

Designing and Launching a Student-Led Medical Journal: Structure and Early Implementation of the Graduate Medical Scholars Journal (GMSJ)

Aryna C. Armand, MS¹ | Matin Bikaran¹ | Timothy B. Gardner, MD, MS^{1,2}

¹Geisel School of Medicine, Dartmouth College, Hanover, New Hampshire, USA

²Center for Digestive Health, Dartmouth Hitchcock Medical Center, Lebanon, New Hampshire, USA

Correspondence: Aryna C. Armand (aryna.c.armand.med@dartmouth.edu)

Received: 6 June 2025 | **Accepted:** 5 December 2025

Funding: The authors received no specific funding for this work

Keywords: student-led publishing | medical education | peer review training | research literacy | academic journal development

Abstract

Medical students often lack structured, early opportunities to engage in academic publishing, and while student-run journals exist, few published frameworks describe how to create and sustain them. This absence of guidance limits replication and institutional adoption as a strategy for improving research literacy. To address this gap, the Graduate Medical Scholars Journal (GMSJ) was developed at the Geisel School of Medicine as a sustainable, student-led medical journal model providing hands-on training in peer review, scholarly writing, and editorial decision-making. Built with faculty mentorship using Open Journal Systems (OJS) v3.4.0.7 and hosted through A2 Hosting, GMSJ operates under a tiered editorial structure: Primary Reviewers (first-years), Editorial Board Members (second-years), Production Managers (first- and second-years), and Editors-in-Chief (third-years), with faculty reviewers offering oversight and mentorship. Standard Operating Procedures (SOPs) and reviewer resources were created, and the structure evolved based on team feedback and functional needs. The journal's infrastructure and workflows are complete, the Editorial Board has been selected and onboarded, and the first call for submissions is planned for October 2025 after our official launch in September 2025. Key lessons learned include the importance of clear role delineation, peer mentorship, and sustainable leadership transitions. Although not initially theory-driven, the model aligns with frameworks of situated learning and near-peer teaching, offering a replicable foundation for other institutions seeking to implement student-led publishing initiatives to enhance research literacy and peer review education.

ABBREVIATIONS:

- GMSJ – Graduate Medical Scholars Journal
- OJS – Open Journal Systems
- SOP – Standard Operating Procedure
- DOI – Digital Object Identifier

1 | INTRODUCTION

In the current rapidly evolving medical landscape, proficiency in research and scholarly communication is paramount for medical professionals. Engaging in research not only cultivates critical thinking but also fosters a deeper understanding of evidence-based practice, essential for delivering high-quality patient care [1]. Despite its significance, many medical students encounter barriers to active research participation, including limited access to mentorship, insufficient opportunities for meaningful involvement, and a scarcity of dedicated platforms for disseminating scholarly work [1,2].

Student-run medical journals have emerged as innovative platforms to bridge this gap, offering students firsthand experience in the intricacies of academic publishing, peer review, and editorial processes. Notable examples include the *Yale Journal of Biology and Medicine* and the *Medical Student Research Journal*, both of which have provided avenues for student scholarship and editorial experience. Nevertheless, the establishment and operationalization of such journals present unique challenges, including securing institutional support, assembling a dedicated editorial team, and navigating the technical aspects of journal management [3,4]. Further, limited published guidance exists outlining the processes involved in developing and operationalizing student-run journals. While some case studies describe the existence or revival of student journals, few provide comprehensive frameworks, infrastructure details, or step-by-step documentation for implementation.

Recognizing these challenges and the pressing need for a dedicated platform to support and showcase medical student research, we embarked on the creation of the *Graduate Medical Scholars Journal (GMSJ)*, an independent initiative developed by students at the Geisel School of Medicine at Dartmouth between December 2024 and April 2025 [5]. This initiative aimed to provide a robust framework for students to engage in the full spectrum of academic publishing—from manuscript submission and peer review to editorial decision-making and publication. This paper delineates the conception, design, and implementation of GMSJ. We detail the selection of the A2 hosting service and the Open Journal Systems (OJS) platform, elucidate the organizational structure of our editorial team, and share insights gained throughout the development process [6,7]. By documenting our journey, we aspire to offer a replicable model for other institutions

seeking to establish student-run medical journals, thereby contributing to the broader discourse on enhancing research engagement among medical students.

2 | METHODS

2.1 Planning phase

2.1.1 Ideation and needs assessment

The genesis for the Graduate Medical Scholars Journal (GMSJ) emerged from our own firsthand experience attempting to navigate the academic publishing process as medical students. While we had extensive prior experience in bench and clinical research, we lacked formal training in the logistics of scholarly writing, formatting manuscripts to meet journal specifications, managing peer review comments, or navigating formal submission systems. Recognizing this critical gap, our aim was to create a journal designed specifically for medical students to learn by actively engaging in the publication process: submitting original research or scholarly work, receiving constructive feedback from peers and faculty, and participating in the editorial and peer review process.

2.1.2 Stakeholder engagement

We began by identifying key stakeholders whose support would be essential to the journal's success. We engaged faculty with experience in research, publishing, and peer review to serve as faculty reviewers and advisors. Early in the process, we secured mentorship from the Assistant Dean of Medical Student Research, who agreed to serve as our chief faculty advisor.

2.1.3 Institutional alignment

While GMSJ is not officially owned or operated by the medical school, it was created for Geisel School of Medicine students with the intent of strengthening the institution's research culture and offering an accessible entry point into academic publishing. The journal aligns with Geisel's broader mission to train physician-scholars and enhance research opportunities available to students.

2.2 Technical infrastructure

2.2.1 Platform selection: Open Journal Systems (OJS) [7]

A core objective in designing GMSJ was to ensure a professional, scalable platform that could handle all aspects of academic journal management—submission, partially blinded peer review, editorial communication, revisions, and publication. After evaluating several publishing solutions, we selected Open Journal Systems (OJS) version 3.4.0.7, an open-source platform commonly utilized by academic institutions and professional journals globally. OJS offered a flexible, modular system that allowed us to customize editorial workflows, assign user roles at various levels (e.g., editors, reviewers, authors), and manage manuscripts through multiple revision cycles.

Key considerations in choosing OJS included:

- Global recognition and extensive use in student-run and institutional journals globally.
- Support for blinded peer review at the primary and faculty review levels.
- Built-in tools for editorial decision tracking, reviewer communication, and publication formatting.
- Active user community and documentation for troubleshooting.
- Real-time tracking of key journal metrics, including submissions, reviews, publications, and rejections.

2.2.2 Web hosting: A2 Hosting Service [6]

To self-host the OJS instance independently, we selected A2 Hosting, a platform known for its speed, security, and compatibility with PHP/MySQL environments required by OJS. A2 allowed us to:

- Maintain full administrative control over our journal and user data.
- Configure custom domains, backup systems, and file storage solutions.
- Scale as submission volume and storage needs increase.

We opted for this self-hosted approach to avoid reliance on institutional IT infrastructure, ensuring long-term flexibility and autonomy over the platform.

2.2.3 Site configuration and customization

The installation and configuration of OJS involved designing the submission and review workflows to match our editorial structure, creating user roles that aligned with

our team tiers, customizing the front-end theme to reflect the GMSJ identity, and ensuring accessibility, secure login credentials, and version control during setup. All logos and designs were generated using Canva and ChatGPT4o.

2.2.4 Editorial workflow integration

We designed the technical backend to mirror the educational goals of GMSJ. As visualized in Figure 1, submitted manuscripts are first screened by the Editors-in-Chief for basic adherence to journal standards (e.g., correct file types, sufficient word count, etc.). Suitable manuscripts are assigned to an Editorial Board Member with no prior connection to the author. The Editorial Board Member then assigns a Primary Reviewer (a first-year student) to conduct a double-blind preliminary review, assessing formatting, guideline adherence, and plagiarism. The Primary Reviewer submits a checklist, plagiarism certificate, and review report to the Editorial Board Member after 2-weeks from assigned date. The Editorial Board Member then conducts the second review, evaluates content using a structured rubric, and either recommends revisions to the author or rejection to the Editors-in-Chief. Once the manuscript is ready, the EBM forwards it to a Faculty Reviewer for a third, double-blind review focused on academic rigor and subject-specific expertise. The EBM then presents the manuscript at the monthly Editorial Board Meeting, where the Editors-in-Chief make the final publication decision. Manuscripts accepted for publication are forwarded to the Production Managers (first or second-year students) for formatting and upload. This multi-layered review structure was embedded into OJS workflows using customized permissions and stage assignments.

2.3 Editorial team design

A distinguishing feature of GMSJ is its clearly defined, student-driven editorial structure, designed to support both high-quality peer review and educational skill-building. Inspired by traditional journal hierarchies but tailored specifically for medical students, the GMSJ editorial board is stratified by academic year, complemented by faculty oversight and mentorship.

2.3.1 Tiered editorial structure

Our editorial model consists of four main student-led roles and two faculty-led roles. Each role is supported by an onboarding Standard Operating Procedure (SOP) to ensure

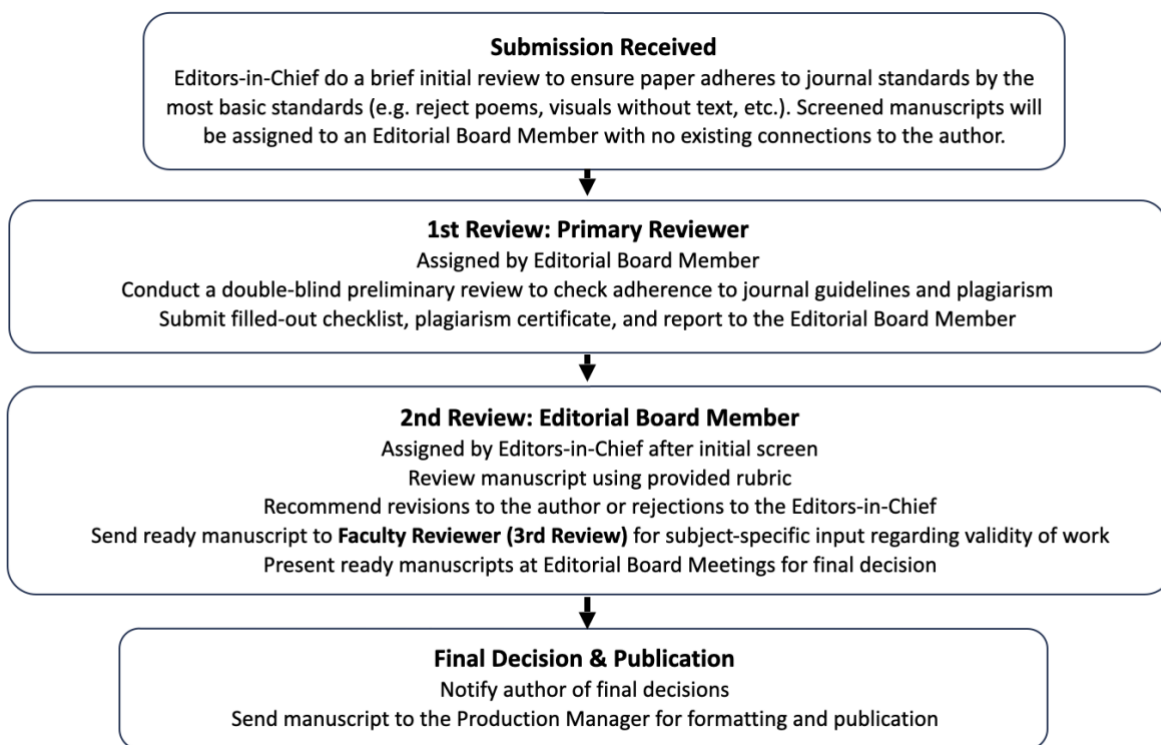


Figure 1. Editorial Review and Decision-Making Workflow for the Graduate Medical Scholars Journal (GMSJ), 2025.

This figure illustrates the multistep peer review and editorial decision-making process for GMSJ. Following submission, Editors-in-Chief conduct an initial screening to ensure the manuscript meets minimum journal standards (e.g., formatting, appropriateness of content). If deemed suitable, the manuscript is assigned to a Primary Reviewer (a first-year medical student) for preliminary review, which includes a formatting checklist, plagiarism screening, and initial feedback. The completed materials are then forwarded to an Editorial Board Member (a second-year student), who evaluates the manuscript’s quality and rigor using a standardized rubric. This review may result in requested revisions, rejection, or advancement to the next stage. Manuscripts deemed ready are sent to a Faculty Reviewer for subject-specific input and are then presented at an Editorial Board Meeting, where final decisions are discussed. The Editors-in-Chief make the final determination and notify authors. Accepted manuscripts are forwarded to the Production Manager for formatting and publication.

clarity and consistency, and smooth role transitions for future cohorts:

- **Primary Reviewers (first-year students):** Serve as the first layer of review. They ensure that submitted manuscripts adhere to GMSJ’s author guidelines, which were developed by the journal’s founders as a curated synthesis of established formatting and submission standards used by established medical and scientific journals. Primary Reviewers use a structured checklist to assess whether submissions meet these baseline requirements. They also conduct plagiarism screening and verify that manuscripts are free of major formatting or compliance issues before advancing to content-level review by the Editorial Board. They are further given the opportunity to submit a formal initial review report to the Editorial Board Member, allowing them to practice content review and gain foundational experience in the peer review process.
- **Editorial Board (second-year students):** Responsible for managing manuscript progress through the review phases up to copyediting. They conduct detailed content reviews following the Primary Reviewer stage, evaluating quality, research rigor, validity, and clarity. Editorial Board Members determine whether manuscripts should be revised, rejected, or advanced to faculty review. They are responsible for presenting the manuscript, their review, and their recommendation during monthly Editorial Board Meetings. They also manage author communications regarding revisions and track progress in OJS.
- **Faculty Reviewers:** Serve as the final checkpoint in the peer review process, ensuring manuscripts meet

academic standards before publication. They offer mentorship to the Editorial Board and provide expert-level feedback. Faculty involvement ensures that accepted work is of publishable quality and offers authors constructive feedback that strengthens their research.

- **Chief Faculty Advisor:** Serves as the senior academic mentor to the journal, providing guidance on scholarly standards, editorial oversight, and long-term sustainability. This individual supports the onboarding of new Editors-in-Chief, assists with connecting Editorial Board Members to Faculty Reviewers, advises on complex or ethical decisions, and ensures alignment with institutional goals and academic standards.
- **Editors-in-Chief (third-year students):** Oversee all journal operations. They assign submissions, guide Editorial Board members, facilitate communication with faculty reviewers, make final decisions on manuscript acceptance, and ensure issue compilation and publication stays on schedule. Editors-in-Chief are also responsible for onboarding new members, maintaining continuity year-to-year, and upholding journal standards.
- **Production Managers:** To ensure smooth production and maintenance of the journal, GMSJ includes two distinct production management roles: the Technical Operations Lead and the Formatting & Publication Lead. These complementary roles collaboratively support the final stages of issue production and website upkeep.
 - **Technical Operations Lead:** Responsible for all technical aspects of the journal's infrastructure, including backend management of the Open Journal Systems platform, troubleshooting user access issues, updating website content, and ensuring data security and stability. This lead also configures user roles, maintains the submission and review workflows, and records and archives meeting minutes during Editorial Board meetings.
 - **Formatting & Publication Lead:** Oversees the copyediting and production phases for accepted manuscripts, as well as the visual and structural preparation of each issue. This includes formatting accepted manuscripts, ensuring compliance with journal style, compiling final PDFs for upload, and posting updates and announcements to the Journal's homepage. The Formatting & Publication Lead is also

responsible for verifying author metadata, ensuring DOIs and keywords are properly formatted, and maintaining consistency in the look and feel of each published article.

The full editorial tiering and decision-making workflow are summarized visually in Figure 2.

2.3.2 Workflow and role integration

Editorial responsibilities were deliberately scaffolded to provide increasing complexity and ownership as students advance in their training. This tiered approach facilitates progressive involvement:

- First-year medical students learn to critically appraise basic elements of a manuscript and gain entry-level experience in content review through initial report submissions.
- Second-year medical students develop analytical skills by evaluating study design, methods, and scientific writing.
- Third-year medical students manage strategic journal operations, oversee editorial decision-making, mentor junior members, and liaise with faculty.

3 | RESULTS

Although GMSJ is still in its pre-launch phase, foundational milestones have been successfully achieved. The platform has been configured through Open Journal Systems, the editorial structure finalized, and internal documentation—including author guidelines, reviewer checklists, SOPs, and video tutorials—fully developed. Onboarding of the inaugural editorial board is currently underway, incorporating Journal Club sessions—where editors practice manuscript review and receive feedback from faculty and Editors-in-Chief—as part of the review training. Applications for Primary Reviewer positions will open in July, coinciding with the arrival of the incoming first-year medical students. The first call for submissions is anticipated in October 2025.

Early student interest has been strong, with recruitment materials highlighting leadership development, peer review training, and academic publishing experience as key learning opportunities. Training resources and editable infrastructure documents are being prepared for public release to support transparency and encourage institutional replication.

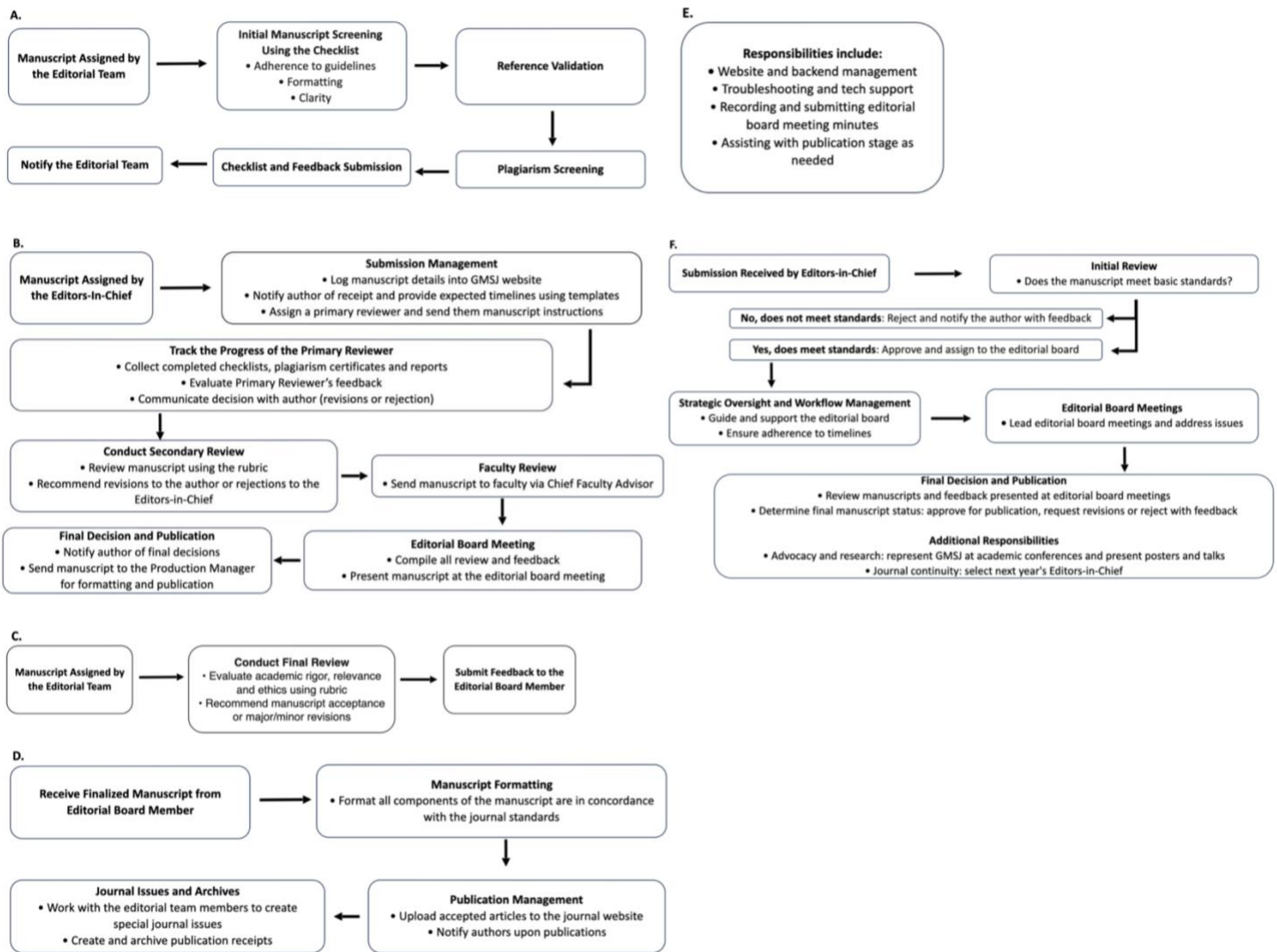


Figure 2. GMSJ Editorial Roles and Workflow Responsibilities.

This figure illustrates the tiered editorial structure and corresponding responsibilities within the Graduate Medical Scholars Journal (GMSJ). Each subpanel represents a different role within the journal's operational framework. **A. Primary Reviewers (First-Year Students):** Perform initial screening of submitted manuscripts for formatting, adherence to author guidelines, and clarity. Also responsible for plagiarism screening and reference validation using structured checklists. **B. Editorial Team Members (Second-Year Students):** Manage manuscript assignments, conduct secondary reviews, and present at Editorial Board Meetings. Responsible for evaluating Primary Reviewers' feedback and preparing manuscripts for faculty review and final decision. **C. Faculty Reviewers:** Serve as the final checkpoint in the review process. They evaluate manuscript quality, provide expert-level feedback, and ensure that accepted work meets academic standards before publication. **D. Production Manager – Formatting & Publication Lead (Second-Year Student):** Format finalized manuscripts, upload accepted articles to the journal website, and manage issue compilation and archiving processes. **E. Production Manager – Technical Operations Lead (Second-Year Student):** Oversees backend website management, workflow configuration, and troubleshooting; records editorial board minutes and assists with final stages of publication as needed. **F. Editors-in-Chief (Third-Year Students):** Provide strategic oversight of the editorial process, lead Editorial Board Meetings, and make final publication decisions. Responsible for continuity planning, external advocacy, and ensuring adherence to timelines and quality standards.

Visual tools—including the review process (Figure 1) and development of role structure flowcharts (Figure 2)—were created to accompany onboarding and communicate

responsibilities. These are designed to be adaptable for other programs seeking to establish similar models.

We anticipate that GMSJ will serve as a student-led learning environment where participants gain early exposure to the academic publishing process, develop critical appraisal and editorial decision-making skills, and contribute to a culture of scholarly engagement in undergraduate medical education.

4 | DISCUSSION

Throughout the development process, we recognized the value of intentional scaffolding, transparent documentation, and iterative peer feedback. Selecting OJS allowed us to retain full control over editorial workflows and user permissions, which was essential for customizing the platform to our needs. One key insight was the importance of embedding mentorship opportunities—both for student editors and authors—as a way to enhance the journal’s educational impact.

Our biggest challenge was ensuring sustainability in a student-run model. To address this, we created role-specific SOPs, developed a standardized onboarding process that includes Journal Club training sessions, and intentionally structured roles to align with annual class-year transitions. In doing so, we aimed to preserve institutional knowledge and support continuity across leadership cycles.

Although the journal was not initially grounded in an explicit educational framework, we later recognized that its structure naturally reflects the principles of situated learning and near-peer teaching. These frameworks, though initially integrated informally, may help other institutions structure similar student-led academic publishing initiatives.

Our reflection also surfaced the need for more faculty involvement in early stages—not only for content expertise but also for credibility and strategic support. In future iterations, we plan to introduce a formal faculty advisory board and to implement onboarding feedback surveys to continuously improve training and operations.

Following onboarding, the journal will initiate its first review cycle and begin compiling its inaugural issue. In parallel, we plan to introduce brief pre- and post-participation surveys to evaluate student learning outcomes related to peer review, academic writing, and research literacy. Ultimately, we hope that this model will inspire and enable other institutions to empower students as active contributors to the academic publishing ecosystem.

ACKNOWLEDGEMENTS

The authors wish to acknowledge the support of the Geisel School of Medicine’s Medical Student Affairs Office for providing early feedback on the journal’s infrastructure and alignment with institutional goals.

SOURCES OF FUNDING

No funding has been received during the development of Graduate Medical Scholars Journal (GMSJ).

AUTHORSHIP

All authors contributed substantially to the conception, design, and implementation of the Graduate Medical Scholars Journal (GMSJ) and to the development of this manuscript.

CONFLICT OF INTEREST DISCLOSURE

The authors are the founders of the Graduate Medical Scholars Journal (GMSJ) and prepared this article to document the journal’s development and implementation. This article was accepted for publication in GMSJ without external peer review, as it represents a foundational report on the creation of the journal itself. The authors declare no financial conflicts of interest.

REFERENCES

1. Mokhtari B, Badalzadeh R, Ghaffarifar S. The next generation of physician-researchers: undergraduate medical students' and residents' attitudes, challenges, and approaches towards addressing them. *BMC Med Educ.* 2024;24(1):1313. Published 2024 Nov 14. doi:10.1186/s12909-024-06166-8
2. Funston G, Piper RJ, Connell C, Foden P, Young AM, O'Neill P. Medical student perceptions of research and research-orientated careers: An international questionnaire study. *Med Teach.* 2016;38(10):1041-1048. doi:10.3109/0142159X.2016.1150981
3. Dandekar K, Ulrich P. Student-run journals: contributions to the scholarly community and the students involved. *Sci Ed.* 2017;40(2):130-135. <https://www.csescienceeditor.org/wp->

[content/uploads/2017/10/CSEv40n2_text_p130-135.pdf](#)

4. Ho, Adrian. (2011). Creating and Hosting Student-Run Research Journals: A Case Study. *Partnership: The Canadian Journal of Library and Information Practice and Research*. 6. 10.21083/partnership.v6i2.1516.
5. Graduate Medical Scholars Journal. <https://gmscholars.com/index.php/gmsj>. Accessed April 7, 2025.
6. A2 Hosting. <https://www.a2hosting.com/>. Accessed April 7, 2025.
7. Public Knowledge Project. Open Journal Systems. <https://pkp.sfu.ca/software/ojs/>. Accessed April 7, 2025.