

How research experience can strengthen your medical school application

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Critical thinking is a part of the field of medicine, and for prospective medical students it will play a key role—especially on portions of the Medical College Admission Test (MCAT)—in determining whether they gain acceptance to medical school.

One method to sharpen your critical analysis skills and prepare for medical school is to participate in research as either an undergraduate student or during the time between college and medical school.

“Any and all research—including non-medical research—is beneficial,” said Haidn Foster, an AMA member and third-year medical student at the University of Cincinnati College of Medicine (UC). “If you can apply to medical school with six months or a year of sustained research, even if only part-time, it shows a dedication to learning and problem solving that admission committees look upon favorably.”

Research and admissions

A medical student’s admissions portfolio—the varying aspects of an application—is going to include an undergraduate transcript, MCAT scores and a number of experiential factors that speak to one’s readiness for a career in medicine.

A 2019 survey of medical school admissions faculty, conducted by the Association of American Medical Colleges (AAMC), looked at the academic metrics, experiences and demographics that go into which applicants receive interview invitations and acceptance offers.

Among respondents evaluating the types of experiences they see on applications, research or laboratory experience was viewed as having medium importance. Greater weight was given to community service or volunteer experiences, shadowing experiences and experiences that

demonstrated leadership.

Learn more with the AMA about how volunteering now can make you a better medical student.

John D. Schriener, PhD, is associate dean for admissions and student affairs at Ohio University Heritage College of Osteopathic Medicine, one of 37 member schools of the AMA Accelerating Change in Medical Education Consortium. He said not all research experiences are created equal.

“When we look at research, we are looking at what a student has been doing,” Schriener said. “Are they really contributing to that? Are they having a meaningful experience where they try to get a full spectrum of what research is all about?”

Read about what medical schools are looking for beyond the MCAT.

How research pays off in medical school

Now pursuing an MD-PhD at the University of Southern California Keck School of Medicine, Drayton Harvey participated in four years of research during his time as an undergraduate at Dartmouth College.

His research on topics such as sudden infant death syndrome resulted in publications and presentations. It also allowed him to strengthen his medical school application and question situations from a different vantage point. That mindset, he said, has carried over to medical school.

“Med school, more than undergrad, is really about applied knowledge,” Harvey said. “Yes, you are drinking from the fire hydrant constantly to learn all there is to know about human physiology and pathology. At the same time, you are learning to apply that in the clinic, and that’s where research helps. It asks you to push and ask questions based on the knowledge you do have.”

Schriener echoed the sentiment.

“We value research as a whole,” he said. “It exposes you to methods, protocols, processes, analysis, and those are things that are going to help you as a medical student.”

Is research mandatory for medical school?

Most medical students have some research background prior to applying.

According to a 2019 survey of incoming medical students conducted by the AAMC, nearly 60% of respondents participated in a laboratory research apprenticeship for college students. Among survey respondents who took one or more year off between college and medical school, 46% said they spend a portion of that time volunteering on some form of research.

While it certainly can help your application to have some research in your background, it's not mandatory. Schriener said you can put together a solid medical school application without much or any research on your resume.

“There are a lot of candidates who apply coming from institutions, maybe smaller liberal arts colleges, that maybe don't have a research component,” Schriener said. “We don't want to ding someone that doesn't have those opportunities.” Medicine can be a career that is both challenging and highly rewarding, but figuring out a medical school's prerequisites and navigating the application process can be a challenge into itself. The AMA premed glossary guide has the answers to frequently asked questions about medical school, the application process, the MCAT and more.

Have peace of mind and get everything you need to start med school off strong with the AMA.