BOSTON UNIVERSITY

21st Annual John McCahan Medical Campus Education Conference

May 28, 2026

(Vendor Workshops May 27, 2026)

Showcasing Educational Innovation and Scholarship on the Boston University Medical Campus

Theme: AI in Health Sciences Education

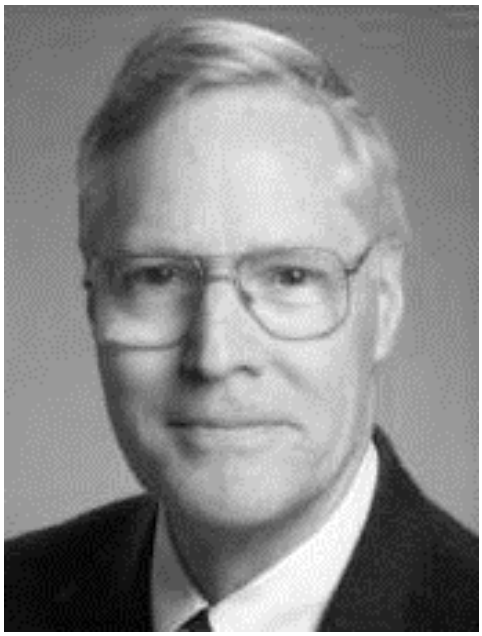
Chobanian & Avedisian School of Medicine

Goldman School of Dental Medicine

School of Public Health

Graduate Medical Sciences

JOHN F. MCCAHAN, M.D.



Dr. John F. McCahan served as the Associate Dean for Academic Affairs at Boston University School of Medicine from 1976 until 2006. From November 2003 through May 2005, he also led the School of Medicine as the Acting Dean. Dr. McCahan received his B.A. and M.D. degrees from the University of Pennsylvania. He subsequently trained in internal medicine at the Upstate Medical Center, Pennsylvania Hospital and Guy's Hospital, London. Following two years of service in the United States Public Health Service at the National Communicable Disease Center in Atlanta, he joined the staff at Lincoln Hospital in the Bronx and the faculty at Albert Einstein College of Medicine. He was appointed Director of the Department of Medicine at Lincoln Hospital in 1972. During this period, Dr. McCahan was centrally involved in student and post-graduate training programs and became particularly invested in the care of the poor and the provision of health care services to underserved populations.

Following his recruitment to Boston University in 1975 as Associate Professor of Medicine, Dr. McCahan continued clinical practice with underserved populations through the Home Medical Service (now the Geriatrics Home Service). He was a regular preceptor of fourth-year students on home visits to frail elders. He developed a teaching program in family medicine and became a Professor of Family Medicine following the establishment of that department in 1997.

After his appointment as Associate Dean for Academic Affairs in 1976, Dr. McCahan oversaw numerous revisions and reforms of the M.D. curriculum. He guided a major change in curriculum governance and chaired the Medical Education Committee, created in this reorganization. Throughout his career, he had a particular interest in the patient-doctor interaction and the teaching methodologies that resulted in effective clinical skills. He has actively taught, studied, and administered a variety of educational formats from large group lectures to one-on-one teaching, feedback, and evaluation. In recognition of his excellence as an educator, Dr. McCahan received the Frederick Jackson Teaching Award and faculty membership in Alpha Omega Alpha.

In addition to serving as chairman of numerous administrative and educational committees, Dr. McCahan was the principal investigator of several grants and contracts, including a PHS-BHP Grant to Establish a Department of Family Medicine; a PHS-BHP Predoctoral Training Grant in Family Medicine; and a Community Partnerships with Health Professions Education Initiative, W.K. Kellogg Foundation. He served as Boston University School of Medicine liaison and author of the Boston section of a plan for a statewide Area Health Education Center program. Throughout the years, he earned the admiration of his colleagues for his ability to articulate and implement a clear vision of modern medical education.

KEYNOTE

Learning Endures, Tools Evolve: Teaching and Learning in the Age of AI

Thomas “TJ” McKenna, Ph.D.
Director, Center for STEM Professional Learning at Scale
Clinical Assistant Professor, Science Education
Associate Director, Educator Engagement and Impact, AI and Education Initiative
Boston University, Wheelock College of Education & Human Development

Dr. McKenna is a Clinical Assistant Professor of Science Education and Program Director for AI & Education at Boston University’s Wheelock College of Education and Human Development. He also directs the Center for STEM Professional Learning at Scale, reaching more than 17,000 educators across 29 states.

He was recently awarded the 2026 Gerald and Deanne Gitner Family Award for Innovation in Teaching with Technology from the university.
For more than 20 years, Dr. McKenna has worked at the intersection of science education, professional learning, and educational innovation. His career has focused on helping teachers create high-quality science learning experiences for all students and on understanding how to scale effective practice.

He is the founder of Phenomena for NGSS, used by more than 5 million educators and students worldwide, and his current work explores how artificial intelligence can support—not replace—teacher expertise in STEM education.

Overview: AI is reshaping how we teach, learn, and practice, yet the foundations of how people learn remain constant. This keynote argues that meaningful progress in AI-enhanced health sciences education requires aligning new technologies with the long-standing learning theories that guide effective instruction. Drawing on cross-disciplinary work spanning STEM education, large-scale professional learning systems, and the design of human-centered AI for teaching and learning, the talk offers a clear, practical framework for integrating AI in ways that strengthen reasoning, deepen clinical judgment, and support high-quality teaching.

Rather than centering tools or technical skill, the session highlights the pedagogical decisions educators make every day and shows how AI can be used to extend—not replace—the intellectual work of learners and instructors. Participants will leave with concrete design principles and examples for bringing AI into their curricula in ways that are rigorous, responsible, and firmly anchored in how learning actually happens.

ACKNOWLEDGMENTS

John McCahan Medical Campus Education Day conference was first held in 2006 to honor Dr. McCahan's decades of educational contribution to both medical and graduate education at Boston University Medical Campus with a support from Medical Campus Provost and Dean Karen H. Antman, M.D. Each year, dedicated BUMC educators volunteer their time to organize the conference under the oversight of the Department of Medical Sciences & Education. The conference organizers would like to acknowledge with appreciation the contributions of the planning committee:

Committee Chairs	Claire Grimble Elaine Lee
Department of Medical Sciences & Education	Hee-Young Park (Professor and Chair) Paige Curran Theresa Davies David Flynn Stacey Hess-Pino Erin Kane Kathleen Swenson Kimberly Zayhowski
BUMC IT, Educational Media	Sammy An Fouzia Bentahar Howard Canning Jana Mulkern David King
BU Chobanian & Avedisian School of Medicine	Laurie Craigen Jeannine Foley Christopher Schonhoff Jonathan Wisco Aaron Young
BU Goldman School of Dental Medicine	Afsheen Lakhani Yoshiyuki Mochida Breno Reboucas
BU School of Public Health	Lisa Sullivan
Alumni Medical Library	Dominique Couturier Kate Flewelling David Flynn
Medical Education Office	Caroline Mulligan Elizabeth Yellen
Events Office	Claire Grimble
Dean's Office	Daniella Adrien
Communications Office	Mike Cohea Doug Fraser Maria Ober Mallory Rice

The Planning Committee acknowledges with appreciation the support and participation of the following educational vendors:

The Planning Committee acknowledges with appreciation the support from the following offices that have made this meeting possible:

Division of Continuing Education, Boston University Goldman School of Dental Medicine
Graduate Medical Sciences, Boston University Chobanian & Avedisian School of Medicine
Graduate Medical Education, Boston Medical Center
Dean's Office, Boston University Goldman School of Dental Medicine
Dean's Office, Boston University Chobanian & Avedisian School of Medicine
Medical Education Office, Boston University Chobanian & Avedisian School of Medicine
Office of Student Affairs, Boston University Chobanian & Avedisian School of Medicine
Dean's Office, Boston University School of Public Health
BUMC IT, Educational Media
Alumni Medical Library

Wednesday, May 27th, 2026
Virtual Vendor Visits Via Zoom

10:00 am- 10:30 am	**Noodle Factory:** Beyond Chatbots: How the University of London Uses AI to Transform Teaching and Learning Zoom Link Here *"The AI study assistant helped me feel less isolated during late-night study sessions when I was struggling to understand difficult topics on my own." Recent feedback from a University of London student* Join Tim Hall (University of London) and Jim Wagstaff (Noodle Factory) for a faculty-to-faculty conversation about what becomes possible when AI is grounded in your course materials, embedded in an LMS, and designed around your learning outcomes. Drawing on UoL's implementation of Noodle Factory, Tim and Jim will share how learning designers and academics have moved from cautious experimentation to proposing their own authentic role plays, formative scenarios, and agentic learning activities, each tied to a specific learning outcome. For BU faculty, the questions are practical. How can trusted, course-grounded AI support clinical reasoning, communication practice, and assessment preparation? Where does it sit alongside other tools like ChatGPT and Claude that students already use? And what does institutional AI mean for equity within a cohort? The session includes a short live demonstration of one teaching workflow and extended Q&A.
11:00 am- 11:30 am	**TurnItIn/ExamSoft:** Assessment Solutions for The Age of AI Zoom Link Here We'll explore two differing assessment solutions. Learn how ExamSoft allows for digital testing while also blocking the use of AI-powered misconduct and what's new and on deck for both our Legacy & Enterprise platforms. We'll also explore paper-based assignment and testing capabilities through Gradescope as an alternative, as well as the AI powered tools within that ensure quick & easy scoring/grading, feedback, and more for Instructors.

1:00 pm- 1:30 pm	**VisualDx:** Augmented Clinical Reasoning with VisualDx: Supporting Learners and Clinicians at BU Zoom Link Here This session will highlight how Boston University students, residents, and faculty use VisualDx to support clinical decision-making, strengthen diagnostic reasoning, and enhance medical education. Through real-world examples, we'll explore how VisualDx's image-rich clinical content and differential diagnosis tools help learners build confidence, recognize variation in disease presentation, and engage patients in shared decision-making. The session will focus on practical, existing features available to the BU community today, with a brief look at how emerging AI capabilities are further augmenting clinical insight and educational outcomes.
2:00 pm- 2:30 pm	**Blackboard**: Ultra Quick Hits: Explore the Best of Blackboard Ultra Zoom Link Here Join Blackboard for a fast paced Ultra Quick Hits session highlighting impactful features in the Ultra course experience. You will also get an exclusive first look at the new Gradebook Grid View, scheduled for release this summer. This is a great opportunity to see what's new, what's coming, and how these updates can streamline your Blackboard experience. Topics include Gradebook Grid View, Batch Edit, Announcements (video and data on who viewed announcements), Creating/re-using content, Ultra Document, AI Conversations and New discussions settings.
3:00 pm- 3:30 pm	**Echo360:** Human in the Loop: What Institutions Are Learning About AI in Education Zoom Link Here As institutions around the world rapidly experiment with AI, many are discovering that successful adoption depends less on the technology itself and more on understanding where AI helps, where it falls short, and where human expertise must remain central. In this session, Echo360 Chief Global Product & Tech Officer Kathryn Stewart will share observations and emerging patterns from educators and institutions navigating AI in teaching and learning environments. The discussion will explore how human-in-the-loop approaches can support trust, transparency, engagement, and academic integrity while helping institutions move from experimentation toward more thoughtful and responsible AI adoption.

Thursday, May 28th, 2026

Theme: AI in Health Sciences Education

Main Conference, Keynote, Round Tables, Awards, Presentation, Posters

8:30 am-9:45 am	**Workshops and View Vendor Exhibits** Workshop A: LLMs Go Head-to-Head: Large Language Models vs. Legitimate Librarian Methods for Advanced Database Searching (Room L201/203) Workshop B: When the Algorithm Disagrees: Teaching Clinical Judgment in the Age of AI (Room L211) Workshop C: Integrating Artificial Intelligence into Health Sciences Education: A Framework for Teaching and Learning (Room L206-209) Workshop D: Funding Health Professions Education Innovation & Shipley Academic Innovation Fund Information Session (Room L213)
9:45 am-10:00 am	Break
10:00 am-11:15 am	**Keynote: *Learning Endures, Tools Evolve: Teaching and Learning in the Age of AI*** **Thomas "TJ" McKenna, Ph.D.** Director, Center for STEM Professional Learning at Scale Clinical Assistant Professor, Science Education Associate Director, Educator Engagement and Impact, AI and Education Initiative Boston University Wheelock College of Education & Human Development AI is reshaping how we teach, learn, and practice, yet the foundations of how people learn remain constant. This keynote argues that meaningful progress in AI-enhanced health sciences education requires aligning new technologies with the long-standing learning theories that guide effective instruction. Drawing on cross-disciplinary work spanning STEM education, large-scale professional learning systems, and the design of human-centered AI for teaching and learning, the talk offers a clear, practical framework for integrating AI in ways that strengthen reasoning, deepen clinical judgment, and support high-quality teaching. Rather than centering tools or technical skill, the session highlights the pedagogical decisions educators make every day and shows how AI can be used to extend—not replace—the intellectual work of learners and instructors. Participants will leave with concrete design principles and examples for bringing AI into their curricula in ways that are rigorous, responsible, and firmly anchored in how learning actually happens.

11:15 am-12:25 pm	**Creating a Game Plan for AI in Teaching & Learning**, facilitated by the Institute for Excellence in Teaching & Learning **Benjamin Keating, Ph.D.** Assistant Director, Curricular Innovation **David Farelo, Ph.D.** Assistant Director, AI & Education **Erin Baumann, Ph.D., M.Sc.** Executive Director, Teaching & Learning Innovation As medical educators explore the affordances and limitations of AI, a key challenge is finding space to share and examine actionable strategies that can be implemented across teaching contexts. In this interactive session, we invite participants to (1) share their own strategies around the role of AI in the classroom, (2) and further develop their game plans for integrating AI into the objectives, assessments, and activities that drive learning. To stimulate conversation, Caroline Brinkert, lecturer in BU's Sargent College of Health & Rehabilitation, will share a brief case-study on transparent assignment design as a lever for equitable, evidence-based innovation in graduate education. Drawing on the Transparency in Learning and Teaching (TILT) framework and the AI Assessment Scale (AIAS), Brinkert's case study responds to the need for clearer expectations around both learning and AI use. Participants will then have the opportunity to work in small groups to explore how these approaches might apply to their own courses, objectives, and assessments.
12:25 pm-2:00 pm	**Lunch and Round Table Discussions**
2:00 pm-2:05 pm	Break
2:05 pm-2:50 pm	**Awards and Oral Presentations of Abstract Award Winners**
2:50 pm-4:00 pm	**Poster Session, Networking, Educators Matchmaking Corner and View Vendor Exhibits**

JOHN MCCAHAN MEDICAL CAMPUS EDUCATION CONFERENCE AWARDS

Graduate Medical Sciences Faculty Recognition Award

Graduate Medical Sciences is committed to the highest quality educational experiences for our students. The GMS Faculty Recognition Award celebrates faculty who embrace our teaching mission by seeking ways to engage students in an active learning environment and by challenging students to think critically and supporting students to take ownership of their own scholarship. This award recognizes faculty that have gone above and beyond expected contributions by developing creative initiatives to our teaching mission including, but not limited to, innovative coursework, new curriculum design, and the support of an improved teaching and learning environment.

Boston University Henry M. Goldman Faculty Appreciation Award – Predoctoral Category

This award goes to the predoctoral faculty member recognized for dedication to the educational mission of our school. The individual embodies qualities of teaching excellence, mentorship, professionalism, and service.

Boston University Henry M. Goldman Faculty Appreciation Award – Postdoctoral Category

This award goes to the postdoctoral faculty member recognized for dedication to the educational mission of our school. The individual embodies qualities of teaching excellence, mentorship, professionalism, and service.

Crest Oral-B P&G Professional Oral Health Excellence in Teaching in the Basic Sciences Award

This award goes to the faculty member selected by the DMD first-year class who has had the greatest impact on learning in the basic sciences and oral biology. The individual demonstrates a passion for their subject and provides a positive learning experience for students.

Boston University School of Public Health Educational Innovation Award

BUSPH values its excellent reputation for innovative teaching and is proud to acknowledge excellence in teaching and learning through the BUSPH Educational Innovation Award. This award recognizes creative contributions to the development of tools for the innovative presentation of coursework, new curriculum design, and the creation of an improved teaching and learning environment. The Educational Innovation Award is designed to reward faculty who are prepared to challenge the traditional ways of doing things, to try out new approaches and to seek improvements in the way teaching is delivered and learning is achieved. Its aim is to enhance the status of teaching, encourage innovation and disseminate good practice.

Chobanian & Avedisian School of Medicine Affiliate Teaching Award

This award recognizes superlative clinical teaching in the third year by Chobanian & Avedisian School of Medicine faculty at affiliated sites and is determined solely on input from students.

Chobanian & Avedisian School of Medicine Kaiser Permanente Silicon Valley Affiliate Teaching Award

This award recognizes superlative clinical teaching in the third year by Chobanian & Avedisian School of Medicine faculty at the Kaiser Permanente Silicon Valley Regional Campus sites and is also determined solely on input from students.

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Insights from your most important digital exams to guide your most important priorities

ExamSoft is the leader for high-stakes **computer-based exams and comprehensive reporting**. Delivering secure exams, in person or remote, ExamSoft provides actionable data at the student, course, department and institution level that enables educators to improve learning outcomes.

- Uphold academic integrity with unparalleled security measures including complete device lockdown, remote proctoring, ID verification, and AES-256 bit encryption.
- Ensure curricular success with instant insights into longitudinal student performance broken down by accreditation standards and other customizable categories.
- Provide a more reliable digital exam experience, and lower barriers against equitable access to technology by not requiring internet connection during testing time.

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Turn grading into learning

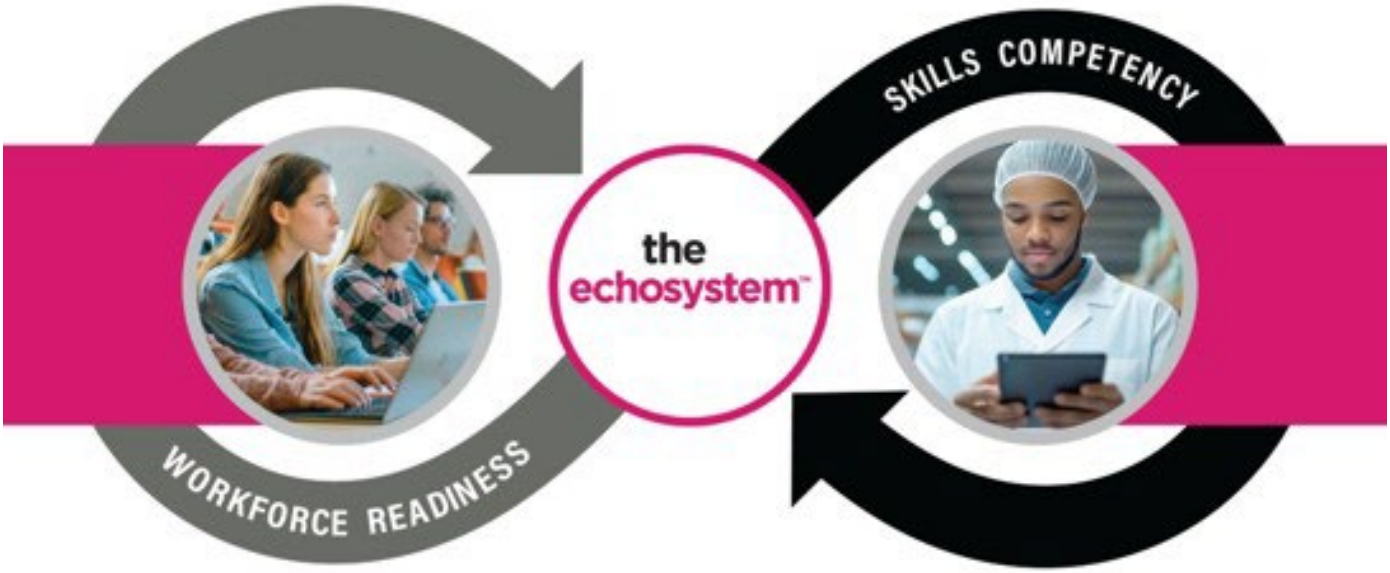
Gradescope is the **paper-to-digital grading platform** that dramatically improves grading and feedback workflows, offers flexible assessment solutions, and provides valuable insights. Paper assessments are a core part of almost every course. By digitizing paper quizzes, homework, and exams, Gradescope helps institutions manage the complexities of issuing assessments, grading, and understanding how students are applying concepts within their work.

- Flexibility to offer multiple assessment types including handwritten short answer and diagrams, multiple-choice bubble sheets, computer programming, and more.
- AI-assisted grading and dynamic rubrics make instructors more effective and provide students faster feedback with increased clarity and consistency.
- Anonymous grading helps to reduce unintended bias, and student specific accommodations create a more equitable assessment experience.

echo360

Transforming Learning From the Front Row to the Frontline

Delivering AI-enhanced solutions in one integrated learning experinece



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Blackboard

WORKSHOPS

Workshop A

LLMs Go Head-to-Head: Large Language Models vs. Legitimate Librarian Methods for Advanced Database Searching

Katie D. Sweeney, MLIS, and Barbara Slover, MLIS
Alumni Medical Library

Room L201/203 (Please bring a laptop to this session)

There comes a point in every researcher's process when they realize that Generative AI is not exactly a silver bullet for database searching or conducting literature reviews, given the prevalence of paywalls and non-open access content. The next thought in the researcher's mind may be something like, "okay, but can AI help me quickly write an advanced search strategy that I can then paste into PubMed?" Good question. Unfortunately, current large language models (LLMs) consistently fail at this task. Allow your librarians to demonstrate how and why this is the case and help you can gain confidence doing it yourself. Crafting an accurate and precise search strategy for your research question is as useful a skill as ever.

Target Audience:
Any BU faculty, staff, or student looking to deepen their understanding of advanced database search techniques, especially those interested in why AI is currently unreliable for crafting searches and how librarians approach the process instead.

Learning Objectives:
Upon completion of this workshop, learners will be able to:

- Describe where AI goes wrong in writing search queries.
- Identify appropriate MeSH terms for a given topic.
- Create a valid, accurate, and precise advanced PubMed search.

Session Outline:

- Introduction – agenda & learning objectives (5 min)
- Hands-on Activity – learners will open Google Form & PubMed on their computers (5 min)
- AI Example – Define research question and go over a ChatGPT-created search; students will search PubMed & fill out corresponding question in the form (10 min)
- PubMed Advanced Search – Examine ChatGPT's search in Search Details, describe automatic term mapping (ATM) and MeSH terms; have learners fill out the corresponding question in the form (10 min)
- MeSH Browser – Identify the facets of a search, search for MeSH terms, locate keywords and synonyms; learners will fill out the corresponding question in the form (10 min)
- Crafting a Strategy – Compile list of facets in the Advanced Search and show results; learners will fill out the corresponding question in the form and submit (10 min)
- Q&A – Answer questions, show Ask-A-Librarian button, where to get help in the future (15 min)

Workshop B

When the Algorithm Disagrees: Teaching Clinical Judgment in the Age of AI

John R. Weinstein, PhD, MS
Physician Assistant Program, Chobanian & Avedisian School of Medicine

Room L211

Artificial intelligence (AI) is increasingly embedded in health care across settings, including predictive analytics, medical imaging interpretation, documentation, and clinical support. While algorithms rival human clinicians, their utility is constrained by several limitations, including a lack of explainability and algorithmic bias. Beyond clinical accuracy, AI raises urgent regulatory concerns.

Despite their complexity and ubiquity, most trainees and practicing clinicians receive little formal instruction in interpreting, evaluating, or integrating AI outputs. Consequently, AI increases clinical performance only slightly and not to the level of AI alone, highlighting that the central challenge is not merely tool accuracy but effective human–AI integration.

Even if the long-term impact of AI remains uncertain, these tools are already shaping care. This workshop addresses that gap by focusing on professional judgment in the presence of algorithmic input. Under a decision-theoretic lens, AI integration is a problem of action under uncertainty; when tools are imperfect but unavoidable, failing to prepare learners to engage with them is not a neutral omission, but a higher-risk strategy. Participants will engage with practical examples and leave with a structured, transferable approach to begin to teach this skill.

Target Audience:
Health professions educators across disciplines, including medicine, residency programs, and genetic counseling. No prior AI expertise required.

Learning Objectives:
Upon completion of this workshop, learners will be able to:

- Analyze how AI outputs influence decision-making under uncertainty
- Identify common pitfalls in human–AI interaction
- Apply a structured framework to teach learners how to evaluate and integrate AI tools critically
- Design a brief, case-based teaching activity incorporating AI into their own program context

Session Outline:

- Context (5 minutes): Overview of AI use across health settings and limited formal training.
- Case Activity (20 minutes): In small groups, participants work through realistic cases drawn from clinical AI use. Groups discuss how (or whether) the AI influences their reasoning.
- Debrief (10 minutes): Facilitated discussion highlighting variability in decisions, trust calibration, bias, and consequences of error.
- Educational Implications (10 minutes): Brief review of challenges in clinician–AI integration and a decision-theoretic framing that not preparing learners to engage with AI carries risk.
- Instructional Template & Example (10 minutes): Introduction of a teaching template. Brief illustration of how it was applied longitudinally in the PA program.
- Group Application Activity (15 minutes): Participants design a teaching activity using the template.
- Share-Out & Closing (5 minutes): Selected groups share their activity. Workshop concludes with a practical framework for teaching decision-making with AI.

Workshop C

Integrating Artificial Intelligence into Health Sciences Education: A Framework for Teaching and Learning

Meredith A. Bailey, DMD, MBA
General Dentistry, Goldman School of Dental Medicine

Room L206/209

Artificial intelligence (AI) is increasingly shaping both healthcare delivery and education. Faculty need a clear understanding of what AI is, how it works, and how it can be used responsibly, as well as how to prepare students to engage with these technologies and develop technical literacy.
Participants will be introduced to key concepts in AI using a dental curriculum model to demonstrate how integration can be achieved across health sciences disciplines. The goal is to provide faculty with a practical framework for understanding and incorporating AI into their own teaching environments.

This session includes interactive discussion to explore how AI is currently being used in teaching, learning, and assessment across disciplines. It also emphasizes that AI is a tool to support, not replace, professional judgment, critical thinking, and the role of the educator.

Target Audience:
Faculty, course directors, and educational leaders across health sciences disciplines

Learning Objectives:
Upon completion of this workshop, learners will be able to:

- Describe foundational concepts in artificial intelligence, including key terminology and basic principles of machine learning and large language models.
- Explain how AI can be integrated into health sciences education to support teaching, learning, and assessment across disciplines using a dental curriculum model.
- Evaluate the use of AI-supported educational tools, including Noodle Factory, within a course setting.
- Identify key ethical considerations associated with the use of AI in education, including bias, transparency, and the importance of professional judgment.
- Interactive collaboration to discuss and share practical considerations for incorporating AI into curriculum design and student support

Session Outline:

- Introduction and Overview (5 minutes): Overview of core AI concepts and terminology, using examples from dental education to establish a practical foundation.
- Curriculum Design and Teaching Framework (15 minutes): Presentation of a structured approach to designing, implementing, and teaching an AI curriculum in a clinical education environment, including foundational concepts, clinical and non-clinical applications, and alignment with learner level.
- AI in Health Sciences Education (15 minutes): Discussion of current and emerging applications of AI in teaching, learning, and assessment, with emphasis on adaptability across disciplines and interactive participant input.
- Demonstration and Application (10 minutes): Demonstration of Noodle Factory, including real-time tutoring, case-based learning, and formative assessment, with discussion of faculty oversight and alignment with course objectives.
- Ethical and Practical Considerations (10 minutes): Review of key considerations, including bias, transparency, limitations of AI tools, and the importance of maintaining human judgment.
- Discussion and Q&A (5 minutes): Open discussion and participant questions.

Workshop D

Funding Health Professions Education Innovation & Shipley Academic Innovation Fund Information Session

Priya Garg, MD, Benjamin Keating, PhD, Molly B. Cohen-Osher, MD, MMedEd, Hollis Day, MD, MS, MHPE, Erin Baumann, PhD, MSc, Annwesa Dasgupta, PhD, Cindy Vincent, PhD, Jonathan J. Wisco, PhD

Room L213

Transforming an initial idea into a fundable educational innovation can be challenging, particularly in the context of health professions education, where scholarly impact, feasibility, and alignment with funding priorities are critical. This interactive 90-minute workshop will guide participants through the early stages of grant development, moving from concept to a structured proposal. Participants will begin by reflecting on common facilitators and barriers to educational scholarship within their own contexts, then engage in structured brainstorming to refine a preliminary idea into a clearly defined educational problem and target learner audience aligned with health professions education needs. Through guided activities and peer collaboration, participants will develop a draft grant proposal concept that incorporates key elements including: proposed innovation, aims, implementation and evaluation plan, and potential for dissemination. The workshop emphasizes collaborative learning and iterative feedback, with small-group work enabling participants to evaluate and strengthen their ideas through peer input. By the end of the session, participants will have a clearer, more refined proposal framework and an action plan for advancing their work toward submission.

Target Audience:
Faculty and staff who would like to understand and apply for education funding opportunities, using the Shipley Academic Innovation Fund's Call for Proposals for Health Education Innovation Grants.

Learning Objectives:
Upon completion of this workshop, learners will be able to:

- Refine a preliminary idea into a clearly defined educational problem and target audience aligned with priorities in health professions education.
- Develop a structured draft of a grant proposal, including a proposed innovation, aims, implementation and evaluation plan, in alignment with Shipley grant priorities.
- Critically evaluate and strengthen a grant proposal through peer collaboration, incorporating feedback to enhance clarity, feasibility, and potential impact.
- Develop action plans to complete a draft of an educational grant proposal that could be submitted for funding.
- Participate in collaborative learning, feedback and peer networking.

Student Submitted Abstracts	
Poster 1	Evaluating Predictors of Success in a Pre-Dental Master's Program
Poster 2 (Award)	A Pilot Pre-Post Study of Applied Improvisation to Enhance Psychosocial Skills in Genetic Counseling Students
Poster 3	Improving Surgical Safety: using Explainable Predictive AI Models to Predict major Perioperative Hemorrhage
Poster 4	EVALUATING THE IMPACT OF AI-FACILITATED SUBTITLES ON VIEWER ENGAGEMENT IN PEDIATRIC MEDICAL EDUCATION VIDEOS
Poster 5	Evaluation of Application Sessions in Ultrasound Skills in a Medical Education Preclinical Curriculum
Poster 6	Evaluating Trauma-Informed Inclusive Pedagogy in a Human Physiology Course: A Pilot Study of Students' Perceptions
Poster 7	Let the Game begin
Poster 8	Assessing Medical Student Preparedness for Prehospital Medical Emergencies
Poster 9	The Impact of a Student-Led Interprofessional Workshop in Identifying Early Signs and Symptoms of Child Abuse and Neglect
Poster 10	Comparing Near-Peer Instruction Modalities and Performance Trajectories in Graduate Physiology
Poster 11	AI Chatbots in Oral Health Education: A Pilot of Current Practices and Faculty Perspectives
Resident/Fellow Submitted Abstracts	
Poster 12	Drill Down To It: Development and Deployment of Intraosseous Access Training
Poster 13	Educating Mental Health Clinicians on Approaches to Harm Reduction for Stimulant Misuse
Poster 14	Artificial Intelligence in Medical Education: Assessing Chatbot Accuracy and Student Preferences
Poster 15 (Award)	Integrating Point-of-Care Ultrasound Curriculum into a Fourth-Year Internal Medicine Internship Preparation Course
Poster 16	Incorporation of an International Surgical Oncology Rotation into a CGSO Fellowship Program: Impact and Perceptions
Poster 17	Transformation of Flipped Learning in Dental Education Through a Global Lens
Faculty/Staff Submitted Abstracts	
Poster 18	Can an intensive teaching intervention improve ophthalmology board passage rates for residents with low scores on standardized tests of clinical knowledge?
Poster 19	When Palpitations Met Sepsis: A Simulation to Teach Diagnostic Priorities
Poster 20	Connected Communities: Social Events as Drivers of Engagement and Belonging at the Graduate Medical Sciences Community Catalyst Center and Office of Student Affairs
Poster 21	Hands-On Introduction to Cardiac Point-of-Care Ultrasound in the Internal Medicine Clerkship
Poster 22	AI as an Informed Colleague: Refining Grant Proposals With LLMs
Poster 23	Student Leadership in Student Activity Groups Improves Wellbeing and Decreases Burnout
Poster 24	An Investigation of Genetic Counselor Experiences Transitioning into a Teaching Role Through a Solicited Diary Study
Poster 25	What Do Preceptor Evaluations Capture—and What Actually Predicts Licensure Exam Results?
Poster 26 (Award)	Preparing Students to Utilize Artificial Intelligence in Clinical Decisions
Poster 27	Testing the Waters: Evaluating the Clinical Impact of PISCEs Participation

Evaluating Predictors of Success in a Pre-Dental Master's Program

Tanmayee Bhimireddy, BDS, MPH; Muskan Sunilkumar Patel, BDS, MPH; Christopher Peters, MS; Theresa Davies, PhD[1]; Karen Bottenfield, PhD[1]
Department of Epidemiology & Biostatistics School of Public Health
Graduate Medical Sciences; Oral Health Sciences Program[1]

Introduction: Admission to dental school is highly competitive, and pre-dental master's programs such as the MS in Oral Health Sciences (OHS) at Boston University have emerged as important pipeline pathways, particularly for students from under-represented backgrounds. Identifying applicants who are most likely to succeed in these programs is critical to both student outcomes and program effectiveness. As professional schools have shifted towards a holistic review of applicants, reliable predictors of academic success remain unclear, highlighting the need for further longitudinal research. Previously, we reported on the OHS program and future success in dental school. Here, we present our findings following the evaluation of a large cohort of students spanning 5 academic years to identify predictors of success in the OHS program.

Methods: Data were collected for 183 students enrolled in the OHS program between 2017 and 2021. Variables included undergraduate GPA (UGPA), eight DAT sub-scores, grades in prerequisite science courses, gender, state of residency, and prior dental school application history. OHS GPA served as the primary outcome measure. Independent samples t-tests were used to compare OHS GPA between students who did and did not take each prerequisite course, and a one-way ANOVA was used to compare OHS GPA across UGPA quartiles. Pearson correlation was used to assess relationships between continuous variables and OHS GPA. Year-by-year subgroup analyses were conducted to assess the consistency of findings across cohorts.

Results: Six of eight DAT sub-scores were significantly correlated with OHS GPA, including Total Science ($r = 0.309$, $p < 0.001$), Academic Average ($r = 0.279$, $p < 0.001$), Biology ($r = 0.270$, $p < 0.001$), General Chemistry ($r = 0.257$, $p < 0.001$), Organic Chemistry ($r = 0.238$, $p = 0.002$), and Reading Comprehension ($r = 0.154$, $p = 0.048$). Undergraduate GPA was a significant predictor of OHS GPA by both ANOVA ($p = 0.002$) and Pearson correlation ($r = 0.297$, $p < 0.001$), with students in the highest UGPA quartile averaging an OHS GPA of 3.60 compared to 3.38 for those in the lowest quartile. In addition, completion of undergraduate Microbiology ($p = 0.004$) or Anatomy & Physiology ($p = 0.014$) was significantly associated with OHS GPA, as was performance in undergraduate Biology ($r = 0.214$, $p = 0.005$).

Conclusion: The results of this study suggest that while DAT science scores and UGPA may be consistent and reliable predictors, prior coursework and performance in key science courses also contribute to predicting academic success. Overall, these findings provide important insight for admissions decisions and for optimizing recruitment and student outcomes in pre-dental master’s programs.

****BEST STUDENT ABSTRACT AWARD****

A Pilot Pre-Post Study of Applied Improvisation to Enhance Psychosocial Skills in Genetic Counseling Students

Chloe S. Evans, BS; Lillian Sosa, MS; Elizabeth Fieg, MS
Master's Program in Genetic Counseling, Graduate Medical Sciences, Chobanian & Avedisian School of Medicine

Introduction: By definition, genetic counselors utilize psychosocial counseling and communication skills in their practice; these skills are represented in the practice-based competencies published by the Accreditation Council for Genetic Counseling (ACGC). Applied improv adapts principles of improvisational theatre to non-theatrical settings to practice psychosocial counseling and communication skills. Many medical education institutions in the United States have integrated pilot applied improv workshops to promote patient-centered communication and isolate specific psychosocial skills that trainees may find challenging to learn and practice. There is a dearth of research on the outcomes of applied improv interventions pertaining to specific psychosocial skill competencies as outlined in the ACGC domains.

Objective: This study aimed to evaluate how an applied improv intervention affects second-year genetic counseling students' perception of psychosocial skill improvement and assess participant experiences with and attitudes toward applied improv.

Methods: Twenty-two second-year genetic counseling students from two training programs participated in a 75-minute applied improv intervention (60 minutes of interactive games, 15-minute facilitated debrief). Twenty-one participants completed pre- and post-intervention surveys that included an adapted Genetic Counseling Self-Efficacy Scale and an adapted Revised-Attitudes Toward Research Scale, plus items assessing perceived intervention effectiveness and acceptability. Two-tailed independent-sample t-tests compared pre/post scores ($\alpha = 0.05$) and latent content analysis analyzed free response items.

Results: Scores on most self-efficacy measures increased post-intervention; the largest change was observed for nonverbal attending ($p = 0.015$). Overall attitudes toward applied improv increased post-intervention ($p < 0.05$), with participants rating the session as enjoyable, relevant to genetic counseling, and effective for improving camaraderie and communication while reducing anxiety. Despite positive effects, most participants did not endorse applied improv as a required addition to the core curriculum.

Conclusion: A brief applied improv session was feasible, well-accepted, and associated with short-term gains in self-reported psychosocial skills. Findings support further study using prolonged exposure, longer follow-up, and expanded diversity of participants to determine whether applied improv produces durable skill gains useful for curriculum integration

Improving Surgical Safety: Using Explainable Predictive AI Models to Predict major Perioperative Hemorrhage

Nisha Jha, MBBS; Devesh Jha, PhD[1]
School of Public Health; Pennsylvania State University[1]

Background: Postoperative major bleeding is a life-threatening complication, especially in low-resource hospitals where advanced monitoring, immediate laboratory support, and massive transfusion protocols may be unavailable. Early identification of patients at high risk could enable timely intervention and targeted monitoring. Machine learning (ML) offers predictive potential, but most models depend on high-fidelity datasets not feasible in such settings. This study presents a proof-of-concept model using synthetically generated perioperative data to design a simple and interpretable triage score.

Objectives: To develop a predictive model for major perioperative bleeding (EBL > 500) using preoperative clinical indicators. To apply explainable AI techniques to make the model's reasoning transparent and clinically interpretable. To identify the most important preoperative and intraoperative predictors of major bleeding. To evaluate and compare model performance using clinically meaningful metrics (AUC, sensitivity, specificity). To create a decision-support tool that can assist anesthesiologists and surgeons in early risk identification.

Methodology: A retrospective observational study using open access perioperative patient data to identify risk factors associated with significant bleeding. Machine-learning models were trained on 80% of the dataset, tested on 20%, and evaluated to predict bleeding risk with explainability analysis using SHAP. Data Pre-Processing: Performed feature cleaning, handling missing values, and normalization where required. (6389-3987 cases with valid EBL Measurements). Conducted feature engineering and selection to identify relevant perioperative indicators. Encoded categorical variables and prepared numerical features for modeling. Model Development: Four models were developed and compared: Linear Regression, Random Forest, Gradient Boosting, and AdaBoost. Train–Test Split: Dataset divided into 80% training and 20% testing to ensure unbiased model evaluation.

Results: Achieved 86.3% sensitivity with AdaBoost (12×); excellent sensitivity with manageable false positives. Identified operation duration as dominant predictor (1.5× importance of next feature) for EBL followed by Surgical approach, (open surgeries), pre op Hb. Successfully identified AdaBoost with 12× cost-sensitive weighting as the optimal machine learning configuration for high EBL prediction.

Discussion / Conclusion: This comprehensive analysis successfully identified AdaBoost with 12× cost-sensitive weighting as the optimal machine learning configuration for high EBL prediction, achieving superior balance between Sensitivity and specificity. Major achievements: Evaluated 4 algorithms across standard and cost-sensitive approaches (20 total configurations)**.** Achieved 86.3% sensitivity with AdaBoost (12×) - excellent sensitivity with manageable false positives**.** Identified operation duration as dominant predictor (1.5× importance of next feature) for EBL followed by Surgical approach, (open surgeries), pre op Hb. Central, arterial line placements were observed as valuable clinical indicators. Demonstrated 135% improvement over baseline AdaBoost (36.64% ® 86.3% recall)**.** Identified AdaBoost (12x) as the superior model for similar Explainable Predictability**.** Clinical impact: Deploying the recommended model will: **C**atch 86.3% of high EBL cases preoperatively (113/131).

Evaluating the Impact of AI-facilitated Subtitles on Viewer Engagement in Pediatric Medical Education Videos

Natalia Khoshnam, MS
Graduate Medical Sciences, Master's Program in Medical Sciences

Background: Digital platforms have become increasingly important channels for distributing medical education at a global scale. Open-access video platforms such as YouTube allow healthcare professionals worldwide to access clinical educational resources asynchronously. However, language barriers remain a significant limitation for non–English-speaking learners. Subtitle translation initiatives represent a potential strategy to improve accessibility, yet limited research has examined how subtitle use influences viewer engagement with medical education content.

Objective: This study aimed to evaluate the association between subtitle exposure and viewer engagement in pediatric educational videos hosted on the OPENPediatrics YouTube channel.

Methods: A retrospective observational study was conducted using YouTube Analytics data from January 1 to December 31, 2025. Videos were selected from the OPENPediatrics Pediatric Clerkship playlist. Inclusion criteria required that videos exceed five minutes in duration, be published prior to January 1, 2025, and contain at least one clinician-reviewed OPENPediatrics subtitle translation. Engagement metrics were aggregated at the video–subtitle condition level, resulting in 47 observations across 18 videos. Three mutually exclusive subtitle conditions were analyzed: no subtitles, official OPENPediatrics clinician-reviewed subtitles, and YouTube auto-generated subtitles. The primary outcome was average view duration, representing watch time per view. To estimate the association between subtitle condition and engagement while accounting for differences in view exposure, a generalized linear mixed model with a negative binomial distribution was fit using total watch time as the outcome, the logarithm of views as an offset, and a random intercept for video.

Results: During the analytic period, videos were viewed 347,473 times. Most engagement occurred without subtitles (328,631 views), while official OPENPediatrics subtitles were used in 18,229 views and YouTube auto-generated subtitles in 613 views. Mean average view duration was 3.39 minutes for sessions without subtitles, 4.14 minutes for sessions using OPENPediatrics subtitles, and 8.19 minutes for sessions using auto-generated subtitles. Mixed-effects modeling demonstrated that use of official OPENPediatrics subtitles was associated with significantly longer average view duration compared with sessions without subtitles (rate ratio 1.24, 95% CI 1.09–1.40, $p < 0.001$). Sessions using YouTube auto-generated subtitles were associated with an even larger increase in engagement (rate ratio 2.13, 95% CI 1.76–2.59, $p < 0.001$), although these observations represented a small proportion of total views.

Conclusions: Subtitle use was associated with increased viewer engagement in pediatric educational videos hosted on the OPENPediatrics YouTube channel. Clinician-reviewed subtitles demonstrated meaningful improvements in average view duration across a larger number of viewing sessions, suggesting that structured subtitle translation initiatives may enhance engagement among multilingual audiences. These findings highlight the potential role of multilingual accessibility strategies in expanding the global reach of digital medical education resources.

Evaluation of Application Sessions in Ultrasound Skills in a Medical Education Preclinical Curriculum

Karen S. Li, BS; Elana Green, BS; Pavle Gajic, BA; Molly Cohen-Osher, MD, MMedEd; Jonathan Wisco, PhD
Chobanian & Avedisian School of Medicine

Introduction/Background/Purpose: Point-of-care Ultrasound (POCUS) usage has grown in clinical practice due to its cost-effectiveness and diagnostic efficiency. This has led to the increased implementation of POCUS training during preclinical years in U.S. medical schools. Boston University Aram V. Chobanian & Edward Avedisian School of Medicine (BU Chobanian & Avedisian SOM) have been offering preclinical POCUS learning opportunities outside of the formal curriculum through student-led organizations such as Ultrasound is for Everyone (USIFE). Students have shown great interest and success in learning ultrasound through these hands-on opportunities, inspiring the school to implement POCUS into the Principles Integrating Science, Clinical Medicine, and Equity (PISCEs) curriculum as of the 2025-2026 academic year. However, unlike the USIFE club activities, which range from 60-120 minutes of small group instruction and self-directed practice, the sessions in PISCEs are only 30 minutes, and primarily didactic. Given the brevity and format of these sessions, their efficacy in improving students' interest and knowledge in ultrasound is currently unknown.

Purpose/Objectives: This study seeks to understand the effect of incorporating ultrasound teaching into a shorter, formalized, and mandatory preclinical curricular session on student knowledge, confidence, and interest in POCUS, compared with longer, more hands-on USIFE club sessions.

Methods: M4 students were recruited to teach M1 students in an interactive 30-minute cardiac POCUS session wherein the M4 demonstrated common echocardiogram views. A echocardiogram-specific pre- and post- Qualtrics survey were created and distributed the immediate weeks before and after the session, respectively. Surveys included Likert scale questions that ascertained students' confidence in skills, understanding and interest in POCUS, and appraisal of its utility in their future careers. In addition, a 10-item multiple-choice assessment (MCQ) to test students' knowledge of curricular content was administered. To assess for changes pre- and post-session, both paired (n=19) and independent t-tests (n=46; n=26) were used. Statistical analysis was performed using SPSS and Microsoft Excel. Further, qualitative data was also collected regarding students' expectations and experiences of the sessions.

Findings/Results: Out of 140 M1 students, 46 completed the pre-survey, 26 completed the post-survey, and 19 completed both. Of the 19, 6 attended USIFE sessions. There was a statistically significant increase in both students' subjective attitudes of ultrasound and confidence in skills assessed in the Likert scales, and objective performance on the MCQ. There was not a statistically significant difference in MCQ scores in subjects who attended USIFE sessions compared to those who did not. Students reported an increase in the understanding of foundational concepts of ultrasound (probe usage, terminology, Doppler usage) as well as comfort using ultrasound ($p < 0.001$). Students had a high baseline of perceived importance of trauma-informed care ($p > 0.05$), but reported an increased familiarity with trauma-informed care as well as an understanding of its application in ultrasound ($p = 0.005$). Students had an increase in self-efficacy in their probe positioning skills to visualize cardiac structures ($p < 0.001$). In assessing objective performance on the MCQ, students' knowledge significantly increased from before the session ($M = 4.21$, $SD = 1.99$) to after the session ($M = 9.00$, $SD = 0.88$). Lastly, students reported varying expectations for the session; the most common were themes of probe positioning, visualizing structures, and interpretation. Most students reported that their expectations were met by the session, although students overwhelmingly expressed desire for more engaging and active learning, more time for the session, and more sessions in the curriculum.

Conclusions/Discussion: The session's brevity and lack of standardization in teaching– yet statistically significant increases in students' perception and knowledge of ultrasound– highlights the importance and efficacy of incorporating ultrasound into the formal preclinical curriculum. Students also expressed strong support of and engagement with the session and desire for more and longer sessions in the future. There is great potential in refining sessions to foster even greater student interest, confidence, and knowledge in ultrasound and promote career development.

Evaluating Trauma-Informed Inclusive Pedagogy in a Human Physiology Course: A Pilot Study of Students' Perceptions

Sedrah Mashhour, BS; Marisol Lopez, PhD
Goldman School of Dental Medicine
Department of Pharmacology, Physiology & Biophysics; Chobanian & Avedisian School of Medicine

Introduction/Background: Students in higher education exhibit a high prevalence of prior trauma exposure, which can negatively impact attention, learning, memory, and overall academic performance. Students may be exposed to more trauma particularly in courses such as physiology due to their rigor and content material. To combat this, we developed a trauma-informed pedagogical framework grounded in the Substance Abuse and Mental Health Services Administration (SAMHSA) principles of safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment, voice and choice, and cultural awareness. This framework emphasizes creating inclusive, supportive learning environments that mitigate re-traumatization while promoting student success, increasing student engagement, reducing achievement gaps, and enhancing motivation.

Purpose/Objectives: This pilot study evaluates the implementation of trauma-informed, inclusive pedagogical practices in a Human Physiology course through a structured student survey assessing perceptions of the learning environment. The study aims to analyze how these trauma-informed teaching practices are associated with student perceptions of empowerment, engagement, and classroom community, with the goal of identifying patterns across diverse student populations and informing future implementation of inclusive, student-centered instructional strategies in physiology education.
Methods: A series of trauma-informed pedagogical practices that supported the SAMHSA principles were implemented in a human physiology course in the Masters in Medical Science program in Graduate Medical Sciences at the Chobanian & Avedisian School of Medicine in the Fall 2024 semester. At the end of the semester, students (n = 32) participated in a survey that measured key domains aligned with trauma-informed principles. Students reflected on their experiences with their learning processes by answering Agree, Neutral, and Disagree to 23 targeted, SAMHSA-themed questions. These questions also assessed instructor and instructional behaviors in the classroom.

Results: Likert-scale ratings from the survey revealed students responded positively to trauma-informed instructional practices. Highest agreements included feeling safe (100%), instructor presence and engagement (98%), inclusivity (97%), and transparency around expectations (93%), which align with the SAMHSA principles of Safety, Collaboration and Mutuality, and Transparency. The SAMHSA principle of Empowerment revealed that students recognized the instructor was invested in their success (95%) and acknowledged the multiple ways to develop skills and knowledge (90%). Yet, fewer students reported receiving instructor-provided supportive feedback (78%). Items with the lowest student agreement revolved around the principle of Choice and Voice; agreement for student agency generally hovered around 60%.

Conclusion/Discussion: This pilot study demonstrates that trauma-informed pedagogical practices rooted in SAMHSA principles can be meaningfully implemented in graduate-level physiology courses. Students felt safe, were able to partake in collaborative learning, and appreciated the transparency in instructor communication and classroom design. Alternatively, Choice and Voice and Empowerment emerged as areas requiring further attention due to the relatively low agreements. This study is significant because trauma exposure disproportionally affects students from disenfranchised backgrounds. Implementing trauma-informed pedagogy in instructional practices is significant for reducing trauma, leading to students feeling safe and

supported in their learning. These evidence-based teaching practices have also been found to reduce achievement gaps and bolster motivation.

Let the Game Begin: Enhancing Learning Engagement and Knowledge Retention Among Dental Residents Using Kahoot.

Jijhi Paulraja, AS-DMD; Nikki Noonan, DMD, CAGS; Devaki Sundararajan, BDS, CAGS; Breno Reboucas, DDS, CAGS
Goldman School of Dental Medicine
General Dentistry; Oral and Maxillofacial Pathology; Pediatric Dentistry

Introduction: Dentistry is a complex, demanding field. It requires integrating theoretical knowledge, technical precision, and clinical decision-making. Dental students must master biomedical sciences, develop psychomotor skills, and apply diagnostic reasoning in patient care. Traditional methods—focused on lectures and repetitive exercises—may not maintain student engagement or support deep, lasting retention of multifaceted skills. In response, gamification has emerged as an innovative way to bring game-based elements into learning. By adding interactive challenges, immediate feedback, rewards, and progressive skill levels, gamification makes complex dental topics more manageable and engaging. This approach boosts motivation and participation and supports active learning, reinforcing cognitive and clinical skills.

Objective/method: A total of 12 pediatric dentistry residents at Boston University Henry Goldman School of Dental Medicine were asked to participate in this study. Pediatric Dentistry Residents attending the Oral Pathology Seminar participated in an interactive 10-question quiz which was conducted using Kahoot! game platform (Kahoot's Design LLC. Oslo, Norway). Following the quiz, a QR code link to an optional and anonymous electronic survey was shared with participants to evaluate their perception of this interactive learning method and its effectiveness in reinforcing their knowledge of the subject matter taught in the seminar. The group received the same anonymous electronic survey 2 months later to assess their knowledge of retention perception. The results were analyzed and interpreted to see if gamification was beneficial for perceived knowledge retention and improved confidence in applying this knowledge clinically.

Results: Survey :1 - A total of 12 responses were recorded, of which 9 were complete and included in the final analysis. All participants consented and reported participation in the quiz activity.
Most respondents agreed or strongly agreed that the quiz enhanced engagement and made the lecture more interesting. There was improvement in their critical thinking, better understanding of seminar topics, and ability to link didactic concepts to clinical scenarios. Chi-square test analysis showed a statistically significant relationship between game-based quizzes and critical thinking ($p = 0.0089$). Participants (91.7%) believed that gamification would be beneficial across other dental subjects.
Survey:2 - A total of 10 participants completed the survey, all of whom provided consent and reported participation in the quiz activity (100%). Overall, participants demonstrated a highly positive perception of the gamified quiz. The majority either agreed or strongly agreed that the quiz enhanced knowledge retention, and knowing that a quiz would follow the lecture increased their motivation. Chi-square test analysis showed a statistically significant relationship between game-based quiz and knowledge retention ($p = 0.0031$). Importantly, 88.9% of participants believed that gamification would be beneficial if applied to other dental subjects. Overall, these findings suggest that gamification is well-received and supports enhanced engagement, learning, and clinical confidence among postgraduate dental students.
Key findings from both surveys showed a clear and consistent pattern: The postgraduate dental residents perceived gamification as an engaging and effective educational strategy.

Conclusion: Overall, the findings demonstrate that the majority of participants responded positively to the use of gamification, perceiving it as beneficial for both learning and knowledge retention. Participants also

reported increased confidence in applying concepts in clinical settings. Furthermore, there was a strong consensus that similar gamified approaches could be effectively extended to other areas of dental education. These results reinforce the potential of gamification as a valuable educational strategy, capable of enhancing student engagement, improving learning outcomes, and supporting clinical competence in postgraduate dental programs.

Assessing Medical Student Preparedness for Prehospital Medical Emergencies

Kruthik Ravishankar, BA; Michael Anchan, BS; Ariana Rauch, BS; Priya Garg, MD; Barbara Walsh, MD
Chobanian & Avedisian School of Medicine

Introduction/Background: Heart disease, unintentional injury, respiratory compromise, and stroke remain among the leading causes of death in the United States. Despite advancements in prehospital and in-hospital care, patient outcomes are still largely dependent on bystander intervention. Early recognition of time-sensitive medical emergencies reduces mortality. Training courses covering "Stop the Bleed" and CPR improve laypeople's ability to respond effectively. Although medical students learn pathophysiology and in-hospital management of critical emergencies, many report decreased confidence with responding to prehospital emergencies, even when they may be the most medically trained individuals present. Despite this, graduate medical education lacks comprehensive technical training in early emergency response and immediate stabilization in prehospital settings.

Purposes/Objectives: While bystander medical training improves emergency response, the extent to which traditional medical school education prepares students to respond to emergencies remains unclear. This study evaluates medical students' preparedness to respond to critical emergencies in the prehospital setting by comparing the readiness of pre-clinical students who complete a bystander medical training course to graduating fourth-year medical students. We aim to determine whether targeted bystander training improves emergency medical response readiness compared to the traditional four years of medical school education alone.

Methods: Pre-clinical medical students were invited to participate in a bystander medical responder course taught by experienced EMTs, paramedics, and an emergency medicine attending physician. Before the training, students completed a survey that included a Likert scale to qualitatively assess comfort recognizing and responding to cardiac arrest, severe hemorrhage, opioid overdose, and stroke, along with a quantitative, knowledge-based assessment of their understanding of emergency medical response. Pre-clinical students then completed an educational intervention (bystander responder course), which included didactics and hands-on medical simulation. After the course, students were invited to complete a post-survey, which reassessed qualitative and quantitative measures of preparedness. Separately, fourth-year medical students at the conclusion of their clinical rotations completed an equivalent survey to assess qualitative and quantitative preparedness for medical emergency response. Aggregate responses were compared across groups.

Findings/Results: Initial survey data from preclinical medical students demonstrated limited understanding of both recognition and initial management of time-sensitive medical emergencies. In contrast, survey responses from fourth-year medical students reflected a higher level of knowledge and familiarity with appropriate first steps in management across the same clinical scenarios. Follow-up assessment of the preclinical cohort after the educational intervention and formal statistical analysis remain ongoing.

Conclusion/Discussion: Preliminary survey data indicate near-graduation medical students demonstrate greater understanding of time-sensitive emergencies in prehospital settings. However, participant attrition during follow-up phases limited the ability to fully evaluate the intervention's impact. Despite these limitations, findings suggest this gap may be addressable through structured curricula and simulation-based training focused on emergency bystander response. We aim to further evaluate this intervention and recommend incorporating bystander response training into traditional preclinical curricula. As this study was

conducted at a single urban academic institution, future analyses should explore generalizability across diverse educational settings and assess the impact of similar curricula at other medical schools.

The Impact of a Student-Led Interprofessional Workshop in Identifying Early Signs and Symptoms of Child Abuse and Neglect

Crystal D. Vejar, BA, MS; Arba Goskova, BA; Julia Japo, BS
College of Osteopathic Medicine; University of New England

Introduction: Child abuse and neglect remain frequently underrecognized in healthcare settings, despite repeated patient encounters and the presence of subtle warning signs. These challenges are compounded by differences in training across disciplines and gaps in communication between healthcare professionals. Interprofessional education (IPE) has emerged as an important strategy for strengthening collaboration, communication, and patient outcomes. By promoting shared learning across disciplines, IPE helps students develop a more comprehensive approach to patient care, particularly in complex and sensitive situations such as suspected abuse. Student-led workshops may further enhance engagement by addressing topics that are often underrepresented in traditional curricula while creating a supportive environment for active participation, discussion, and peer learning.

Objective: To develop and implement a student-led interprofessional workshop aimed at improving early recognition of child abuse and neglect.

Methods: Hidden in Plain Sight was a one-hour, student-led interprofessional workshop designed to evaluate whether meaningful learning outcomes could be achieved through a brief peer-led format while addressing content often underemphasized in formal curricula. The workshop was created by an 18-student team representing three graduate programs and delivered virtually via Zoom. Approximately 65 students from multiple health professions programs attended. Participants reviewed two pediatric case scenarios centered on the recognition of child abuse and neglect. Each case was presented through three professional perspectives to demonstrate how collaborative practice can improve identification of concerning findings. Guided discussion focused on communication, reporting responsibilities, and team-based intervention. Pre- and post-workshop surveys assessed changes in participant knowledge, confidence, and perceptions of interprofessional collaboration.

Findings: Despite the one-hour timeframe, participants demonstrated measurable improvements in self-reported knowledge and confidence related to identifying signs of abuse and neglect. Survey responses also reflected greater appreciation for interprofessional teamwork and improved understanding of the roles of healthcare professionals outside their own disciplines.

Conclusion/Discussion: This workshop highlighted the critical role healthcare professionals play in recognizing, reporting, and responding to child abuse and neglect. Through case-based learning, participants gained insight into subtle warning signs as well as the responsibilities of mandated reporters. Positive feedback suggests that even a brief virtual workshop can meaningfully enhance awareness and collaboration skills. Future plans include offering additional virtual sessions, expanding participation to more disciplines, and developing in-person workshops where learners can practice responding to realistic scenarios. Strengthening interprofessional collaboration remains essential to improving outcomes for vulnerable pediatric patients.

Comparing Near-Peer Instruction Modalities and Performance Trajectories in Graduate Physiology

Joseph D. Webb; Sarita Som; Christopher Schonhoff, PhD
Graduate Medical Sciences, Chobanian & Avedisian School of Medicine

Introduction / Background: Voluntary near-peer instruction (NPI) programs are ubiquitous in medical education but difficult to evaluate rigorously because students self-select based on academic need. This bias can create the appearance that NPI programs have neutral or negative effects when, in fact, those effects may be beneficial. We developed and compared four analytical approaches to correct for selection bias when evaluating NPI effectiveness.

Purpose / Objectives: We hypothesized that structured, faculty-supervised peer instruction would show a more favorable association with exam performance than unstructured peer tutoring, and that this divergence would become more pronounced as confounder control intensified.

Methods: This retrospective cohort analysis included 191 graduate-level Human Physiology students in the BU School of Medicine MAMS program during a single semester. Students voluntarily participated in two forms of NPI: structured TA sessions (n = 86 attended at least one session; 90 min weekly, faculty-approved content, standardized format) or unstructured peer tutoring (n = 37 students; 2 hr weekly 1:1, complete freedom over session format, offered to students scoring <70% on the prior exam). Both TAs and tutors were selected solely based on prior academic performance in the course (grades of A− or A). The analytic panel comprised 350 student-exam observations across Blocks 2 and 3, using each student's prior block examination score as a within-person anchor. We examined associations between NPI participation and performance on three standalone exams using four analytical approaches: naive OLS (no covariates), prior-score adjusted OLS regression, inverse probability of treatment weighting (IPTW), and within-student fixed effects. All regression models used heteroskedasticity-consistent (HC3) standard errors.

Findings / Results: Naive analysis suggested tutoring acceptance was associated with substantially lower exam performance (β = −4.92 pp, 95% CI [−8.45, −1.39], p = 0.006); structured TA attendance also showed a negative but non-significant naive association (β = −0.92 pp, 95% CI [−2.24, +0.39], p = 0.168), consistent with both interventions attracting lower-performing students. After sequential bias correction, prior-score adjustment reduced the tutoring estimate to −2.14 pp (95% CI [−4.66, +0.39], p = 0.097); IPTW — which improved covariate balance on prior exam score (standardized mean difference: −0.256 before weighting, −0.063 after) — yielded −2.20 pp (95% CI [−4.20, −0.21], p = 0.030), indicating residual unmeasured confounding not captured by propensity score adjustment; and within-student fixed effects, which eliminate all stable student-level confounders, yielded a null of −1.33 pp (95% CI [−8.71, +6.06], p = 0.725). In contrast, structured TA sessions showed a directional shift toward positive as confounder control increased: −0.51 pp (OLS), −0.58 pp (IPTW), and +0.68 pp (95% CI [−0.23, +1.58], p = 0.144) under fixed effects.

Conclusions / Discussion: Voluntary NPI programs cannot be rigorously evaluated without comprehensive statistical correction for selection bias. Structured, faculty-supervised near-peer instruction demonstrates a directionally more favorable association with exam performance than unstructured tutoring across all analytical models, with the fixed effects estimate crossing into positive territory. These findings suggest that program design and faculty oversight are important moderators of NPI effectiveness. Future observational studies of NPI should collect prior GPA, test anxiety, weekly study hours, help-seeking tendency, and science prerequisite grades to enable more complete causal inference.

AI Chatbots in Oral Health Education: A Pilot of Current Practices and Faculty Perspectives

Funing Zhang; Matthew Mara, DMD, EdD
General Dentistry; Goldman School of Dental Medicine

Introduction: Health professions education requires competency in non-clinical skills, such as communication and critical thinking, which are often difficult to assess and standardize. Among educational strategies, standardized patients have the most substantial evidence base for improving students' clinical competence and interpersonal skills, although robust implementation is frequently constrained by cost. The emerging use of artificial intelligence (AI) chatbots has the potential to transform how students practice non-clinical skills through interactive engagement, personalized simulation experiences, and automated assessment. While AI chatbots have been proposed as a novel educational tool in oral health education, limited evidence exists regarding their current integration into curricula and faculty perceptions of their use.

Objective: The primary objective of this study was to examine the current use of AI chatbots and faculty perceptions among oral health faculty attending the 2026 American Dental Education Association (ADEA) Annual Session. Secondary objectives focused on identifying facilitators and challenges related to the curricular integration of AI chatbots.

Methods: This study received approval from the BUMC/BMC Institutional Review Board (H-46165). A 39-item questionnaire was developed in REDCap and informed by health professions education literature and study objectives. Participants were recruited through the ADEA Council of Sections Member's Forum for the Scholarship of Teaching and Learning and Educational Research, Development, and Curriculum Section and the Special Interest Group for Teaching and Learning with Emerging Technology. Descriptive data were calculated and analyzed in REDCap.

Results: Of the 24 invited participants, 9 (37.5%) completed the questionnaire. Most respondents identified as female (8/9, 88.9%), were affiliated with predoctoral dental programs (7/9, 78%), and reported 10–19 years of academic experience (6/9, 66.7%). Responses regarding the use of AI in coursework were evenly distributed among "yes," "no," and "unsure" (each 33%). Participants who reported AI use identified ChatGPT as their primary tool. Common approaches for teaching non-clinical skills included lectures (7/9, 77.8%), small-group discussions (8/9, 88.9%), role-play (5/9, 55.6%), and seminars (4/9, 44.4%). No respondents reported using AI chatbot simulations to teach non-clinical skills (0/9, 0%); however, one respondent reported using AI chatbots for assessment in communication and health promotion (1/9, 11%). Despite limited use, most respondents agreed that AI chatbots have the potential to improve student learning (7/9, 78%), provide valuable simulated patient experiences (7/9, 78%), and would be well received by students (9/9, 100%). Reported facilitators for integrating AI chatbots included existing faculty training (3/7, 42.9%), IT support (4/7, 57.1%), access to digital resources (3/7, 42.9%), and institutional innovation initiatives (3/7, 42.9%); however, key barriers identified by participants were concerns about fear and misuse (6/7, 85.7%) and the lack of clear guidelines (6/7, 85.7%).

Conclusion: Despite limited current use, faculty perceive strong potential for AI chatbots to support students' non-clinical skill development in oral health education. Future research should expand recruitment to behavioral science directors and AI technology experts at U.S. and Canadian dental schools with the goal of informing best practices for the responsible and effective adoption of AI chatbots in oral health education.

Drill Down To It: Development and Deployment of Intraosseous Access Training

Aubrey D. Brown, MD; Karishma Patel, MD; Shad Yasin, MD; Megan Leo, MD; Andrew Mittelman, MD
Department of Emergency Medicine; Boston Medical Center

Introduction / Background: Intraosseous (IO) access is indicated for the rapid administration of medications and fluids when quick IV access is difficult. First-pass success is higher for IOs vs. IVs. Humeral IOs (hIO) may be superior. Reflecting the critical nature of this procedure, ACGME has proposed IOs as a required procedure for residents in 2027. However, there is varied exposure to IOs in medical school, and relatively few resources exist for the deployment of an IO curriculum.

Purpose / Objectives: We designed and implemented an in-situ educational intervention with distributed practice to train EM residents on IO placement. Our objective was to subsequently evaluate this intervention on learner-centered and key clinical metrics.

Methods: This study evaluated a just-in-time training for PGY-1 residents on IO placement. The educational intervention consisted of a hands-on didactic and a refresher course 6 months later. A training kit and guide were assembled for deliberate practice between sessions. Learners completed pre- and post-session surveys assessing procedural confidence reported on a 5-point Likert scale. Statistical significance of the median scores was evaluated using the Wilcoxon Signed Rank Test and Bonferroni adjusted p-values. To evaluate clinical impact, we examined the frequency of IO placement and site selection following the intervention.

Results: 24 residents completed the training over 2 years. All residents had an increase in their confidence in the indications (3.5/5 pre; 5/5 post; p 0.036), anatomy (2/5 pre; 5/5 post; p 0.018), site selection (1/5 pre 5/5 post; p 0.018), and required documentation (1/5 pre; 5/5 post; p 0.018). The majority (88%) of residents felt either somewhat or extremely confident they could rapidly place an IO on a critically ill patient (vs. 4% previously)($p<0.001$). Most measures were found to be sustained at follow-up. Overall, IO placement frequency was unchanged across the study; 0.3% of patients arriving in our ED had IO access established during their visit. Rates of hIO utilization nearly doubled (8% pre to 14% post). Provider documentation increased substantially following the educational intervention (19% pre to 42% post).

Conclusion: This curricular innovation sought to capitalize on both distributed and deliberate practice models to teach IO placement to PGY-1 residents. A one-hour workshop increased confidence in all assessed domains. With relatively little time, effort, and equipment, residencies can deploy a similar curriculum to standardize abilities for this important procedure.

Educating Mental Health Clinicians on Approaches to Harm Reduction for Stimulant Misuse

Jose R. Dominguez, MD, MPH; Amy Yule, MD
Department of Psychiatry, Boston Medical Center

Introduction/Background: Stimulants such as cocaine and methamphetamine are common substances of misuse. Management of stimulant misuse is of particular concern for mental health clinicians working with people who use drugs, as stimulant misuse is associated with increased risk of psychosis and suicide. Individuals experiencing psychiatric symptoms of excessive stimulant misuse ("over-amping"), such as anxiety, panic, auditory or tactile hallucinations, are at increased risk of physical or chemical restraints during encounters with emergency psychiatric services. Furthermore, people with severe mental illness are at higher risk of unintentional overdose. In the absence of direct pharmacotherapy to treat stimulant misuse, patients may benefit from discussing harm reduction strategies to reduce the risk of stimulant misuse with their mental health clinicians. However, formal training on these strategies is limited and has not been implemented in mental health treatment settings.

Purpose/Objectives: The purpose of this quality improvement project was to educate mental health clinicians on harm reduction in stimulant misuse (HR-St) and to encourage clinicians to discuss safer stimulant use with their patients. Screening, management of excessive stimulant misuse ("over-amping"), and the role of safe use supplies for stimulants were selected as specific targets for education.

Methods: A 1-hour education session focused on 1) screening for stimulant use, 2) management of excessive stimulant use ("over-amping"), and 3) the role of safe use supplies was developed by an addiction psychiatry fellow in collaboration with a community harm reduction organization and leadership from the stimulant use disorder clinic at Boston Medical Center. Education sessions were conducted within multidisciplinary psychiatry teams at Boston Medical Center over 2 months (January through February 2026). Team members included faculty and staff within the psychiatry department as well as psychiatry residents, nurse practitioner trainees, psychology trainees, and social work trainees. The training was jointly led by the addiction psychiatry fellow and a representative from a community harm reduction organization. Participants completed anonymous surveys immediately before and after the training that focused on their perceived levels of training in and attitudes toward harm reduction in stimulants, including the revised Harm Reduction Acceptability Scale (HRAS-R).

Findings: Participants reported baseline favorable attitudes toward HR-St but identified lack of training and uncertainty in how to discuss the topic as major barriers to discussing safer stimulant use with patients. Following training, participants reported increased understanding of HR-St and increased feelings of confidence in discussing HR-St with patients. Participants felt training addressed educational needs in their role and improved knowledge of community resources in providing care for patients who use stimulants. Participants reported increased favorability towards harm reduction following training as measured by the HRAS-R.

Conclusion: Preliminary results suggest that mental health clinicians who provide care to people who use stimulants are interested in discussing safer use with their patients and hold favorable attitudes toward harm reduction. However, mental health clinicians often feel inadequately prepared to discuss HR-St in clinical encounters. This suggests a need for the development of further harm reduction education for mental health clinicians as well as further investigation into the effects of this education on clinical outcomes.

Artificial Intelligence in Medical Education: Assessing Chatbot Accuracy and Student Preferences

River C. Grace, MD
Department of Psychiatry; Boston Medical Center

Introduction / Background: Generative artificial intelligence (AI) is increasingly used in medical education, but factual accuracy and perceived educational value may not align. This tension is especially pertinent in unsupervised learning settings, where little research has yet been conducted.

Purpose / Objectives: We aim to compare answer accuracy and learner-perceived usefulness of AI-generated versus human-written explanations for psychiatry shelf exam-style questions, using psychiatry as an initial proving-ground specialty to inform broader study of AI-assisted medical education.

Methods: We evaluated 3 open-access AI chatbots available at the time of initial pre-pilot data collection. Each model was prompted with 50 published clinical psychiatry shelf exam questions and asked to identify the correct answer and explain it at the level of a third-year medical student. Model accuracy was compared with the human expert-written answer key. For AI responses that were correct, AI-generated explanations were paired with corresponding human-written explanations from the answer key and presented in blinded fashion to 79 medical students. Students selected the explanation they found more useful for learning and provided free-text rationale for their choices.

Findings / Results: Model accuracy ranged from 50% to 80%. AI-generated explanations were shorter than human-written explanations and more often used chunked information formats such as bullets or numbered sections. Students showed no clear preference between AI-generated and human-written explanations. Students' free-text responses suggested that AI explanations were often valued for clarity and ease of understanding, whereas human explanations were preferred for greater depth and detail.

Conclusions / Discussion: In this pre-pilot study, learners rated accurate AI-generated explanations as comparably useful to human-written explanations despite inconsistent overall model accuracy. Together, these findings suggest that information accessibility and clarity may influence perceived educational value even when system-level reliability remains limited. These preliminary findings informed the design of a subsequent prospective study of trust, calibration, and faculty oversight in AI-assisted medical education.

****BEST RESIDENT/FELLOW ABSTRACT AWARD****

Integrating Point-of-Care Ultrasound Curriculum into a Fourth-Year Internal Medicine Internship **Preparation** Course

Jaeine Lee, MD; Joseph Rencic, MD; Deepti Gunasekaran, MD
Department of Medicine, Chobanian & Avedisian School of Medicine

Background: Point-of-care ultrasound (POCUS) has rapidly become accessible and clinically valuable in internal medicine (IM) practice however POCUS training in undergraduate medical education (UME) remains heterogeneous in scope, depth, and integration. Majority of the UME curricula concentrate instruction in the pre-clinical years with limited integration into clinical curricula and is largely studied within emergency medicine contexts. There is a need to provide focused training in IM-specific diagnostic applications to equip students with foundational skills for residency.

Objectives: We developed, implemented and evaluated a structured two-week POCUS curriculum within a fourth-year internship prep course for IM bound students in February 2026. Learning objectives spanned 4 domains: (1) image acquisition: standard lung, cardiac, JVP, bladder, kidney, and lower extremity DVT views; (2) image interpretation of eight normal and pathologic findings (A- vs B-lines, pulmonary edema vs pleural effusion, IVC size, LV and RV function, pericardial effusion, hydronephrosis, DVT); (3) clinical integration of POCUS in four core diagnostic skills- dyspnea, shock, volume status, and anuric AKI; and (4) Confidence for POCUS use in internship.

Methods: Instruction spanned a total of 12 hours over two weeks with 4 hours of didactics, including normal ultrasound anatomy, pathology review and clinical case scenarios; and 8 hours of supervised hands-on scanning on standardized actors in the simulation center with a 3:1 ratio of learners to instructor, learners to device and learners to simulated patient. Pre- and post-workshop competency was assessed on a 20-item, 5-point Likert-scale survey (including all 4 domains) and a 12-item knowledge quiz (for image interpretation and clinical integration domains). The items in the 2 common domains were aligned across both instruments. Composite Likert scores (0-100) and quiz scores (0-100%) were summarized with medians and IQRs and compared using the Mann–Whitney U test. Spearman correlation assessed associations between perceived and objective performance.

Results:
Self-reported competency improved across all items, with cumulative Likert scores in the pre-survey (n=7) increasing from median of 34 [IQR 28–38] to 73 [IQR 69.5–83.5] on the post survey (n=7) ($p < 0.0001$). Cumulative knowledge quiz scores similarly increased across all items, with a median of 57.1% [IQR 50.0–85.7%] pre-workshop (n=9) to 100.0% [IQR 96.4–100.0%] post-workshop (n=8) ($p < 0.0001$). Positive correlations were found between self-reported competency and objective performance in the image interpretation domain (Spearman rho = 0.79, $p < 0.02$) however they were not statistically significant across the clinical-integration items (Spearman's rho = 0.40, $p = 0.60$).

Discussion:
Our curriculum is novel in its design in 3 ways: 1) adaptation of IM–specific core diagnostic skills from the Alliance for Academic Internal Medicine POCUS consensus guideline, 2) alignment of survey and quiz components within the interpretation and clinical integration skills domains, and 3) Correlation of perceived and objective performance data. Observed Discrepancy between strong pre-course knowledge performance and low baseline confidence in image interpretation suggests limited learner confidence in translating pre-

clinical ultrasound exposure into applied skill. Furthermore, the weaker association between confidence and performance in clinical integration tasks highlights the need for repeated, supervised exposure in the clinical setting with real pathology. Limitations include small single-institution sampling, differing pre/post cohorts, ceiling effects from binary quiz scoring, reliance on Likert scores, and no objective assessment of image acquisition.

Conclusion: This structured 12-hour POCUS curriculum improved self-reported competency and knowledge across all assessed domains in 4th year medical students. Our study revealed persistent gaps in confidence-performance alignment that support the need for longitudinal, clinically integrated ultrasound training with standardized objective assessments.

Incorporation of an International Surgical Oncology Rotation into a CGSO Fellowship Program: Impact and Perceptions

Sasha L. Lightfoot; Steve Kwon, MD, MPH; Bryant Morocho, MD; Ponnandai Somasundar, MD, MPH; Joseph Espat, MD, MS; James Konness; MD.
Surgical Oncology, Roger Williams Medical Center

Introduction: Medical education is increasingly adopting a global perspective, yet international surgical education opportunities are relatively rare during surgical fellowships. Our study aims to assess the trainee's perception of an international rotation (IR) during their Complex General Surgical Oncology (CGSO) fellowship.

Methods: All Roger Williams Medical Center (RWMC) CGSO Fellowship graduates who participated in IRs between 2006-2022 were surveyed (n=10). IRs included 4-week rotations Kenya, India, Pakistan, Mexico, New Zealand, and France. The survey responses were collected anonymously. The survey focused on short- and long-term perception and impact of IR experience using a 5 point-Likert scale.

Results: The response rate was 100% (n=10/10). Most fellows were Caucasian (33.3%) or Asian/Pacific Islander (40.0%), male (80.0%), with current practices in the community (40.0%) or university-affiliated (40.0%) settings, and in urban settings (77.7%). All agreed that they gained exposure to cases they had not encountered during their fellowship in the United States. All but one fellow indicated that they had gained a greater appreciation of resource limitations and cost savings that still inform their practice. Most fellows (70.0%) felt that they learned something that changed their clinical practice. Most also reported that the IR led to long-term professional relationships, collaborations, and exchange of ideas (70.0%). The primary barrier to implementing an IR within a CGSO fellowship was the cost. Sixty percent of the surveyed fellows indicated that without financial support, they would not have participated in the IR. The costs range from $2,000 to $7,000 per month. After completing the IR, 60% of the fellows continue to participate in global health initiatives.

Conclusions: Offering IR in CGSO Fellowships provides exposure to cases and surgical techniques not commonly encountered in the United States, enhances understanding of resource constraints, and fosters the development of an international network of surgeons. Sustainable improvement in the global health landscape may be achieved by integrating IRs into ACGME-approved fellowships. Providing financial support is a major barrier to implementation.

Transformation of Flipped Learning in Dental Education Through a Global Lens

Kevin S. Ma, DDS
Orthodontics and Dentofacial Orthopedics; Goldman School of Dental Medicine

Introduction: The COVID-19 pandemic catalyzed changes in medical education delivery worldwide, forcing institutions to reimagine teaching paradigms. Dental education, with its unique blend of theoretical knowledge and hands-on clinical skills, faced particular challenges during this transition. The flipped classroom model, characterized by pre-class content engagement followed by interactive in-person or virtual sessions, emerged as a vital pedagogical framework during this crisis. However, the pandemic revealed disparities in how different cultures approached this educational shift, a pattern that has persisted not only during the pandemic but also in recent years.

Objectives: This systematic review investigated how flipped dental curricula across multiple countries culturally adapted in response to the pandemic. Our specific aims were to: (1) characterize regional variations in flipped dental curricula in the pandemic era; (2) assess comparative effectiveness of flipped programs across regions; (3) identify culture-specific barriers and facilitators to flipping; and (4) extract transferable insights from crisis-driven innovations that can guide future educational reform in dental education globally.

Methods: A systematic search was performed across PubMed, Embase, Web of Science, and Cochrane databases for studies evaluating flipped dental curricula. We analyzed outcomes including satisfaction, awareness, behavior, performance, and confidence. The quality of experimental designs and risk of bias were assessed. Flipped programs were categorized as fully flipped, where pre-class materials were followed by instructor-led activities, or partially flipped, where online materials were provided with minimal in-class instruction. Temporal analysis examined distribution of program implementation across pre-pandemic (before 2019), pandemic (2020-2023), and post-pandemic (2024-2025) periods to assess the impact of the pandemic on cultural adaptation patterns of flipped pedagogy, with a focus on implementation strategies, participant responses, and reported barriers across geographical regions.

Results: We identified 53 flipped dental curricula from 18 countries, representing 8,297 dental students, residents or fellows, and practicing dentists. Geographic distribution included 14 programs in the U.S., 11 from China, 6 from the United Kingdom, 3 each from Malaysia and Germany, 2 each from Japan, Iran, and Australia, and 1 each from Brazil, Canada, France, India, Jordan, Korea, Saudi Arabia, Sweden, Taiwan, and Turkey. 27 programs (50%) were implemented during the pandemic (2020-2023), compared to only 11 (20.4%) pre-pandemic (2015-2019) and 16 (29.6%) post-pandemic (2024-2025), demonstrating a pronounced surge in flipped pedagogy adoption during the pandemic. Cultural adaptation patterns diverged significantly between regions. North American and European institutions emphasized asynchronous learning platforms with student autonomy, while Asian programs maintained structured collaborative frameworks with enhanced faculty guidance, even in virtual environments. Academic performance favored flipped programs in 38 of 43 comparative studies, though implementation strategies varied regionally. Satisfaction metrics showed 27 of 38 programs reporting above 50% positive reception, with 28 programs indicating preference for flipped programs over didactic comparators. Additionally, 21 programs demonstrated enhanced awareness favoring flipped programs, while behavioral adoption patterns showed regular application of content learned in flipped programs in 5 studies and willingness to apply regularly in 8 studies.

Discussion:

The rate of adopting flipped modules more than doubled during 2020-2023 compared to pre-pandemic years. This surge yielded insights regarding the persistence of cultural pedagogical philosophies even during forced innovation, the reflection of underlying educational values in technological adoption patterns across regions, and the enduring value of emergency-driven teaching resources beyond crisis periods. Post-pandemic curriculum design should retain crisis-era innovations while aligning implementation with local educational cultures, particularly concerning student autonomy expectations, digital platform selections, collaborative learning architectures, and assessment methodologies.

Can an intensive teaching intervention improve ophthalmology board passage rates for residents with low scores on standardized tests of clinical knowledge?

Christine Ament, MD; Dariah Lauer, MD; Haley Ament; Mark Soo, MS[1]
Ophthalmology and Visual Sciences; Chobanian & Avedisian School of Medicine; Boston Medical Center
Northeastern University[1]

Introduction: Recent literature has explored the relationship between medical licensing exams and clinical outcomes. Specifically, trainees scoring higher on United States Medical Licensing Exams (USMLE) become physicians with better patient outcomes and lower patient mortality rates than their lower scoring peers. (1,2) Ophthalmology resident physicians are required to pass the American Board of Ophthalmology Written Qualifying Examinations (WQE) to become board certified. The Ophthalmology Knowledge Assessment Program (OKAP) is an examination similar to the WQE which is given annually to all ophthalmology residents post graduate year (PGY) 2-4 in the United States and Canada. OKAP scores have been shown to correlate with WQE pass rates. (3,4,5) OKAP performance is measured with a raw, a scaled, and a percentile rank score. The percentile score compares the test taker to the contemporary PGY cohort and is the most widely reported and studied scoring metric. The WQE is not scored on percentile rank but rather has a minimum passing score. First time WQE passage rates in 2019-2024 ranged from 73.9-99%. (6) Medical students are required to take three USMLE exams: Step 1, Step 2 and Step 3 (S1, S2, S3). USMLE scores have been shown to correlate with WQE passage rates.3 Since 2022 when USMLE-S1 became Pass/Fail, USMLE-S2 is taken prior to residency application so that this numerical score can be included in the application. The average USMLE-S2 score for matched ophthalmology residents in 2024 was 257, compared with 249 (SD15) for all matched residents. (6) This indicates that USMLE scores are likely considered during ophthalmology resident selection. And because medical students matching into ophthalmology score significantly higher than the USMLE mean, ophthalmology residents are a particularly strong cohort among which to calculate OKAP percentile rank scoring. There is limited data on two important questions for ophthalmology residency administrators: 1- Is WQE pass rate predicted by USMLE scores, similar to the impact noted in the large studies cited above and 2- Which interventions improve OKAP scores and WQE pass rates for residents who perform poorly on USMLE and OKAP.

Purpose / Objectives:

This project was undertaken as a response to low program OKAP scores and low WQE passage rates. Over the past three years, (2023, 2024, 2025) in which 12 of our residents were eligible to sit for the WQE at the conclusion of their residency, 7 residents passed WQE on their first eligible attempt. This rate of 58% first attempt passage rates compares unfavorably to the overall WQE passage rates of 74-99%. (7 8) We designed an early teaching intervention intended to increase the rate of WQE board passage for our trainees. This paper analyzes 1- the predictive value of OKAP and USMLE scores on WQE passage rates and 2- the impact of a this intensive teaching intervention on OKAP and WQE.

Methods:

The intervention started in September 2023 and included 1- required weekly board review session for all residents taught by one attending (CA) and 2- targeted individual remediation (CA) for residents who scored below 20th percentile on OKAP and 3- further remediation for residents who scored below 10th percentile including assigning an additional mentor and a required outside board review course. The USMLE-S1 and S2 score, OKAP performance and WQE result for 44 residents trained between 2018-2026 were collected and de-identified. OKAP scores and percentile ranks for tests taken in 2020 and 2021 were excluded as the exam was optional due to COVID-19. Differences in exam scores between residents who passed versus failed their ABO-

WQE were assessed using Welch's two-tailed t-test, with Benjamini-Hochberg correction to control the false discovery rate. For paired analysis of OKAP scores before and after intervention, two analyses were performed. Pre-intervention scores were compared with post intervention scores. Data were analyzed using paired Student's t-test. p values ≤ 0.05 were considered statistically significant for all analyses. All analyses were performed in R; code is available upon request.

Findings / Results:
USMLE scores were predictive of WQE passage rate. PGY4 OKAP scores were predictive of WQE passage rate. Weekly board intervention increased the average OKAP scores across the program, although there was significant variability between residents, and residents with higher USMLE scores benefited more from the teaching intervention than those with lower USMLE scores. Resident survey data from 2025 indicated a high rate of satisfaction with the teaching intervention, independent of impact on OKAP and WQE scores. We will update this submission with resident survey results from 2026 (released in late April 2026).

Abbreviated References with PMID/DIO only (for character count.) Full references to be included on poster
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When Palpitations Met Sepsis: A Simulation to Teach Diagnostic Priorities

Sonia Ananthakrishnan, MD; Katy Bockstall, MD; Aasman Singh Lama, MS
Department of Medicine; Chobanian & Avedisian School of Medicine; Boston Medical Center

Introduction / Background: Medical education is increasingly adopting simulation to provide students with hands-on, experiential learning. We developed a palpitations simulation, based on one of our clerkship BU Core Diagnoses, to teach a conceptual approach to patients presenting with palpitations and to highlight the intersection of tachyarrhythmias and sepsis—two common inpatient problems with major impacts on morbidity, mortality, and length of stay. Prework reviewed a broad approach of tachyarrhythmias, discussed common triggers, and highlighted practical steps for evaluation and management of palpitations.

Purpose / Objectives: The session aimed to equip clerkship students to: (1) generate a prioritized differential for new-onset atrial fibrillation and other tachyarrhythmias; (2) define sepsis using accepted objective criteria and identify principles of sepsis management; (3) create a clear, prioritized problem list with appropriately defined problems; (4) recognize MRSA risk factors relevant to empiric antibiotic choices; (5) demonstrate effective interprofessional and patient communication; and (6) improve knowledge as measured by pre- and post-session assessment. We used data collected from the assessments to understand the effectiveness of the session and refine the session for the 2026-2027 academic year.

Methods: We implemented a standardized, high-fidelity simulation during the Medicine clerkship with required prework covering differential diagnosis, ECG recognition, and initial management steps. Each session included a brief pre-brief, the simulation scenario (palpitations with evolving hemodynamic instability and concern for sepsis) including faculty and M4 IM Student Chief facilitators, and a structured debrief focused on diagnostic reasoning, management priorities, antibiotic considerations, and communication. Knowledge and decision-making were assessed using multiple-choice questions embedded in the simulation (targeting arrhythmia management, SIRS/sepsis recognition, and MRSA risk). Over one academic year, N=125 responses were collected (out of 155 eligible students). Poll data and learner feedback guided iterative curricular quality improvement for the 26-27 year.

Findings / Results: Among participants (N = 125), overall knowledge improved from pre- to post-test across key domains. Correct identification of sepsis criteria rose from 55.2% to 82.4%, and recognition of MRSA risk factors increased from 27.2% to 67.2%. 86.4% of students initially selected either rate or rhythm control rather than addressing underlying triggers of tachyarrhythmias. This finding validates the need for the simulation, its specific learning objectives and is a central point of discussion in the group debrief.

Conclusions / Discussion: The palpitations simulation effectively increased student knowledge as a curriculum component addressing arrhythmias and sepsis conjointly. Data-driven curricular revisions based on our pilot year results have been implemented for the 2026-2027 academic year. These include reframing diagnostic reasoning in the prework, more emphasis on MRSA risk factor teaching, and refinement of a case-based application question on the post-test.

Connected Communities: Social Events as Drivers of Engagement and Belonging at the Graduate Medical Sciences Community Catalyst Center and Office of Student Affairs

Kimberly R. Arena, EdM; Micheka Fenelon, MS; Theresa A. Davies; PhD; Sarah M. Rowan, MPH
Graduate Medical Sciences, Chobanian & Avedisian School of Medicine

Introduction: Social support structures play a critical role in encouraging and maintaining graduate student success and persistence. This support is critical for students on a medical campus, where high-stakes academic environments converge with pressures like imposter syndrome, social isolation, financial strain, and personal responsibilities. These challenges can lead to physical and mental distress and are particularly acute for students from traditionally marginalized groups. However, these stressors can be buffered with early intervention to support academic growth and a successful social experience that allow access to informal mentorship and help restore work-life balance and develop well-being habits that can support students as they pursue their careers. At Graduate Medical Sciences (GMS), housed within the Boston University Chobanian & Avedisian School of Medicine, efforts to engage students in meaningful social experiences represent a data-informed approach to building peer connections and reducing isolation felt by students pursuing professional and graduate-level education. The Office of Students Affairs and the Community Catalyst Center (C3) within GMS are key drivers of such social experiences. Both offices work independently and in tandem to promote a wide range of social offerings that complement other structured professional and academic development opportunities offered throughout the academic year.

Purpose: A primary objective of this initiative is to increase meaningful participation by students in social extracurricular activities that foster peer connections, reduce social isolation, and support professional and academic growth in events facilitated by Student Affairs, C3, and associated peer mentors.

Methods: The Office of Student Affairs and C3 hosted approximately eight to 10 social events for students throughout academic years 2024-25 and 2025-26. C3 and Student Affairs hosted one social event each approximately every four to six weeks, focusing on a mix of creative art nights, wellbeing activities, school-wide mixers, casual coffee chats, and end-of-semester socials. These general social events were supported at a smaller scale by affinity groups, which hosted their own, peer-led social opportunities for community building, mentorship, and targeted support for students with shared identities or lived experiences. We employed a multichannel marketing strategy to encourage student attendance, utilizing a biweekly newsletter, standalone emails, social media, campus screens, and a student GroupMe channel to advertise upcoming events.

Results: Attendance at GMS social events was consistently and measurably higher by 20-30% than at more formal events related to professional or academic development. While this result does not negate the importance of such formal events, it does show that informal social experiences are appealing to a wider range of students. Professional and academic seminar events may attract subsets of students with more specific interests or needs however, informal social events attract a wider cross-section of students by offering lower pressure opportunities for casual connection from students across programs.

Conclusion: Regular, structured social events are valuable experiences for graduate students and should intentionally complement formal professional and academic development activities. Well-designed social programming offers critical stress reprieve and restorative social time for students to recharge, build relationships, sustain their personal wellbeing, and access informal mentorship opportunities. Investment evidence-based series of social experiences coordinated by Student Affairs and C3, and supported by mentors

and leaders, will yield measurable benefits for individual students, peer groups, and the GMS community as a whole.

Hands-On Introduction to Cardiac Point-of-Care Ultrasound in the Internal Medicine Clerkship

Radha Govindraj, MD;Anoopa Gollapudi, MD; Aasman Singh Lama, MS; Sonia Ananthakrishnan, MD
Department of Medicine; Chobanian & Avedisian School of Medicine

Introduction / Background: Point-of-care-ultrasound (POCUS) is progressively becoming part of a clinician's toolkit with bedside findings influencing both diagnostic and management planning. Providers across multiple specialties are incorporating POCUS into their practice. There is also national momentum to incorporate POCUS training earlier in medical education, starting as early as the first year of medical school. This has been limited by both availability and cost of trained providers and equipment. As these access barriers diminish with time, there is an opportunity to enhance the medical education of our trainees by early exposure to POCUS. At the clerkship level for Internal Medicine, we aimed to do this by briefly introducing how POCUS, specifically cardiac POCUS, can be a clinical aid. We also aimed to give each student an opportunity to not only practice techniques of holding an ultrasound probe but also apply those techniques to obtain the appropriate cardiac images and identify basic cardiac structures.

Purpose / Objectives: The session aimed to provide all students with the opportunity to obtain core cardiac POCUS views, including the parasternal long axis, parasternal short axis and apical four chamber views, as well as practice obtaining a view of the inferior vena cava. Additional stated objectives were to (1) highlight how cardiac POCUS can aide in bedside clinical reasoning on the Internal Medicine clerkship (2) practice holding the ultrasound probe (3) identify basic anatomical structures on introductory cardiac POCUS views. We also collected feedback to inform changes for this session in the upcoming academic year.

Methods: We implemented a standardized workshop during the Internal Medicine clerkship. No pre-work was required. Each session included a brief didactic slideshow with an example of how cardiac POCUS was applied to a clinical case. The didactic also incorporates an introduction to the different views obtained with cardiac POCUS, identification of the structures seen on each view, and techniques to help identify them. Each one-hour session had one instructor (familiar with cardiac POCUS and application) and one live model for the instructor to demonstrate on and students to practice on. Additionally, each session had about 6 - 7 students. To reach all our students, each session was run 3 – 4 times within a clerkship block over six blocks in the 2025 – 2026 academic year. The sessions occurred in the simulation center, which included access to an ultrasound machine and a screen to display a slideshow. The workshop was assessed using a set of standardized feedback questions asked of all sessions offered during the clerkship. We collected feedback on the session to help refine the session for the 2026-2027 academic year.

Findings/Results: Over one academic year, 145 students participated in the session. More than 92% of respondents either agreed or strongly agreed that the session was relevant to the learning objectives (n= 145 responses), the session was clear and organized (n=145 responses), the preceptor was able to engage the class and stimulate interest (n=145 responses) and that they had a good understanding of the clinical points outlined (n=144 responses). Additionally, each student who was present for the full session practiced obtaining cardiac POCUS views. Open-ended feedback suggested that students overall are in favor of this session and desire more POCUS content. More specifically, suggestions include expanding the scope of the session to include more in-depth orientation to ultrasound views, broader (non-cardiac) applications of POCUS, and presence of more ultrasound trained faculty so each student could practice for longer.

Conclusions/Discussion: Adding a POCUS session to our Internal Medicine clerkship curriculum was welcomed by students who also expressed enthusiasm for further opportunities to explore bedside applications of

POCUS during the clerkship, as well as more time spent understanding and obtaining the views. As access to trained providers and ultrasound equipment expands, we anticipate opportunities to further expand POCUS education for medical students to include pulmonary and/or abdominal applications. This access would also allow us to further optimize the session while balancing the finite amount of curricular time within the clerkship to provide this. We aim to align with the BU Chobanian & Avedisian School of Medicine's goal to implement a longitudinal POCUS curriculum and will evolve the session to build upon future students' increasing baseline knowledge.

AI as an Informed Colleague: Refining Grant Proposals with LLMs

Erin E. Kane, PhD; Elaine Lee, PhD
Medical Sciences & Education; Chobanian & Avedisian School of Medicine

Introduction/Background: In an increasingly competitive funding environment, writing successful grant applications demands a clear and compelling scientific narrative that anticipates and addresses potential reviewer concerns while making a strong case for the importance of the proposed research. This presents challenges for because being expert in the subject matter may create blind spots to identifying points of confusion in one's own writing. Researchers may also be so deeply embedded in their science that they misjudge the amount of background required to ground their work for non-experts and provide either too much or inadequate detail. Researchers may also fail to anticipate critiques or concerns coming from outside their discipline, which can be problematic given that reviewers may be drawn from tangential disciplines.

Purpose/Objectives: Here, we report a case study of several faculty members who used different AI tools to address these challenges. We offer strategies for taking advantage of strengths of artificial intelligence tools like ChatGPT while avoiding pitfalls such as "hallucinations" and the potential for plagiarism.

Methods: Four BU faculty members working with the Grants Strategy Office to refine their scientific narrative for grant applications worked with the first author to use terrierGPT, copilot, and NotebookLM to improve their grants, and provided feedback about their experience.

Findings/Results: Faculty members did not find prompts that asked an LLM to edit existing work helpful. For example, one faculty member provided a writing sample with the prompt, "Rewrite this to be understandable to a high school student." While she received that output, she noted that it felt "like a dead end" and was not particularly generative. Similarly, a faculty member struggling to synthesize many complex concepts provided several of his papers and asked for a synopsis of their main points at a high-school level as part of the introduction for a grant; he noted that while "at least it didn't hallucinate anything," it did not provide anything new. On the other hand, approaches where an LLM provided feedback to which they could respond were more helpful. While adjusting for proposal topic, they provided this prompt and a specific aims page: "If you were a reviewer with general expertise in (e.g.,) molecular and cellular biology, could you please identify the points that are most confusing in this summary? Please list specific sentences or ideas that are confusing and explain why it is unclear for the reviewers." For more targeted feedback, they also provided a potential NIH study section roster and the prompt, ""Using this list of potential reviewers, can you please highlight some places to focus on for addressing potential reviewer concerns?"" Faculty found they received actionable feedback which they could interpret, respond to, and iterate from. As one faculty member noted, "This feels like talking to an informed colleague," and left them with many possible next steps. Importantly, AI tools identified these points of confusion but did not rewrite text or fix the points of confusion. Faculty evaluated the AI feedback and then chose whether and how to address each point.

Conclusion/Discussion:
Faculty found that AI tools were at their most useful when providing feedback which faculty could evaluate and respond to, rather than rewriting existing text or generating new text by themselves. In this context, using AI tools strengthened their ability to address their own blind spots and highlighted potential gaps in understanding for the intended audience. These tools helped them to transition from writer-centric prose to reader-centric prose and ultimately strengthened their scientific narratives.

Student Leadership in Student Activity Groups Improves Wellbeing and Decreases Burnout

Vivian Sanchez, MD; Royisha Young, MS; Nichole Ciccarelli, EdM; Angela Jackson, MD
Faculty Office of Student Affairs; Chobanian & Avedisian School of Medicine

Short Description

Student activity organization leaders at the Boston University Chobanian and Avedisian School of Medicine are surveyed annually at the end of their tenure to capture student activity accomplishments and challenges. A total of 92 student organizations are represented here. Student leaders are asked to whether they met their goals, how enriching their leadership was, and whether their work helped decrease burnout.

Detailed Description

Participation and leadership in student activity groups is a crucial element in fostering community and connection amongst medical students. Within our medical school, there are currently 92 student organizations that provide diverse opportunities for engagement and leadership. A mandatory survey of the student organizations' leaders in February 2026 revealed that medical student leadership is perceived as highly enriching, with an average rating of 4.7 on a Likert scale where 5 represents the highest level of enrichment. 90% of students thought their organizations met their goals for the year, contributing to their overall well-being and sense of accomplishment. Furthermore, 77% of these student leaders believe that involvement in leadership roles contributes to a reduction in burnout. These findings underscore the importance of student activity groups in enhancing the educational experience and well-being of medical students.

An Investigation of Genetic Counselor Experiences Transitioning into a Teaching Role Through a Solicited Diary Study

Kathleen B. Swenson, EdD, MS, MPH, CGC
Medical Sciences & Education; Chobanian & Avedisian School of Medicine

Introduction: With continuous expansion of accredited genetic counseling training programs, more genetic counselors are needed to fill faculty roles as course instructors across program curriculum. In addition to navigating a role transition into facilitating and teaching a course, genetic counselors entering a teaching role also require additional skills and knowledge of teaching and learning theory, curriculum design, and assessment, for example, which are not formally taught in graduate training.

Objectives: To understand the experience of genetic counselor educators who transition into the classroom, this qualitative study investigated how genetic counselors navigate this role change and how they develop self-efficacy as teachers. Understanding more about this experience is important for improving the formal training of future genetic counselor educators and supports the persistence of a faculty workforce needed to ensure the success of graduate training programs.

Methods: Through solicited diary methodology, informed by a descriptive-interpretive generic research design, participants shared their experience through semi-structured interviews and a diary. Genetic counselors who have transitioned to the role of a course instructor with less than five years of teaching experience in the classroom were interviewed and invited to maintain a reflective diary across the semester long course. Diary entries were submitted on a weekly basis after teaching a class, which ranged from 8-14 weeks depending on the course structure. The data collection tools were intentional to gather information about the transition into the classroom and to understand the overall teaching experience over the duration of a course.

Results: Fourteen genetic counselor educators participated in the study with an average of 9.7 years professional experience, and 2.7 years of total teaching experience. Coursework taught by participants overlapped the curriculum of a genetic counseling graduate training program across didactic content, discussion-based/clinical skill content, and research focused content. Through the inductive process of constant comparative analysis, interview and diary data were corroborated and analyzed to identify themes that support transition into teaching and development of self-efficacy as teachers. Results demonstrated the value of collegial relationships, subject matter expertise, and preparation, helped support the transition into a teaching role. Student success and overall student engagement further contributed to the development of self-efficacy in teaching when experiences were positive. Finally, maintaining a self-reflective practice was identified as an important aspect of teaching and a skill that translates well across the varied roles in the profession.

Conclusions: Synthesis of these results further demonstrated the importance of near-peer educators in genetic counseling training, the importance to address impostorism in genetic counselor educators, and the importance of providing faculty support through peer supervision. With a greater understanding of the transitional experience of genetic counselors into the classroom, formal training on instructional design, curriculum, assessments, and overall learning theory, may accelerate the transition from clinical counselor to teacher in the classroom for genetic counselor educators, and may ultimately support the faculty workforce needed for the training of future genetic counseling professionals.

What Do Preceptor Evaluations Capture—and What Actually Predicts Licensure Exam Results?

John Weinstein, PhD, MS
Physician Assistant Program, Graduate Medical Sciences, Chobanian & Avedisian School of Medicine

Introduction/Background: Academic performance is insufficient to identify which students will be most successful and which may struggle. Hence, there is a focus on measuring and assessing the contributions of non-cognitive factors. Preceptor evaluations are widely used to assess student performance during clinical training, yet their construct validity and predictive value remain unclear. These evaluations likely reflect a combination of clinical knowledge, interpersonal behaviors, and work ethic, as well as contextual influences such as site and evaluator differences. Understanding what these evaluations measure and which components are predictive has implications for both assessment and admissions.

Purpose/Objectives: This poster will (1) identify latent constructs within clinical evaluation data, (2) distinguish stable student-level signal from contextual variation, and (3) evaluate the association of these components with end-of-rotation (EOR) exam performance and PANCE scores.

Methods: We analyzed longitudinal preceptor evaluation data from physician assistant students. Exploratory factor analysis identified latent constructs within evaluation items. Mixed-effects models were used to partition variation into student-level and site-level components. A student-level estimate of the non-cognitive construct was derived using random effects modeling. Associations between raw and site-adjusted measures and outcomes (EOR exams and PANCE scores) were evaluated using linear regression. Relationships with pre-matriculation metrics (CASPer, science GPA, interview scores) were also examined.

Findings/Results: A distinct non-cognitive factor emerged, reflecting interpersonal behaviors and work ethic, separate from clinically oriented items. Raw evaluation scores were substantially influenced by site-level variation. After adjusting for site effects, a stable student-level signal remained. This student-level non-cognitive signal was strongly associated with PANCE performance (~18 points per standard-deviation increase), compared with a smaller effect on raw scores (~14 points). Within-student (rotation-level) variation in the non-cognitive factor was not associated with EOR performance, while between-student differences showed modest associations. Prematriculation metrics, including CASPer and academic performance, were not significantly associated with the student-level non-cognitive construct.

Conclusions/Discussion: Clinical evaluations capture both contextual variation and a stable non-cognitive student-level signal. Only the stable component demonstrates strong predictive validity for licensure outcomes. This construct, comprising interpersonal performance and work ethic, is not captured by commonly used admissions metrics, suggesting that key determinants of success emerge during clinical training and are obscured by variability in evaluation contexts. These findings support the use of longitudinal and mixed-effects approaches to improve measurement and highlight the importance of non-cognitive performance in trainee assessment.

****BEST FACULTY/STAFF ABSTRACT AWARD****

Preparing Students to Utilize Artificial Intelligence in Clinical Decisions

John R. Weinstein, PhD, MS; Melissa DiPetrillo, MD; Aliza Stern, MMSc
Physician Assistant Program, Graduate Medical Sciences, Chobanian & Avedisian School of Medicine

Intro/Background: Artificial intelligence (AI) is rapidly becoming embedded in clinical practice. Many hospitals now integrate predictive models into their electronic health records, and clinicians increasingly rely on AI tools. Yet guidance on how to meaningfully incorporate AI findings into clinical decision-making remains limited. Healthcare practitioners who use AI often perform no better than those without access to AI and, at times, worse than the AI system alone. Despite these challenges, the ability to critically engage with AI is an essential skill for future clinicians. However, most health professions programs lack formal instruction on this topic. This presentation evaluates a new curriculum designed to teach healthcare students how to use AI in medicine and integrate AI findings into clinical reasoning.

Purpose/Objectives:

To determine whether our AI curriculum:

- Improves students' knowledge of AI and its applications in healthcare.
- Increases students' recognition of potential biases and ethical dilemmas associated with AI use.
- Helps students effectively integrate AI findings into clinical decision-making.

Methods: AI content was integrated longitudinally into the didactic phase of a physician assistant program through lectures, facilitated discussions, journal clubs, and interactive activities. As part of a session on bias in clinical algorithms, students examined the social impact of AI-based tools. In the Introduction to Research course, students completed an applied activity in which they developed a simple AI skin cancer classifier and tested it on two datasets: one from the original training distribution and another enriched for darker skin tones. Differences in model performance prompted structured reflection on bias and generalizability. Students then received a lecture on the fundamentals of algorithms, common sources of bias, and approaches to interpreting AI research. These concepts were reinforced through two journal club sessions focused on applying AI research findings to clinical practice; to scaffold these discussions, students submitted questions about the assigned articles in advance. Students' readiness to use clinical AI was assessed before and after the curriculum using the MAIRS-MS scale. Pre- and post-curriculum scores were compared using paired t-tests. In addition, using a published set of AI competencies for healthcare professionals as a framework, we conducted a thematic analysis of students' journal club questions to assess their evolving understanding.

Findings/Results: Two cohorts (N = 42) have completed the curriculum, with a third in progress. Students demonstrated significant increases in total MAIRS-MS scores following the curriculum (mean_pre = 69.0 vs. mean_post = 87.9), indicating improved overall readiness to apply AI in clinical care. Significant gains were observed across all MAIRS-MS domains —cognition, ability, vision, and ethics. The mapping of students' journal club questions to clinical AI competencies revealed evidence of both foundational AI knowledge and more advanced competencies, including evidence-based evaluation of AI tools and critical engagement with the social and ethical implications of AI. Analyses of how students apply this knowledge during the clinical phase are ongoing.

Conclusions/Discussion: In the context of rapid AI adoption and limited regulation, health professions students must understand the appropriate, ethical use of AI in clinical care. Although students both recognize and desire formal training in this area, most programs provide little or no instruction. Our findings suggest that

a longitudinal, hands-on curriculum can enhance students' readiness to use AI and foster critical engagement rather than passive adoption. Ongoing work will assess whether these gains persist over time and translate into improved clinical decision-making during the clinical phase of training.

Testing the Waters: Evaluating the Clinical Impact of PISCEs Participation

John Weinstein, PhD, MS; Jonathan Wisco, PhD[1]; Charles Mininger; DMSc; Robert Bagniski, MD; Aliza Stern, MMSc
Chobanian & Avedisian School of Medicine, Graduate Medical Sciences, Physician Assistant Program
Chobanian & Avedisian School of Medicine, Anatomy and Neurobiology[1]

Introduction/Background: Team-based learning has many potential benefits in medical and PA education, including improved learning, student confidence, and critical thinking skills. However, most programs use team-based learning as one of several teaching methods, rather than the predominant mode of instruction. The medical school and PA program recently underwent a curricular redesign from a traditional lecture-based format to one primarily of flipped-classroom and group-based instructional design strategies, Principles Integrating Science, Clinical Medicine and Equity (PISCEs).

Purpose/Objectives: The objectives of this study were to determine whether this new curriculum, by making students more active participants in the learning process, led to better performance during the clinical year as measured by: (1) end-of-rotation exams; (2) preceptor evaluations; and (3) the summative end-of-curriculum exam.

Methods: Two cohorts were analyzed to compare the differing curricula — the final cohort with traditional didactics (Class of 2024) and the first cohort under the new curriculum (Class of 2026). Due to the curriculum change, there was no class of 2025. To ensure similarity between the two cohorts, pre-matriculation data (GPA and CASPer) and PACKRAT scores after the didactic phase were compared using Student's t-tests. Mixed-effects models were used to assess differences in PAEA end-of-rotation exam scores and preceptor evaluations between the cohorts. Multivariate linear regression models were used to determine differences in end-of-curriculum exam scores.

Findings/Results: The two cohorts were similar before matriculation; there were no significant differences in undergraduate GPA or CASPer score, suggesting no cohort-level difference in academic preparation or ability. Furthermore, there was no significant difference in the PACKRAT score, indicating a similar level of medical knowledge prior to entering the clinical year. However, there were marked differences in preparedness measures for the clinical year. The class of 2026 had higher mean scores across all domains of the preceptor evaluation forms; after adjusting for clinical setting, these differences were statistically significant for the ability to perform procedures, generate differential diagnoses and management plans, and educate patients. In mixed-effects models, after adjusting for student demographics and exam topic, PISCEs' participation was associated with a 12.0-point increase on end-of-rotation exams, with the effect most pronounced on earlier rotations. Improvements in performance continued to the summative end-of-curriculum exam, where the class of 2026 scored 38 points higher and 12.9 points higher after adjusting for improved end-of-rotation scores.

Conclusions/Discussion: Students participating in PISCEs significantly outperformed those in traditional didactics across several measures of clinical-year success. Comparable undergraduate GPA and CASPer scores suggest no significant differences in academic preparation or non-cognitive attributes between the two cohorts. Furthermore, both classes demonstrated comparable PACKRAT scores, indicating a similar level of baseline clinical knowledge prior to the clinical phase. Consequently, improved performance in the clinical year is likely attributable to the pedagogical format of the new curriculum. By requiring students to be active participants in their education, the model fosters the metacognitive skills necessary for self-directed learning

during rotations. These skills continued through the clinical year, extending to improvements in. Additionally, by shifting the in-class focus from knowledge acquisition to clinical application, students enter the clinic with superior decision-making skills, as evidenced by improved preceptor evaluations of management plans. These findings suggest that a comprehensive shift to active learning better prepares students for the transition from classroom to clinic than traditional didactic models.