

MCAT Strategies: Assessment, Analysis, and Action

Kayla Cullum

Abstract:

"MCAT Strategies: Assessment, Analysis, and Action" was presented at the 2023 NEAAHP Conference in Niagara Falls, NY. This presentation provided background information on an assessment performed by the Johns Hopkins University Office of Pre-Professional Programs and Advising in the Fall of 2022. The assessment surveyed students and alumni who had taken the MCAT to learn their test-taking strategies and experiences while studying for the exam. During the conference, results were shared, as well as mistakes made and changes for future assessments. We hoped to teach colleagues how to develop a simple MCAT questionnaires with results that prove helpful to future test takers as well as advising staff. Our objectives for the conference session were to:

- Learn MCAT test-taking behaviors and strategies from students attending a mid-sized, private university.
- Discover challenges of developing an MCAT questionnaire and reflect on updates to be made for future assessments.
- Allow session attendees to generate questions for their own MCAT Strategies questionnaire.

Keywords:

MCAT, exam preparation, study strategies, assessment

The Medical College Admission Test® (MCAT®) is a standardized, multiple-choice examination designed to assess your problem-solving, critical thinking, and knowledge of natural, behavioral, and social science concepts and principles prerequisite to the study of medicine (American Association of Medical Colleges, n.d.). Students interested in applying to allopathic (MD) or osteopathic (DO) medical schools, along with other popular health professional programs, must

take the MCAT prior to applying to gain admission. As pre-health advisors, we are frequently asked by our students:

- How long should I prepare for the MCAT?
- What test prep materials are the best to use?
- How much time should I set aside to study for the MCAT monthly/weekly?
- When is the best time for me to take the MCAT?

Kayla Cullum is Assistant Director in the Office of Pre-Professional Programs and Advising at Johns Hopkins University.

Address correspondence to kcullum1@jhu.edu

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There is not a “one size fits all” answer to these questions. Advisors should answer these questions based on the individual student asking and their path as a pre-health student thus far. Our MCAT strategies survey aimed to educate our advisors on best practices for preparation for this exam and to gauge what other extracurricular activities our students felt were possible to maintain while also studying for the exam.

Assessment

The Johns Hopkins University Office of Pre-Professional Programs and Advising used the questions above and our interactions in advising sessions as a guiding tool for creating the 2022 MCAT Strategies Assessment. Designed in Qualtrics, we used a combination of multiple choice and short answer questions to survey students on their preparation strategies, overall timeline, and other activities while studying for the MCAT. Our survey was sent via email in the fall of 2022 to current junior and senior students as well as alumni from our past cycles. We yielded 110 responses over a three-month period, which was a lower completion rate than we had hoped, given that our committee cycles each year average around 400 students. Students were told in the initial survey email that it would take students no more than eight minutes to complete, but no incentive was offered for completing the survey. We hoped that giving students a low time-to-complete for the survey would yield higher results. Thankfully the students who did fill out the survey were extremely forthcoming with advice and helpful information on their MCAT preparation journeys. They were eager to share their knowledge with fellow students and allow others to learn from their mistakes. This

was, in turn, helpful for our advising team to be able to give anecdotes from the survey in our advising sessions to further cement specific study strategies.

Analysis

Through our assessment, we found that 60% of students started preparing for their exam 1-3 months prior to their test date with 67% of students studying for more than 15 hours a week. A common theme in the qualitative answers was mental health. Students urged their peers to take care of themselves during their preparation and to find time each week for something that made them happy and took their mind away from the materials. One student recalled, “I took at least one day off every week because I refused to let the exam dictate my life – and the result was that I studied, worked, and had a great summer.”

At 57%, the majority of respondents took the MCAT in the summer, the second highest being the fall at 22%, with 15% and 6% in the spring and winter respectively. The majority of our students, 86.4%, took the MCAT once, followed by 10% taking it twice. Those who took it twice stressed the importance of not just memorizing content but practicing problems more frequently.

Students utilized a wide variety of MCAT preparation materials (**Figure 1**). Respondents urged students to find free resources first and then use their funds to supplement what they may be missing. Respondents noted using multiple resources to prepare, with the AAMC preparation materials, resources from Kaplan, and materials from U World being the most common resources used.

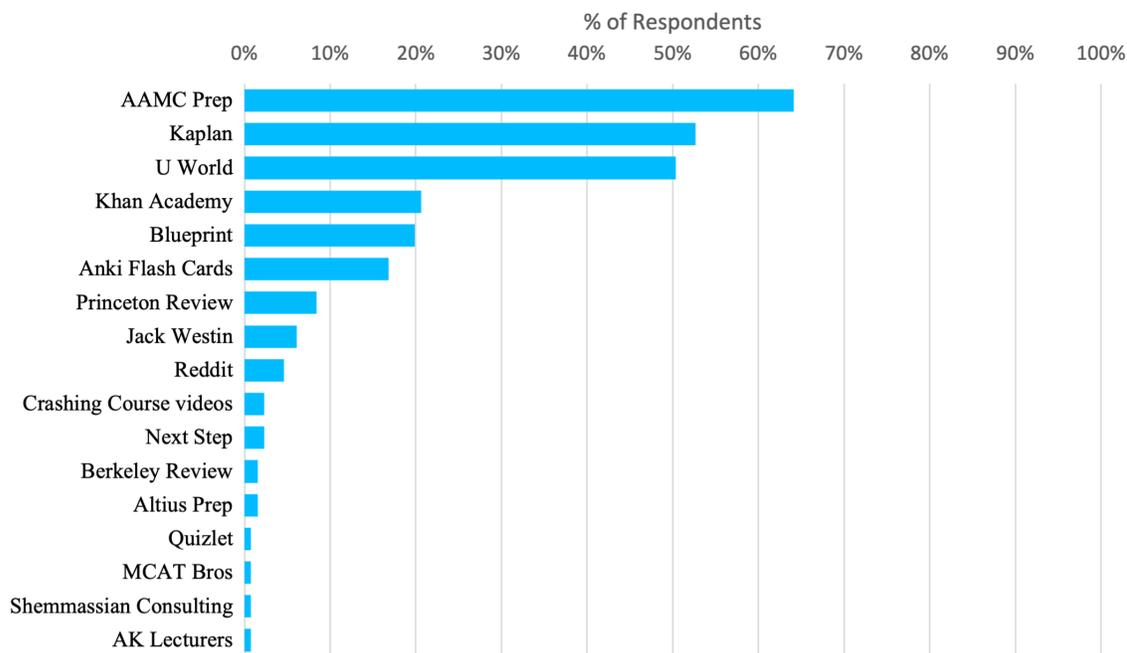


Figure 1. Student utilization of MCAT preparation materials by percentage of respondents.

MCAT Strategies: Assessment, Analysis, and Action *(continued)*

Once the survey closed, we utilized our student worker to compile the data into an online guide to share far and wide. The guide was made [live on our website](#) around spring break and by June 2023 had been viewed 1,657 times. The average time spent on that webpage is around 2 minutes and 30 seconds. In combination with the guide, we took specific areas from the survey and made them into videos shared on our social media channels. Our videos addressed the most common times when students took the MCAT by season, what else students did while they were studying for the MCAT, and two videos with quantitative data focusing on helpful tips shared by respondents. These videos have been viewed more than 8,000 times on Instagram alone. From March 2023 to June 2023, we reached 81.9% more accounts on Instagram than the previous 90-day span and increased our follower account more than 6% thanks to these videos. These videos were also saved by our viewers more than 100 times, allowing students to refer back to the information as needed.

Future Actions

The ways in which Johns Hopkins University “tracks” pre-health students has been a topic of conversation internally for some time. The biggest improvement to be made to better understand the number of students we serve is how we count how many students are on our pre-health “track” at any given time. Currently, this is done through our listserv numbers, but those numbers include students who are no longer pre-health but never unsubscribed. Similarly, it is possible that there are pre-health students who are not on the listservs. Fixing this tracking problem would allow future surveys to get to the right students, and the percentage of responses could be compared to the population at that time.

In analyzing this survey, we learned several places where we will change some of the text to clear up ambiguity and gain better answers from respondents. For example, we did not clarify what we meant by “Fall 2022” in the answer option, so many students may have thought that September dates were considered fall while others might have considered them summer. Further, we would change the question, “What types of exam prep (resources, practice tests, reading, etc.) were most useful?” to a multiple-choice question with the option for “other” instead of the short answer format used here. This would have allowed us to analyze data quicker; however, we would lose the opportunity to capture meaningful anecdotes we received from students who were very descriptive in how they used certain resources compared to others. For example, one student answered, “I used the Princeton Review content review books, watched many Khan Academy videos, and used the Jack Westin Content Outline. For practice problems, I purchased both the AAMC Online Prep-Bundle and a UWorld QBank subscription. I also used Anki to help with memorizing some of the content.” We have many more comments like

this where students described specifically what resources they used for a specific type of review, which would be lost with a multiple-choice question. Lastly, we felt like asking “What courses were most helpful in preparation for the exam?” did not help us learn anything new. The answers were largely all the required pre-health courses and major specific classes that we knew a lot of our pre-health students took, for example, cell biology and genetics.

During this session at the NEAAHP Regional Meeting in June 2023, we gave the audience time to make their own MCAT assessment and work together to come up with more questions we should have asked. The suggestions that came from this conversation were very helpful for future survey building and would allow us to dive even deeper in the connections made between MCAT scores, type of preparation, SAT/ACT score correlation, and more. The most popular suggestions were as follows:

- When students took the exam vs. what they scored
- Spacing practice exams and how to specifically use them to prepare
- Actual score vs. practice score
- If accommodations were used and a student’s correlating score
- Where students took the exam and how far from the locations they live
- How did students create, and adjust as needed, their study plans
- Did students focus on one or more topic(s) each week
- How many times did students come back to each topic vs. their scores in those areas
- Independent vs. group studying
- Whether the student took a gap year(s) and the correlation between their MCAT attempt(s)

Overall, the results we received were very insightful and have proved to be a great resource for our students. Our office is working on creating a similar resource for our pre-dental student population who are taking the DAT. We believe this would be a great assessment to complete annually with the hopes of capturing more data on students who have taken the exam twice and the differences in their preparation strategies, as well as any new preparation materials that become popular.

References

American Association of Medical Colleges. *About the MCAT® exam. Students & Residents.* (n.d.) <https://students-residents.aamc.org/about-mcat-exam/about-mcat-exam> (Accessed: 01 February 2024).

