

# A Welcome to International Authors

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**H**ealth care delivery has seen a rapid transformation over the past several decades in response to social, cultural, and economic world events. These changes are increasingly driving medical educational reform and research on a global level. Despite the international nature of these changes, the *Journal of Graduate Medical Education* (JGME) editors are aware of the limited geographic representation and thematic diversity in medical education literature. This underrepresentation is most evident in contributions from low and middle-income countries, whose inhabitants comprise the vast majority of the world's population (in 2021: 85% of 7.8 billion)<sup>1</sup> and bear most of the global disease burden.<sup>2</sup>

Similar to biomedical journals, medical education literature is dominated by a few countries and primarily reflects a Western perspective.<sup>3</sup> In a review of publications between 1995 and 2000 in 2 leading medical education journals, Tutarel noted that authors from Canada and the United States wrote 95% of all articles in *Academic Medicine*, and authors from Australia, Canada, the United Kingdom, and the United States wrote 74% of all articles in *Medical Education*.<sup>4</sup> Doja and colleagues performed a bibliometric analysis of evaluative studies in medical education between 1974 and 2014 and found that the countries with the highest relative publication productivity were Canada, the Netherlands, New Zealand, the United Kingdom, and the United States.<sup>5</sup> In a more recent analysis of medical education scholarship published in English and indexed on PubMed, Thomas noted that authors from high-income countries, particularly English-speaking Western countries (United States, United Kingdom, Canada, Australia), authored 80% of medical education publications.<sup>6</sup> In this analysis, geographical diversity of authorship was the lowest in medical education research when compared to several other fields, including biological sciences, medicine, and education.<sup>6</sup> These studies highlight that the dominant sources of knowledge generation, synthesis, and dissemination in medical education are highly skewed

to select institutions in English-speaking, high-income countries, primarily in North America and Europe.<sup>7</sup>

Some studies suggest that editorial bias (ie, bias that arises from composition of journal editorial boards) contributes to the underrepresentation of authors from low- and middle-income countries. In a 2021 review of editorial board members of 10 medical education journals, 93% were based in high-income countries and 66% were from the 4 countries with the greatest representation of medical education scholarship, namely the United States, the United Kingdom, Australia, and Canada.<sup>8</sup>

Geographic diversity in medical education publications brings value to readers. Studies have shown that articles published by authors from low- and middle-income countries greatly increase the diversity of questions, theories, and topics in medical education literature.<sup>6</sup> With the global mobilization of learners, curricula, and the health care and medical education workforce, curricular reforms and changes in accreditation standards across international borders can have local impact. Further, health education systems worldwide face similar challenges, including workforce shortages, faculty retention concerns, and resource constraints. Novel solutions from non-Western contexts will enrich the global conversation on medical education practices and may be readily transferable. For example, implementing curricula in resource-constrained environments is an area in which international researchers may have more experience. In addition, many international training programs face fewer bureaucratic hurdles, allowing interventions to be implemented and outcomes to be assessed within a relatively shorter period of time.

JGME welcomes international authors to submit high-quality studies that explore teaching and learning in graduate medical education from diverse perspectives. We are aware that international authors, particularly those from developing medical education systems, face considerable publication barriers. Lack of resources—including time, funding, experienced mentors, and a perception that education research may be of lower value than clinical research—are some of the challenges.<sup>9,10</sup> Also, academic writing, often in what is not the author's first language, can be daunting. Moreover, international authors may not be

DOI: <http://dx.doi.org/10.4300/JGME-D-22-00602.1>

**BOX Tips for International Authors****The Planning Stage**

- Develop research priorities that:
  - Build upon existing literature<sup>12,13</sup>
  - Are potentially relevant to other settings and countries
  - Might engage a broad audience of readers or stakeholders
- Translate priorities into research problems and questions appropriate for your settings
  - Consider the problem-gap-hook heuristic<sup>14</sup>
  - What problems are especially suited to your learning environment and learners?
- Ensure sample is adequate for study<sup>15</sup>
  - For quantitative studies, ensure there is an *a priori* power calculation and effect size determination
  - For qualitative studies, describe sampling strategy and how thematic sufficiency will be determined<sup>16</sup>
  - Longitudinal data collection over time or multi-program and multi-institutional collaborations may increase strength of conclusions
- Obtain institutional review board or appropriate ethics approval at your site
- Focus on statistical rigor
  - Describe methods in enough detail to allow replication or adaptation by others
  - Don't rely only on *P* values for statistical significance—include effect sizes and/or confidence intervals<sup>17</sup>
  - Get statistical expertise if needed
- Match outcomes to research question
  - Ensure that the outcomes represent what really matters to address the stated problem
  - Aim for the highest-level outcomes possible; learner or educator satisfaction supports user acceptability, but higher-level outcomes are usually needed for dissemination through publication
  - If a lower-level outcome is selected, the methods should justify why that outcome is particularly relevant to the question or problem
  - Change in learner behaviors is a strong marker of a successful intervention
- Consider training in health professions education research<sup>18</sup>
  - AAMC Medical Education Research Certificate
  - AMEE Research Essential Skills in Medical Education

**The Writing Stage**

- Frame your study in a way that is specific to the journal audience
- Consult JGME resources for authors (<https://meridian.allenpress.com/jgme/pages/Resources-for-Authors>)
- Focus on a story that progresses logically, rather than chronologically<sup>19</sup>
- Ask a colleague to review and edit your work prior to submission<sup>20</sup>
- If the journal language is not your first language, ask someone to proofread your paper prior to submission
- Consider starting by writing a letter to the editor or a review paper which often have higher acceptance rates

**The Submission Stage**

- Pick the right journal—JGME publishes work that is relevant to multiple specialties and focuses on resident and fellow postgraduate education<sup>21</sup>
- Follow the author instructions carefully
- The abstract is critical, as first editorial decisions are often based on the abstract alone
- A very brief cover letter can describe why the paper is timely, relevant, and of interest to the journal's readership, though some journals use the abstract alone to make the first editorial decision (reject or move forward)

**The Revision Stage**

- Consider a revision decision as a win
- Respond directly (and thoughtfully) to reviewer comments<sup>22</sup>
- Revise and resubmit as needed—don't give up
- It is acceptable to not incorporate reviewer suggestions, with clear, tactfully expressed reasoning
- Remember: the review process is an opportunity to improve your paper, and most published papers represent multiple revisions of the submitted draft<sup>23</sup>

**BOX Tips for International Authors (continued)****After Publication**

- Optimize opportunities for dissemination<sup>24</sup>
  - Present at conferences
  - Share on social media
  - Consider discussing the work on a podcast

Abbreviations: AAMC, Association of American Medical Colleges; AMEE, Association for Medical Education in Europe; JGME, *Journal of Graduate Medical Education*.

as aware of current priorities in medical education research, which will push less popular or exhausted topics lower in editorial consideration for publication in an increasingly crowded medical education research environment.<sup>11</sup> Based on our experiences as medical education researchers and editors handling international submissions for JGME, we propose tips for the research and writing cycle (BOX).

In addition to providing resources to help all authors improve the quality of their submissions, we encourage medical education journals to review their processes for promoting geographic representation and diversity in medical education scholarship. JGME has made efforts to include international papers, including the 2019 “A Look Into GME Around the World,” an international supplement with 42 articles highlighting innovations and experiences in graduate medical education from more than 20 countries.<sup>25</sup> Since researchers in low-resource settings can face barriers in accessing the current literature, JGME transitioned to open access in 2021 to allow access to all articles at no cost. We also do not charge publication fees, which may present an insurmountable challenge for researchers without funding support. To address issues of publication bias, we have recruited an international reviewer community and advised our associate editors to consider geographical diversity when selecting reviewers. In addition, we have made continued efforts to improve the diversity and inclusivity of our editorial board. Beyond greater geographic coverage, we are also committed to recruiting residents, fellows, and early career educators to the JGME Editorial Board to help mitigate the diversity gap between early career and senior career physicians.

Although narrow in scope by focusing on graduate medical education, JGME needs to include more voices and perspectives from more geographical regions of the world. Despite the many challenges, we aim to provide a more diverse and equitable platform for global knowledge dissemination in graduate medical education. We hope to see continued growth in our international submissions and to work within the medical education scholarship

community to improve the diversity and inclusivity of medical education research.

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