Smith R. Making progress with competing interests. *BMJ*. 2002; 325(7377): 1375-1376.

DeAngelis CD, Fontanarosa PB, Flanagin A: Reporting financial conflicts of interest and relationships between investigators and research sponsors. *JAMA*. 2001; 286:89-90.

## **10. Reference Format for Different Documents**

All references must be numbered consecutively in the order in which they are cited in the text, followed by any in tables or legends. Examples for a range of different types of references are provided below. *Journal* abbreviations must follow Index Medicus/MEDLINE formats. Citations in the reference list should contain all named authors. Reference style should conform to AMA Manual of Style, 10th ed.

Journal Article

Link/URL

Book

Book chapter or article in a book

Conference proceedings not published in a book or journal

Thesis or dissertation

Government report

Non-Government report

Horwitz LI, Krumholz HM, Green ML, Huot SJ. Transfers of patient care between house staff on internal medicine wards: a national survey. *Arch Intern Med*. 2006;166(11):1173-1177.

#### Link / URL

Joint Commission on the Accreditation of Healthcare Organizations. 2006 National Patient Safety Goals. [http://www.jointcommission.org/PatientSafety/National Patient SafetyGoals/06\\_npsg\\_dsc.htm](http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/06_npsg_dsc.htm). Accessed February 8, 2009.

#### Book

Patton, MQ. *Qualitative Evaluation and Research Methods*. 3rd ed. Newbury Park, CA: Sage Publications; 2000.

#### Book chapter or article in a book

Cacioppo JT, Petty RE. Social psychological procedures for cognitive response assessment: The thought listing technique. In: Merluzzi T, Glass C, Genest M, eds. *Cognitive Assessment*. New York: Guilford; 1981:309-342.

#### Conference proceedings not published in a book or journal

Jones DL, ed. *Proceedings: Eighteenth Annual Conference on Research in Medical Education*. Paper presented at: 19th Annual Conference on Research in Medical Education; November 1979; Washington, DC.

#### Thesis or dissertation

Dale, DC. *A Brief History of Graduate Medical Education in Washington, Alaska, Montana and Idaho*. [master's thesis], Seattle: University of Washington; 1972.

#### Government report

Johnston LD, O'Malley PM, Bachman JG. *Monitoring the Future: National Survey Results on Adolescent Drug Use: Overview of Key Findings*. Bethesda, MD: National Institute on Drug Abuse, US Dept of Health and Human Services; 2000.

#### Non-Government Report

Millis JS. *The Graduate Education of Physicians. Report of the Citizens' Commission on Graduate Medical Education*. Chicago: American Medical Association; 1966.