Learning How to Learn Medicine: A Student-Led Initiative to Foster Active Learning Strategy Adoption



Paige A. Romer, MA, Tai Lockspeiser, MD, MHPE University of Colorado School of Medicine

No disclosures

Background

- Active recall and spaced repetition are learning strategies that have been associated with better student outcomes.
- Passive learning strategies, such as rereading notes, are associated with worse long-term recall.
- Despite strong evidence on how best to learn, many medical students don't apply these strategies and struggle with adjusting to medical school.
- Peer teaching has long been recognized as an effective approach to education but has not been used to teach learning skills.

Project Description

- Paige Romer, a former teacher with a masters in education psychology and current medical student at CUSOM, worked with UME faculty to develop a talk on learning science, active learning strategies, and learning in medical school.
- Evidence-based learning strategies were interwoven with reflections from Paige and other students about learning in medical school.
- An additional talk on learning in the clerkship year has since also been developed.
- These two talks have now reached over 1000 students and faculty members.
- The session has been evaluated similarly to all other lectures in medical school.

Learning How to Learn **Medicine Session** PASSIVE -> ACTIVE Ask for help The Forgetting Curve

Student Response

81% of students thought it was more effective to have a peer present this material compared to a faculty member.

"Hearing [a student's] perspective and knowledge made me feel like her advice was more applicable to our reality since she had experienced it."

"Her lectures are always incredibly helpful, and always come at a time when I feel like I'm struggling with learning techniques. I still use the information she presented in her first lecture during our first year everyday."

"This is a course that should be taught in high school, college, and medical school. Having resources to help guide learning allows students to learn a lot more effectively."

Suggestions for Implementing a Similar Program

- Identify students with a teaching background and pair them with a faculty mentor to collaboratively develop learning objectives and strategies for the session.
- Design a session that focuses on concrete active learning strategies and student reflections on their own experience.
- Consider having multiple student presenters collaborate on a presentation.
- Student presenters can give a practice presentation to faculty both for feedback and to make sure faculty are aware of the strategies shared.
- Plan the session for times in the curriculum when students may need new learning strategies, such as before first year and the clerkship year.

References

- Augustin M. How to learn effectively in medical school: test yourself, learn actively, and repeat in intervals. Yale J Biol Med. 2014 Jun 6;87(2):207-12. PMID: 24910566; PMCID: PMC4031794.
- Brierley C, Ellis L, Reid ER. Peer-assisted learning in medical education: A systematic review and meta-analysis. Med Educ. 2022 Apr;56(4):365-373. doi: 10.1111/medu.14672. Epub 2021 Oct 24. PMID: 34595769.
- Graffam, B. (2007) Active learning in medical education: Strategies for beginning implementation, Medical Teacher, 29:1, 38-42. DOI: 10.1080/in14215906011766398
- Mahan, J. D., & Stein, D. S. (2014). Teaching adults-best practices that leverage the emerging understanding of the neurobiology of learning. Current problems in pediatric and adolescent health care, 44(6),
- 141–149. https://doi.org/10.1016/ji.cppeds.2014.01.003 Nabizadeh S, Hajjan S, Sheikhan Z, Rafiel F. Prediction of academic achievement based on learning strategies and outcome expectations among medical students. BMC Med Educ. 2019 Apr 5;19(1):99. doi: 10.118/s/s1290-01-118-527-9-MID: 30935300; PMCID: PMC6451587