

Read These Hot Non-JGME Articles From 2024!

Lalena M. Yarris , MD, MCR

Deborah Simpson , PhD

Nicole M. Deiorio , MD

Anthony R. Artino Jr , PhD

Gail M. Sullivan, MD, MPH

The year 2024 has been full of turbulence, with a constant barrage of serious world events. Meanwhile, the *Journal of Graduate Medical Education* (JGME) published a Climate Change and Graduate Medical Education supplement and welcomed a host of new editors, including 7 new resident editors. Amid this change and turmoil, JGME senior editors invite you to consider these notable non-JGME articles for a quiet read, in a calm moment (TABLE). As before, we have not applied a rigorous scientific method for selection and, due to publication deadlines, articles published in December 2024 could not be considered. Nevertheless, we think these are worthy of your attention. Let us know your favorite 2024 articles and what you think of ours by emailing jgme@acgme.org or posting on Bluesky and tagging @jgmejournal.bsky.social.

Lainie Yarris's Picks

Some of the educational problems that intrigue me the most concern complex phenomena involving the perceptions, emotions, and experiences of our trainees. Understanding these phenomena is crucial to meeting our residents' educational needs and improving their performance. Often the process of understanding is a journey best guided by qualitative methods.¹ Two such problems are (1) how can we harness the ability of feedback to improve performance in graduate medical education (GME) and (2) which factors most threaten well-being in modern GME?

This year Ginsburg et al contributed to our evolving understanding of question one.² Prior studies have explored factors that affect feedback-seeking behavior and suggest that learner-initiated feedback is more likely to be received and incorporated.³ However, much of what we know about feedback-seeking behavior relates to the experience of the learner, rather than how faculty perceive this behavior, which logically also impacts feedback conversations. In this constructivist grounded theory study, the authors interviewed faculty to explore how supervisors

perceive trainee requests for feedback. Participants perceived 4 motivations for feedback-seeking behavior: affirmation or praise, desire to improve, to fulfill an administrative requirement, and hidden purposes (eg, making a good impression). Further, factors such as timing of the request, relationship with the learner, and learner reactions to the feedback influenced faculty perceptions of learner motivations as well as their emotional responses to requests. For me this article highlights that well-meaning but reactive solutions to the feedback problem—such as administrative requirements that learners ask for feedback—may not always result in feedback that benefits learner performance. The study also reinforces the complexity of this crucial component of medical education. The article is a great read because of the importance of the topic, beautiful writing, rigorous methods, and thought-provoking recommendations for learners and supervisors regarding feedback-seeking behavior.

In the literature, at meetings, and in conversations with trainees and colleagues, the topic of *moral distress* as a contributor to well-being keeps coming up.⁴ In a qualitative hermeneutic phenomenology (HP) interview study, Chang and colleagues explore what physicians experience when they are unable to take the course of action that feels right and how those experiences influence their health care interactions.⁵ Although this study was done with practicing Canadian physicians, the insights gleaned are relevant to GME. Participants described moral distress that affected their sense-making and well-being for decades, including difficult emotions and often intrusive memories. HP interprets lived experiences to understand phenomena, such as emotions, while considering the participant's role in groups or environments.⁶ HP studies often construct phenomenological examples by weaving together quotes and meaning from the dataset, to create a composite example that pulls the reader into the participant experience. Educators can get a sense of the composite participant experience of moral injury from the hermeneutic example provided in the article—an experience that will resonate with many of us. This article is a great example of how HP can be applied to

DOI: <http://dx.doi.org/10.4300/JGME-D-25-00033.1>

TABLE

JGME Editors' Picks for Best Non-JGME Articles of 2024

Lainie Yarris	
Ginsburg S, Lingard L, Sugumar V, Watling CJ. "I think many of them want to appear to have a growth mindset": exploring supervisors' perceptions of feedback-seeking behavior. <i>Acad Med.</i> 2024;99(11):1247-1253. doi:10.1097/ACM.0000000000005838	A qualitative study of supervisors' perceptions regarding students requesting feedback found that educators make assumptions about learner motivations, which may affect their beliefs and feedback exchange.
Chang DC, Kelly M, Eva KW. A phenomenological exploration of physicians' moral distress: situating emotion within lived experiences. <i>Acad Med.</i> 2024;99(11):1215-1220. doi:10.1097/ACM.0000000000005817	A qualitative study using hermeneutic phenomenology to explore physicians' moral distress. A phenomenological example depicts a composite participant experience, and findings show moral distress causes persistent threats to well-being and intrusive memories.
Rees CE, Davis C, Nguyen VN, Proctor D, Mattick KL. A roadmap to realist interviews in health professions education research: recommendations based on a critical analysis. <i>Med Educ.</i> 2024;58(6):697-712. doi:10.1111/medu.15270	A research methods article that defines realist evaluation and guides the reader through the application and benefits of this approach, with recommendations for conducting realist interviews.
Deborah Simpson	
Mollick E, Mollick L, Bach N, Ciccarelli LJ, Przystanski B, Ravipinto D. AI agents and education: simulated practice at scale. <i>The Wharton School.</i> Published June 26, 2024. Accessed December 11, 2024. doi:10.2139/ssrn.4871171	Report of a prototype for how AI agents can be used in every phase of an educational activity: instruction, deliberate practice with coaching, feedback, assessment, and ongoing monitoring of progress data for the human instructors.
Cabral S, Restrepo D, Kanjee Z, et al. Clinical reasoning of a generative artificial intelligence model compared with physicians. <i>JAMA Intern Med.</i> 2024;184(5):581-583. doi:10.1001/jamainternmed.2024.0295	This study showed that, beyond AI outperforming humans on some tasks, when physicians were given access to AI tools to support decision-making, they did not trust the tools and lacked knowledge of and experience with using them.
Boscardin CK, Gin B, Golde PB, Hauer KE. ChatGPT and generative artificial intelligence for medical education: potential impact and opportunity. <i>Acad Med.</i> 2024;99(1):22-27. doi:10.1097/ACM.0000000000005439	This article can be used to introduce colleagues to AI and medical education: history, current uses, opportunities, and cautions. It is clear, concise, and informative.
Gail Sullivan	
Satyamorthi N, Marin M, Ludlow P, et al. Outcomes of accelerated 3-year MD graduates at NYU Grossman School of Medicine during medical school and early residency. <i>Acad Med.</i> October 15, 2024. Online ahead of print. doi:10.1097/ACM.0000000000005896	Seven years of performance outcomes for 3-year medical students in comparison to their 4-year student counterparts, through their first postgraduate resident year. Many comparison metrics with small, likely educationally meaningless differences were found.
Romanello M, Walawender M, Hsu S-C, et al. The 2024 report of the Lancet Countdown on health and climate change: facing record-breaking threats from delayed action. <i>Lancet.</i> 2024;404(10465):1847-1896. doi:10.1016/S0140-6736(24)01822-1	2023 was the hottest year. 2024 is on track to be even hotter, with escalating effects on human health. This executive summary provides data to support quality improvement, sustainability, advocacy, and other scholarship projects with trainees and faculty.
Nicole Deiorio	
Sebok-Syer SS, Smirnova A, Duwell E, et al. Sharing is caring: helping institutions and health organizations leverage data for educational improvement. <i>Perspect Med Educ.</i> 2024;13(1):486-495. doi:10.5334/pme.1081	This report uses 4 case studies to inspire readers to look at their own education large data sets, with practical frameworks and advice.
Anthony Artino	
Heppe D, Baduashvili A, Limes JE, et al. Resident burnout, wellness, professional development, and engagement before and after new training schedule implementation. <i>JAMA Netw Open.</i> 2024;7(2):e240037. doi:10.1001/jamanetworkopen.2024.0037	This study exemplifies best practices in survey research by integrating high-quality survey tools into an intervention study, with insights and a methodological model for graduate medical education researchers.

Abbreviations: JGME, *Journal of Graduate Medical Education*; AI, artificial intelligence.

education research and may prompt further discussions of how moral distress may affect trainees. A table in this article presents ways physicians find consolation and meaning, in the midst of moral distress, which may guide educators in supporting trainees.

Finally, in addition to qualitative articles, I have a soft spot in my heart for a well-written research methods article, particularly when the method is relevant and underutilized in GME. An important part of any educational intervention, from procedure labs to competency-based medical education, is program evaluation.⁷ Whether for internal quality improvement or for research purposes, educators may find that traditional methods of program evaluation, such as Kirkpatrick's model of outcomes, do not provide sufficient understanding, of why and how interventions work or fail, to inform improvement efforts.⁸ Realist evaluation seeks to understand what works, for whom, and in what contexts, and is particularly well suited to educational interventions that may have variable success among different programs or specialties.⁹ In these situations program evaluation that incorporates realist interviews may illuminate opportunities for revising the intervention, improving implementation, and supporting sustainability. Rees et al present a roadmap to realist interviews in health professions education through a critical analysis that defines realist evaluation and provides recommendations for conducting realist interviews.¹⁰ Program directors will find this approach helpful, whether applying it in a rigorous fashion for research studies or considering the framework for program evaluation.

Deb Simpson's Picks

In June 2020 we envisioned GME in 2030 based on interviews with GME thought leaders.¹¹ Big data, artificial intelligence (AI), and technology were among our major drivers of change. We were spot on but a little late! In 2024, AI/large language model (LLM) medical education articles exploded. These articles demonstrated the power of AI to outperform or equivalently perform humans on various tasks. Other articles focused on using AI/LLM to create assessments and provide automated feedback to learners, including use of virtual reality and simulations. Guides and practical strategies¹²⁻¹⁴; a checklist for reporting, reading, and evaluating AI research¹⁵; and review articles were also published.¹⁶⁻¹⁸

An article from Mollick et al stands out for its vision and practical applications to education.¹⁹ This article describes a prototype for an AI-developed simulation in which the entirety of learning is through AI agents, from an instructional video outlining key task

elements to an AI mentor who provides personalized guidance in preparation for the task. This instruction is then actively practiced with 1 of 3 AI agent roles and concludes with an AI evaluator offering specific, actionable feedback. An AI "progress agent" provides an overview of each learner's progress during the tasks (like a teaching assistant) and passes it on to a human "insights" agent, through concise summaries of learner's actions, decisions, strengths, and opportunities.

This AI simulation is strongly grounded in good pedagogy and ethical considerations for AI use in education. It includes detailed technical specifics, including agent roles, ethics, and prompts, for tech geeks. However, the article does not overwhelm those of us newer to the field. This AI prototype should excite medical educators as we think about learner opportunities for safe, deliberate practice on complex entities, as well as for faculty to use simulation to practice their new roles as AI-informed educators. As outlined by GME thought leaders in 2020, this presents an energizing future if we have the will and the courage to engage.

Also worthy is a study by Cabral et al.²⁰ In this study internal medicine residents (n=18) and attending physicians (n=21) at 2 academic medical centers and a chatbot (GPT-4 from Open AI) worked through a case not previously seen or published. Some humans were randomly assigned to have the option to use the AI chatbot. The most intriguing results, besides AI being better than physicians in processing medical data and clinical reasoning, were that humans, independent of whether they used the chatbot, performed about the same, as few knew how to effectively use the AI tool. The good news? Our medical education colleagues are working to educate current and future physicians on AI as a co-intelligence.

If you are seeking to understand potential impacts and opportunities for AI for medical education, the article by Boscardin et al provides a nice introduction to Chat GPT, chatbots, and generative AI.²¹ The authors discuss AI competencies and AI literacy: understanding AI capabilities and tools, integrating AI tools into teaching, and examining AI and equity. They review the aims, potential impacts and opportunities for generative AI for admissions, learning, assessment, and medical education research. It's an easy, informative AI read.

Gail Sullivan's Picks

With the advent of competency-based medical education (CBME), articles and conference plenaries have debated the value of time-defined medical training, for undergraduate medical education (UME) and GME.

With a growth mindset in mind, maintaining the expected (and contracted) time in GME, even if minimum competencies are achieved earlier, encourages further improvement in skills to aspirational levels. Alternatively, with an efficiency and cost mindset, the shortest possible path through medical education attracts adherents. Related to this debate, medical schools are creating 3-year accelerated programs.

A historical context is helpful. Three-year accelerated medical school training has occurred before in the United States, during WWII and a second peak in the 1970s, related to physician shortage fears. By 1973, one-third of all US medical students were in a 3-year program, which also included 6-year combined college and medical school programs, supported in part by government capitated funding.²² Despite some evidence of similar student performances, these 3-year accelerated MD programs were soon abandoned due to faculty and student dissatisfaction and the end of government funding.²² Students reported exhaustion, and faculty noted the loss of key elements, such as ethics and patient safety.²² Also, one-quarter of 3-year students extended their time by 1 to 2 years.²² Because these 3-year accelerated programs added curricula in place of vacations, electives, and residency interview time, schools required more faculty; consequently, for most students the costs were the same for a 3-year as for a 4-year program. Some experimentation continued in the 1980s, in collaboration with GME: family medicine and internal medicine 3+3, UME+GME combined school and residencies. However, these programs experienced GME accreditation issues.²²

In 2010 a third wave began: currently 32 US schools offer a 3-year program.²³ Initially, most of these programs guaranteed placement in primary care residencies, such as family medicine, to increase physicians for underserved areas. Now programs may offer placement in any residency sponsored by the institution. With the elimination of residency interview and elective time, the goal is to select students who are certain of their career choice on matriculation. The 3-year curriculum is also entirely distinct from the 4-year curriculum.

Satyamorthi et al report preliminary results on 7 classes of 3-year program medical students (n=136), from 2013 through 2019, in comparison to their 4-year student counterparts (n=681), from the New York University Grossman School of Medicine (NYU).²⁴ NYU guarantees a position in a NYU residency for 3-year program graduates. The authors also compared performances of the 3-year graduates as first-year residents to 4-year NYU graduates and graduates from any other 4-year medical school, in NYU residency programs. For the UME comparisons, 3-year students

performed similarly to their 4-year counterparts in a multitude of outcomes, with some statistically significant but very small magnitude differences. These included pre-clerkship examination scores, National Board of Medical Examiners subject examination scores, United States Medical Licensing Examination (USMLE) Step 1 and 2 scores, the NYU clinical skills examination scores, peer assessments, patient logs, clerkship grades, and more. For the first-year resident performance comparisons, outcomes were also similar, with some statistically significant but very small differences. These comparisons included USMLE Step 3 scores, internal medicine milestones, rates of becoming chief residents, and evaluations of teaching and clinical reasoning. Of note, demographics on entry to NYU, such as gender, underrepresented in medicine status, MCAT percentiles, or college grade point average, did not differ between the groups; however, 3-year students were on average 5 months older than their counterparts. The 3-year and 4-year students also evaluated the overall quality of their medical education similarly. For NYU the yearly tuition costs are the same for both programs. The authors reported that bias on the part of NYU program directors and residents against opening their programs to 3-year students appears to have dissipated as the program has matured: the number of NYU residency positions open to 3-year students has increased.

My take on this comparison using numerous metrics is that the 3-year medical school option is feasible for some institutions, for well-qualified, perhaps older students, who are certain of their specialty choice. I sincerely regret that the initial approach, to use this pathway to facilitate more graduates entering practice in shortage specialties and for underserved populations, has been transformed to a faster track into any specialty. There are certainly lessons here for GME.

Also worthy of your consideration is the *Lancet* Countdown on Health and Climate Change (Countdown).²⁵ To monitor the health effects of climate change, the Countdown was established in 2015, the year the Paris Agreement to limit global multiyear mean heating to 1.5°C (2.7°F) by 2100 was signed by world leaders. The Countdown reports are created annually by more than 300 international researchers and health professionals and funded by Wellcome, a charitable foundation supporting health research. In 2023, the annual mean surface temperature reached 1.45°C above the pre-industrial mark. This 2024 Countdown report was issued *before* the conclusion of 2024: between May 2023 and April 2024 the global mean surface temperatures reached *a record-breaking 1.61°C above pre-industrial times*.²⁵ The report tracks 15 indicators with enormous impacts on human health; 10 reached concerning levels at the time of the report.

The report is long, but the executive summary and introduction are short and helpful to bolster justification for program or institutional quality improvement, sustainable, or advocacy projects. Many medical trainees care deeply about global warming and need scholarship opportunities. The Countdown data is scary but essential information for those who care about the health of people and our planet.²⁶

Nicole Deiorio's Pick

When not editing for JGME, I am a student affairs dean. I love the work because it allows me to build systems and structures that support hundreds of learners at a time, while at the same time offering very practical advice and help through many individual student meetings. If that mix excites you too, then you'll find this article to be interesting and inspiring. Sebok-Syer et al provide a concrete framework for developing ways to use large volumes of data obtained about our graduate medical trainees.²⁷ They supplement the framework with their "action-oriented blueprint" with specific tips from 4 case examples from the authors' institutions. Lest you fear that using big data in this way requires a host of resources, both financial and expertise, the 4 case studies highlight a variety of levels of complexity and organizational design.

The authors walk the reader through the various considerations in designing and implementing a process to take advantage of data we already acquire about our trainees and break down the steps in a clear way. A helpful glossary of terms defines commonly used jargon in this domain, which allows those of us trying to bridge departments and constituents to better speak one another's languages.

I hate waste, so the article's exhortation for us to take the next step to fully use the data we already collect really speaks to me. However, the barriers are real, and the authors acknowledge this in a realistic and credible manner. "While we initially conceived this piece as a way of proposing guidelines to facilitate data sharing in medical education, no clear, uncomplicated approach applies in all situations. Data sharing is not a field of absolutes, but rather a field of 'sort-ofs,' 'maybes,' and 'it depends.'"²⁷ I congratulate the author team on an inspiring and persuasive piece, which strikes an authentic balance of blue-sky vision and practical guidance.

Tony Artino's Pick

As a survey methodologist, I am always looking for examples of GME studies that integrate high-quality survey methods into their study design. This year the

investigation by Heppe et al did just that: using survey methods to evaluate the effects of a novel 4 + 4 block scheduling model on internal medicine residents' burnout, well-being, and self-reported professional engagement and clinical preparedness.⁴ This pre- and post-intervention survey study involved residents in a single academic internal medicine residency program (a study weakness), and compared the new 4 + 4 structure (4-week inpatient call-based rotations followed by 4-week ambulatory non-call-based rotations) to the prior 4 + 1 schedule (4 weeks inpatient, 1 week ambulatory). Data from 216 residents (69% response rate) across 3 years were analyzed and examined burnout via the Maslach Burnout Inventory (MBI). Secondary professional and educational outcomes were collected using a 15-item questionnaire with some validity evidence.

The findings demonstrated significant reductions in emotional exhaustion, with a drop of 6.78 points, and depersonalization, with a decrease of 3.91 points, in the post-intervention cohort. These reductions were considerably larger than those observed in prior interventions aimed at mitigating burnout. Additionally, residents reported improvements in job satisfaction, professional engagement, and overall well-being, with relatively large effect sizes noted in their perceived ability to participate in scholarly activities and maintain work-life balance (eg, time for activities outside of clinic or with family and friends). Importantly, no adverse effects on in-training examination scores or perceived clinical skills acquisition were observed, which aligned with the intervention's educational goals.

As a survey methodologist, I am particularly impressed by the robust design and application of survey methods in this study. The use of the MBI alongside a secondary questionnaire developed in a prior study enabled a fairly robust evaluation of the intervention's effects. The authors adhered to the Consensus-Based Checklist for Reporting of Survey Studies (CROSS), which helped to ensure methodological transparency. From my perspective, their approach exemplifies best practices in survey research, by including a focus on survey tools with validity evidence and the use of adjusted statistical models to help minimize bias.

Finally, I appreciate that they integrated self-report survey tools into an intervention study. This allowed for a more nuanced understanding of how schedule restructuring might influence residents' well-being, as well as their professional and personal lives. This alignment of quantitative rigor with practical application serves as a model for GME researchers. Furthermore, the study offers practical insights into reducing resident burnout through innovative scheduling; these findings have broad implications for residency programs

striving to enhance trainee wellness without compromising educational quality.

References

1. Yarris LM, Balmer D, Gottlieb-Smith R, Sullivan GM. Editors' guidance for submitting qualitative research to the *Journal of Graduate Medical Education*. *J Grad Med Educ*. 2024;16(3):246-250. doi:10.4300/JGME-D-24-00389.1
2. Ginsburg S, Lingard L, Sugumar V, Watling CJ. "I think many of them want to appear to have a growth mindset": exploring supervisors' perceptions of feedback-seeking behavior. *Acad Med*. 2024;99(11):1247-1253. doi:10.1097/ACM.0000000000005838
3. Crommelinck M, Anseel F. Understanding and encouraging feedback-seeking behaviour: a literature review. *Med Educ*. 2013;47(3):232-141. doi:10.1111/medu.12075
4. Heppe D, Baduashvili A, Limes JE, et al. Resident burnout, wellness, professional development, and engagement before and after new training schedule implementation. *JAMA Netw Open*. 2024;7(2):e240037. doi:10.1001/jamanetworkopen.2024.0037
5. Chang DC, Kelly M, Eva KW. A phenomenological exploration of physicians' moral distress: situating emotion within lived experiences. *Acad Med*. 2024;99(11):1215-1220. doi:10.1097/ACM.0000000000005817
6. van Manen M. *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy*. State University of New York Press; 1990.
7. Balmer DF, Riddle JM, Simpson D. Program evaluation: getting started and standards. *J Grad Med Educ*. 2020;12(3):345-346. doi:10.4300/JGME-D-20-00265.1
8. Allen LM, Hay M, Palermo C. Evaluation in health professions education—is measuring outcomes enough? *Med Educ*. 2022;56(1):127-136. doi:10.1111/medu.14654
9. Ellaway RH, Kehoe A, Illing J. Critical realism and realist inquiry in medical education. *Acad Med*. 2020;95(7):984-988. doi:10.1097/ACM.0000000000003232
10. Rees CE, Davis C, Nguyen VN, Proctor D, Mattick KL. A roadmap to realist interviews in health professions education research: recommendations based on a critical analysis. *Med Educ*. 2024;58(6):697-712. doi:10.1111/medu.15270
11. Simpson D, Sullivan GM, Artino AR Jr, Deiorio NM, Yarris LM. Envisioning graduate medical education in 2030. *J Grad Med Educ*. 2020;12(3):235-240. doi:10.4300/JGME-D-20-00292.1
12. Indran IR, Paranthaman P, Gupta N, Mustafa N. Twelve tips to leverage AI for efficient and effective medical question generation: a guide for educators using Chat GPT. *Med Teach*. 2024;46(8):1021-1026. doi:10.1080/0142159X.2023.2294703
13. Masters K, Benjamin J, Agrawal A, MacNeill H, Pillow MT, Mehta N. Twelve tips on creating and using custom GPTs to enhance health professions education. *Med Teach*. 2024;46(6):752-756. doi:10.1080/0142159X.2024.2305365
14. Noushad B, Van Gerven PW, De Bruin AB. Twelve tips for applying the think-aloud method to capture cognitive processes. *Med Teach*. 2024;46(7):892-897. doi:10.1080/0142159X.2023.2289847
15. Masters K, Salcedo D. A checklist for reporting, reading and evaluating Artificial Intelligence Technology Enhanced Learning (AITELE) research in medical education. *Med Teach*. 2024;46(9):1175-1179. doi:10.1080/0142159X.2023.2298756
16. Gordon M, Daniel M, Ajiboye A, et al. A scoping review of artificial intelligence in medical education: BEME guide no. 84. *Med Teach*. 2024;46(4):446-470. doi:10.1080/0142159X.2024.2314198
17. Lucas HC, Upperman JS, Robinson JR. A systematic review of large language models and their implications in medical education. *Med Educ*. 2024;58(11):1276-1285. doi:10.1111/medu.15402
18. Elendu C, Amaechi DC, Okatta AU, et al. The impact of simulation-based training in medical education: a review. *Medicine (Baltimore)*. 2024;103(27):e38813. doi:10.1097/MD.00000000000038813
19. Mollick E, Mollick L, Bach N, Ciccarelli LJ, Przystanski B, Ravipinto D. AI agents and education: simulated practice at scale. *The Wharton School*. Published June 26, 2024. Accessed December 11, 2024. doi:10.2139/ssrn.4871171
20. Cabral S, Restrepo D, Kanjee Z, et al. Clinical reasoning of a generative artificial intelligence model compared with physicians. *JAMA Intern Med*. 2024;184(5):581-583. doi:10.1001/jamainternmed.2024.0295
21. Boscardin CK, Gin B, Golde PB, Hauer KE. ChatGPT and generative artificial intelligence for medical education: potential impact and opportunity. *Acad Med*. 2024;99(1):22-27. doi:10.1097/ACM.0000000000005439
22. Schwartz CC, Ajjarapu AS, Stamy CD, Schwinn DA. Comprehensive history of 3-year and accelerated US medical school programs: a century in review. *Med Educ Online*. 2018;23(1):1530557. doi:10.1080/10872981.2018.1530557
23. Consortium of Accelerated Medical Pathway Programs (CAMPP). Accessed Dec 3, 2024. <https://www.acceleratedmdpathways.org/>
24. Satyamorthi N, Marin M, Ludlow P, et al. Outcomes of accelerated 3-year MD graduates at NYU Grossman School of Medicine during medical school and early

- residency [published online ahead of print October 15, 2024]. *Acad Med*. doi:10.1097/ACM.0000000000005896
25. Romanello M, Walawender M, Hsu S-C, et al. The 2024 report of the Lancet Countdown on health and climate change: facing record-breaking threats from delayed action. *Lancet*. 2024;404(10465):1847-1896. doi:10.1016/S0140-6736(24)01822-1
 26. Climate Change and Graduate Medical Education. *J Grad Med Educ*. 2024;16(suppl 1).
 27. Sebok-Syer SS, Smirnova A, Duwell E, et al. Sharing is caring: helping institutions and health organizations leverage data for educational improvement. *Perspect Med Educ*. 2024;13(1):486-495. doi:10.5334/pme.1081



Lalena M. Yarris, MD, MCR, is Deputy Editor, *Journal of Graduate Medical Education* (JGME), Chicago, Illinois, USA, and Professor of

Emergency Medicine, Oregon Health & Science University, Portland, Oregon, USA; **Deborah Simpson, PhD**, is Deputy Editor, JGME, Chicago, Illinois, USA, and Director of Education, Academic Affairs at Advocate Aurora Health, and Clinical Adjunct Professor of Family & Community Medicine, Medical College of Wisconsin, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, USA; **Nicole M. Deiorio, MD**, is Executive Editor, JGME, Chicago, Illinois, USA, Professor, Department of Emergency Medicine, and Associate Dean, Student Affairs, Virginia Commonwealth University School of Medicine, Richmond, Virginia, USA; **Anthony R. Artino Jr, PhD**, is Deputy Editor, JGME, Chicago, Illinois, USA, and Professor and Associate Dean for Evaluation and Educational Research, The George Washington University School of Medicine and Health Sciences, Washington, DC, USA; and **Gail M. Sullivan, MD, MPH**, is Editor-in-Chief, JGME, Chicago, Illinois, USA, and Associate Director for Education, Center on Aging, and Professor of Medicine, University of Connecticut Health Center, Farmington, Connecticut, USA.

Corresponding author: Gail M. Sullivan, MD, MPH, University of Connecticut Health Center, Farmington, Connecticut, USA, gsullivan@uchc.edu