AAMC
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2024
Official Guide to Medical School Admissions
How to Prepare for and Apply to Medical School

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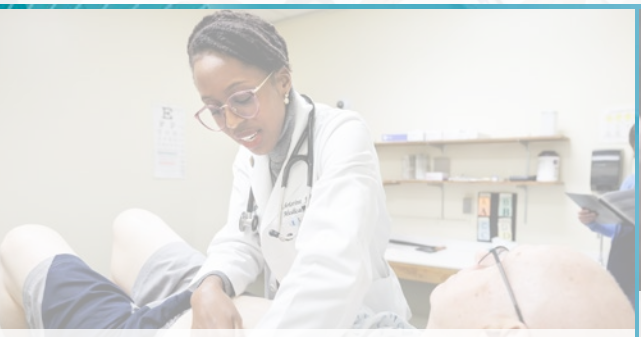
Association of
American Medical Colleges

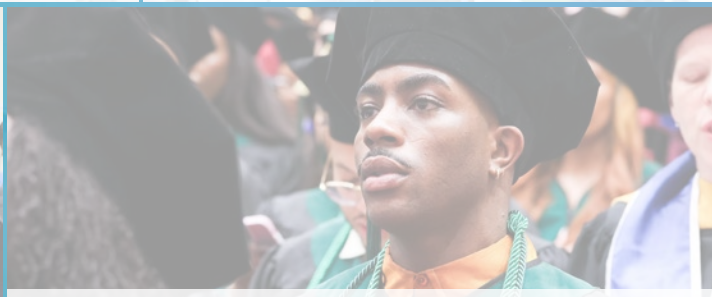
FRONT COVER: ABOUT THE IMAGES

Medical College of Georgia (MCG) at Augusta University students.

Class president and Commencement Day speaker addresses her classmates and their guests at the 2024 Emory University School of Medicine MD Diploma Ceremony.



Mercer University School of Medicine (MUSM) student during a standardized patient encounter.



Graduating MD student recites official oath during a Morehouse School of Medicine (MSM) commencement ceremony at the historic Martin Luther King Jr. International Chapel in Atlanta, Georgia.

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Association of American Medical Colleges
Washington, D.C.

2024 Official Guide to Medical School Admissions

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Note: The AAMC regularly reviews its publications and educational materials to assess and adapt language as accepted usage continues to evolve. This document reflects the AAMC style guide at time of publication.

About the AAMC

The AAMC (Association of American Medical Colleges) is a nonprofit association dedicated to improving the health of people everywhere through medical education, health care, medical research, and community collaborations. Its members are all 159 U.S. medical schools accredited by the Liaison Committee on Medical Education; 13 accredited Canadian medical schools; nearly 500 academic health systems and teaching hospitals, including Department of Veterans Affairs medical centers; and more than 70 academic societies. Through these institutions and organizations, the AAMC leads and serves America's medical schools, academic health systems and teaching hospitals, and the millions of individuals across academic medicine, including more than 201,000 full-time faculty members, 97,000 medical students, 158,000 resident physicians, and 60,000 graduate students and postdoctoral researchers in the biomedical sciences. Following a 2022 merger, the Alliance of Academic Health Centers International broadened participation in the AAMC by 70 international academic health centers throughout five regional offices across the globe. Learn more at aamc.org.

Important Notice

The information in this book is based on the most recent data provided by AAMC-member medical schools at the request of the AAMC.

We edited and, in some instances, condensed the material to meet space limitations. In compiling this edition, we made every reasonable effort to ensure the accuracy and timeliness of the information, and, except where noted, the information was updated as of summer 2024. All the information, however, especially figures on tuition and expenses, is subject to change and is nonbinding for the medical schools listed and the AAMC. All medical schools listed in this edition, as with other educational institutions, are subject to federal and state laws prohibiting discrimination on the basis of race, color, religion, sex, age, disability, or national origin.

Such laws include Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, and the Age Discrimination Act of 1975, as amended. For the most current and complete information about costs, official policies, procedures, and other matters, please contact individual schools.

In applying to U.S. or Canadian medical schools, applicants need not go through any commercial agencies. The AAMC does not endorse any organization or entity that purports to help applicants gain admission to medical school, other than undergraduate premedical advisors and medical school admissions officers.

AAMC Commitment to Diversity and Inclusion

The AAMC's mission is to serve and lead the academic medicine community to improve the health of people everywhere. As the U.S. population ages and grows more diverse, understanding the benefits of diversity, equity, and inclusion becomes critical to addressing the health of the nation, especially in light of persistent health care disparities. The AAMC's commitment spans more than three decades, demonstrated by programs, advocacy, research, and leadership engagement activities that promote diversity, equity, and inclusion in medicine and biomedical research. Information about AAMC initiatives is available at aamc.org/diversity.

Contents

Contents

Figures, Tables, and Worksheets

Figures, Tables, and Worksheets

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

How to Use This Guide

The AAMC works through many avenues to support medical education and help aspiring physicians succeed in their path to medical school. We created this guide to serve as a resource for students considering a career as a physician. Each chapter explains one aspect of the medical school admission process, and each is carefully reviewed every year by content experts at the AAMC.

You may choose to read this book cover to cover, or you may prefer to skip ahead to chapters most relevant to where you are in the application process. Here are some tips to get the most out of this guide.

Skim the table of contents before you begin reading.
Not everyone takes the same path or is in the same place when they use this guide. You may want to read the chapters in the order that most relates to where you are in the process and what you need to know to move forward.

Use and update the chapter worksheets.
At the end of each chapter, you'll find a worksheet that can help you with your medical school application. Topics include tracking your volunteer experiences, finding people to write your letters of evaluation, and determining the right time to take the MCAT® exam. You may want to complete these worksheets after you read the chapter or hold onto them until you're at that phase of the application process. You can print copies of the worksheets or complete fillable PDFs.

We encourage you to share your work with your prehealth advisor as you complete the worksheets. You should have an advisor or mentor to help guide you through this process. Find out more about the benefits of working with an advisor in Chapter 2, "Undergraduate Preparation." If you do not have a prehealth advisor at your school, you can find one at NAAHP.org.

Look through the data in this book to understand the national picture.
Part of being a well-prepared applicant is knowing more about the national applicant and acceptance data. While every applicant is different, and every medical school accepts applicants with a range of scores and experiences, it can be helpful to see how you compare with other applicants across the country. This will help you to decide, along with your prehealth advisor, when you're ready to apply to medical school. The data in this book comes directly from the AAMC Data Warehouse, the AAMC Data Book, the American Medical College Application Service® (AMCAS®), the MCAT, and surveys conducted with entering and graduating medical students such as the Graduation Questionnaire (GQ) and the Matriculating Student Questionnaire (MSQ). The data is comprehensively updated each year with the most current information available at the time of production. Because this information comes directly from the source, you can trust that it is the most up-to-date and accurate information available. For more information, you can refer to the AAMC FACTS tables.

Check out the Medical School Admission Requirements™ (MSAR®) site when you're ready to look at individual schools.
One of the most important decisions you'll make is where to apply to medical school. The AAMC's Medical School Admission Requirements™ (MSAR®) website provides the most comprehensive, up-to-date information and data. When you're ready to start researching medical schools, tap into this powerful online database of information on U.S. and Canadian medical schools and baccalaureate-MD programs. As the gold standard for admission requirement information, this is the only comprehensive resource of accurate and current data directly from the MCAT program, the AMCAS program, and medical school admissions offices. Your subscription allows you to search, sort, and save information.

The AAMC has resources to help you, from inspiration through practice.
We have numerous resources to help you, whether you're just considering a career as a physician or you're already applying to medical school. Take a look at these premed and applicant resources, and tell other applicants about them if you find them useful.

- Aspiring Docs®
  - Aspiring Docs Diaries
  - Inspiring Stories
  - Fact Sheets
  - Ask a Medical Student
- Anatomy of an Applicant
- Financial Aid and Financial Literacy Resources
  - Financial Information, Resources, Services, and Tools (FIRST) Fact Sheets
  - MedLoans® Organizer and Calculator
  - AAMC Financial Wellness Program
- Medical College Application Test® (MCAT®)
  - *MCAT® Essentials for Testing Year 2025*
  - *The Official Guide to the MCAT® Exam*
- AMCAS
  - *2025 AMCAS Applicant Guide*
- Careers in Medicine® (CiM)

Keep up with us on social media.
One of the best ways to find out what's going on is to follow us on social media and check out our videos on YouTube:

Facebook: facebook.com/aamcpremed

X: x.com/aamcpremed

Instagram: instagram.com/aamctoday

YouTube: youtube.com/user/AAMCvideo

A note about MD versus DO programs: This guidebook explains the process of preparing for and applying to medical doctor (MD) programs accredited by the Liaison Committee on Medical Education (LCME®). You may have heard of osteopathic medicine programs that grant doctor of osteopathic medicine (DO) degrees. DO and MD programs have many similarities; both types of physicians are fully certified to practice medicine in the United States after passing board examinations. For more information about DO-granting schools and admission requirements, consult the American Association of Colleges of Osteopathic Medicine.

CHAPTER 1

So . . . You Want to Be a Doctor

Aaron Teng-Hei Hui
Albert Einstein College of Medicine
Class of 2026

Do you remember when you first decided to pursue medicine? I believe that within each of us lies an innate desire to make a difference, to touch lives, and to bring healing to those who need it. I wager that it is this profound yearning that has led you not only to embark on but also to embrace this journey — a journey that will shape your life as well as also countless other lives in the years and decades to come.

However, make no mistake: This journey will be difficult. Medicine, after all, is not just a profession; it's a calling that both demands and requires steadfast dedication, resilience, and a relentless pursuit of new knowledge. It is a field that constantly challenges the very limits of our understanding and often pushes the boundary of what is possible. It requires a curious mind, a compassionate heart, and a spirit that refuses to yield to adversity.

Yet, while the path ahead will be arduous, remember that you possess a unique set of skills and qualities that cannot be defined simply by test scores and GPA alone. Your intellectual capacity, honed by your studies, will equip you to comprehend the complexities of the human body and begin to unravel the mysteries of disease. Never forget that it is your empathy and your ability to see beyond the symptoms and embrace the human behind the illness that define you as a physician.

In a world sometimes limited by hurried consultations and fragmented care, take the time to listen to your future patients, to understand their fears and hopes, and to offer solace in moments of vulnerability. May empathy guide your steps and skill guide your hands — and may your heart remain attuned to those you will serve. The world eagerly awaits your healing.

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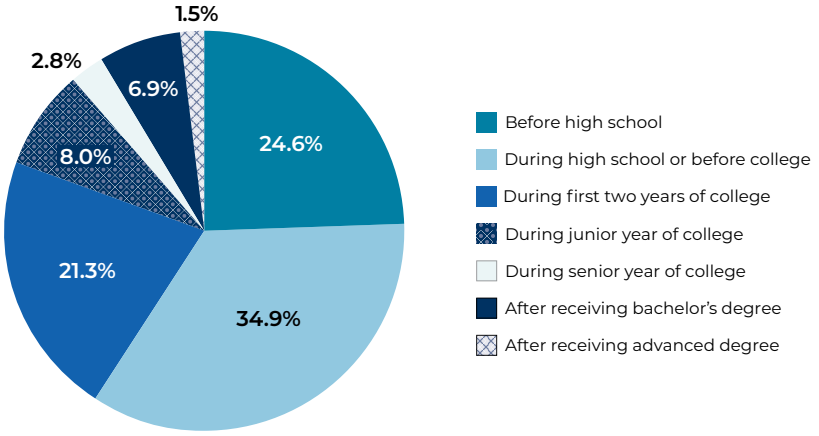
Many medical school applicants realize their dream of becoming a doctor at an early age. A recent AAMC survey shows that just over half of all medical students who responded to the survey chose a medical career before they set foot in college — and one in five made the choice before they even started high school (refer to Figure 1.1).

Whether you have always known you wanted to be a doctor or are just starting to consider the idea, being a physician is an extremely rewarding profession. A career in medicine offers numerous opportunities to make a real difference in the lives of countless people.

As a doctor, you are likely to see new life come into the world or provide comfort to those about to leave it. Or you may choose to help build the future of medicine by educating the next generation of physicians. Perhaps you will dedicate yourself to discovering new cures for devastating diseases.

Whichever direction you follow, you will play a role in reducing or eliminating people's pain and suffering, improving their quality of life, and providing invaluable service to your local community and maybe the country as a whole.

FIGURE 1.1. When did you definitely decide that you wanted to study medicine?



Source: AAMC 2023 Matriculating Student Questionnaire (MSQ).

Your Medical Career Driven by Your Interests

Another benefit of the field is that you can choose from many and varied ways to practice. From clinical practice to biomedical research, from public health to medical education — the choices are plentiful. Most students change or refine their specialty preferences as they gain experience and knowledge in medical school. You can find more information about the number of U.S. medical students who provided a specialty preference in Table A1, "Continuity of Specialty Preference," in the Matriculating Student Questionnaire (MSQ) and the 2023 Graduation Questionnaire. If your interests change with time and experience, medicine — because of its emphasis on lifelong learning and ties to research and technological developments — will provide you with opportunities to hone your skills and re-orient your practice. Here are some examples of possible careers:

- The satisfaction of long-term patient relationships is one attraction of **family medicine and internal medicine**, where the bulk of time is spent in direct contact with patients. Physicians who work under the umbrella of "primary care" often care for entire families and enjoy the challenges that come from treating a diverse population with varied backgrounds and conditions.
- Other physicians, like **cardiologists, ophthalmologists, dermatologists, endocrinologists**, and other specialists, develop and apply detailed knowledge about the intricacies of a single organ or system.
- Physicians interested in **scientific exploration** with the desire to **break new ground in medical knowledge** can be found in the nation's private and public laboratories and research institutions.
- Those with a commitment to social justice and an interest in fulfilling the health care needs of the underserved and disadvantaged can meet those challenges in **urban and rural clinics, in public health, or as medical missionaries.**
- Careers in **general surgery** often suit people who have a desire to see immediate results of their interventions. **Plastic and reconstructive surgery** draws others with artistic skills and aesthetic interests.

- Those interested in mind-body interactions and the emotional lives of their patients might find a home in **neurology or psychiatry**.
- The fast pace of medicine draws some to work as **emergency physicians or trauma surgeons.**
- Others motivated by national defense may use their skills as **flight surgeons or in military medicine.**
- The **economic and public policy aspects of health care** guide some physicians to think tanks and health-related organizations, as well as to serve in the legislative and executive branches of government.
- Those fascinated by issues facing groups of patients with age-defined illnesses and problems — from the risks in infancy and early childhood to the challenges of older life — find fulfillment as **pediatricians and geriatricians**.
- Assisting patients in overcoming complex fertility and gestational problems is the hallmark of specialists in **reproductive endocrinology** as well as **obstetrics and gynecology**.
- Those dedicated to reducing the incidence of birth defects and inherited diseases might find their calling in **medical genetics**.
- The detection, prevention, and eradication of injury and disease draw people to the fields of **preventive medicine and epidemiology**.

Once you enter medical school, you'll start actively learning about these and the myriad other career options and considering where you best fit. This is addressed further in Chapter 3, in the section "Determining How You Want to Practice Medicine."

What About the Future?

As long as we're looking ahead, let's look way ahead. In 5, 10, 15 years, what will medicine look like?

One thing is certain — the face of medicine changes continually. A good example of this is the growing prevalence of women in medicine. In the 1976-1977 academic year, women made up just 24.7% of all medical school matriculants. Compare that with 2023-2024, when they made up more than half — 55.4% — of the entering class, according to the AAMC Applicant Matriculant File.

Look back one generation, and you can see many new fields have emerged.

- In the early 1980s, a new — and fatal — illness was taking hold that nobody could identify. We now know it well: AIDS. **Infectious disease** is currently a large medical subspecialty, and, as a result, significant advances have been made in extending the lives of those infected with HIV.
- In the last few decades, **minimally invasive surgery**, in which surgeons carry out precise procedures — sometimes with the assistance of a robot — became increasingly popular. Such surgeries are currently used in procedures on the lungs, the esophagus, the prostate, the uterus, and kidneys. Through surgeries like these, patients benefit from smaller incisions, lower risks of complications, shorter hospital stays, less pain, and speedier recoveries.
- In **personalized medicine**, a career path unavailable to the previous generation, technology allows physicians to identify mutated genes and alert patients about their predisposition to a specific disease. (The next step — actually treating diseases with genes — is on the horizon.)
- Some more established fields have evolved to take on new applications. Radiology, for example, is no longer about just reading X-rays. Radiologists can now perform surgery as part of **interventional radiology.**

Even more exciting is what lies ahead: gene therapy, portable medical records, distance surgery, and focused medication. The possibilities for advancement in medical research are limitless.

- Early tests of **gene therapy** have been especially promising for cystic fibrosis, by transporting the correct cystic fibrosis transmembrane conductance regulator gene via a harmless virus or liposome.
- Similarly, research is underway in **pharmacogenomics**, a field that uses patients' genetic codes to develop tailored treatments. For example, if a patient's genes fit a certain type of cancer code, the physician will prescribe the "matching" pharmaceutical developed to destroy cells with that code and will know — rather than hope — the treatment is likely to work. Pharmacogenomics is still in its infancy, with most forms of tailored drugs used in oncology, but studies are progressing in other areas, including cardiology, diabetes, and psychiatric disorders.
- Also, in development is **focused preventive care**, which uses genetic diagnosis to identify to a very specific degree how likely a patient is to develop a certain disease or condition — and prevents that development before it has a chance to begin.
- Other advances may be administrative in nature; for example, the days of hunting down medical records are ending. One possibility being explored is a portable medical records system, or a national online database of individual health records. Everyone would carry a smart card (or have an implanted microchip) allowing physicians easy access to medical records. This technology would reduce errors, make files readily available, minimize or eliminate delays, and eliminate the experience of having repeated — that is, unnecessary — tests.

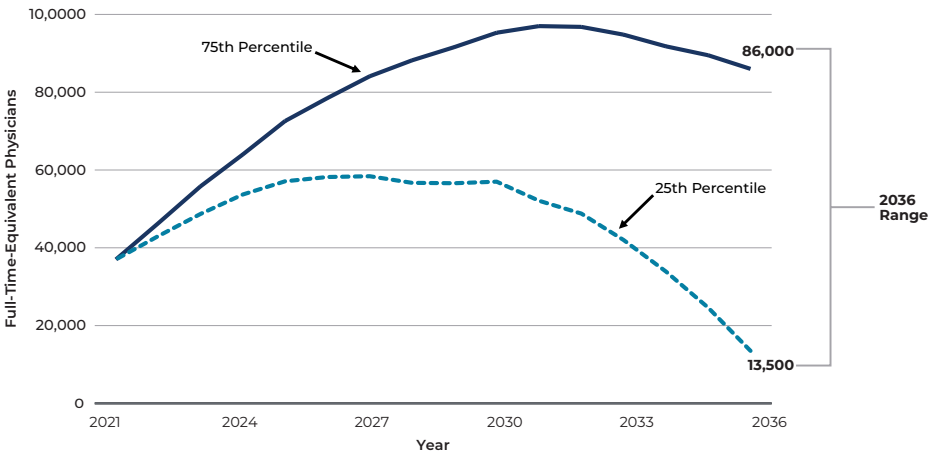
Workforce Issues

Above all, know this: Whatever specialty you choose, your services as a physician will be needed.

According to a study commissioned by the AAMC, there will be a shortage of 13,500 to 86,000 physicians by 2036. The shortage is being driven in large part by the rapid expansion of the number of Americans age 65 or over. Our doctors are getting older, too. Nearly one-third of today's physicians will be of retirement age in the next decade, just as more Americans need care. A continued demand for physicians and other medical professionals is projected.

Figure 1.2 illustrates the growing physician shortages between 2021 and 2036.

FIGURE 1.2. Projected physician shortfall range, 2021-2036.



Source: AAMC. The Complexities of Physician Supply and Demand: Projections From 2021 to 2036.

However, the shortages will be experienced unevenly, and some geographic areas will feel the effect more strongly than others. With that in mind, you might consider these trends as you think about the direction you'd like your career to take.

Primary Care
Although the nation is facing an overall shortage of physicians, many people are particularly concerned about the growing deficit of primary care doctors. Within the overall shortage of physicians, experts expect a shortfall of between 20,200 and 40,400 primary care physicians by 2036. To encourage U.S. medical school graduates to pursue a career in primary care, the federal government and many state governments offer a variety of scholarship and loan repayment programs. You may want to explore the rewards this type of career offers, including the satisfaction that comes from delivering comprehensive care and long-term relationships with your patients.

Underserved Areas
The impact of this shortage is expected to be greatest in underserved areas — the urban and rural areas where health care is already scarce. If you choose to serve in a community designated as a Health Professional Shortage Area by the U.S. Department of Health and Human Services, you may be able to take advantage of a federal program — the National Health Service Corps — that offers scholarships and loan repayment. According to the AAMC's 2023 MSQ, about 32.2% of entering students planned to work in a primarily underserved area, and more than half of entering-student survey participants hadn't yet decided where they wanted to work. (Learn more about this program in Chapter 10, "You Can Afford Medical School.")

A More Collaborative Approach

As Congress explores various scenarios for health care reform, one thing is nearly certain: Given the projected shortage of physicians, we will need to develop new models of health care delivery that make better, more efficient use of all health care professionals — not just doctors.

That means you can expect to work within a more collaborative, shared environment, in which a team of health care providers — including physician's assistants and nurse practitioners, for example — work in tandem. Exactly how that will play out is still in development, but the goal is to create a more efficient system, increase patient satisfaction, and, ultimately, improve health outcomes.

A collaborative approach to health care delivery is instilled beginning in the early years of medical education. Read more about the use of small-group discussions, problem-based learning, and other educational models in Chapter 3, "Your Medical School Years: The Education Process."

Immediate Steps That Lie Ahead

That's the future — or at least what we expect. Right now, though, you're undoubtedly more focused on the short-term goal of getting into medical school.

So, what is the process for applying to medical school? What lies ahead?

Let's be candid. Getting into medical school isn't easy. (But it's definitely doable — as the more than 97,903 students currently enrolled can testify!) You will need to prepare for and take the MCAT exam, select schools to apply to, complete the application, write a personal statement, gather letters of evaluation, secure your undergraduate transcripts, and interview. Then you will wait for notices of acceptance and make your final decision. If you're not accepted, you'll need to evaluate your options and figure out what to do next. All of this will be covered in the following chapters.

But first, you can take many steps to make yourself a more attractive candidate to admissions committees. From taking the necessary courses to working effectively with your prehealth advisor to participating in extracurricular and volunteer activities — there's a lot you can do now. (The next chapter focuses on your undergraduate preparation.)

A Note for Career Changers or Gap-Year Applicants

If a year or more has passed since you graduated from college, you're not alone. Nearly three-quarters (73.2%) of matriculating medical students indicated in the AAMC MSQ that there was a gap between their college graduation and matriculation to medical school of at least a year. Medical schools do not see a break between the end of college and beginning of medical school as a weakness or negative attribute. In fact, what you've experienced or accomplished during this time may enhance your application and qualifications significantly.

We'll provide tips and things to consider throughout this book to help guide you through the application and preparation process. We know there may be some variation in how you'll need to prepare yourself and compile the different components of your application now that you're no longer on campus.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 1.1

Important Resources and Ideas for Getting Medically Related Experiences

Advising Office

Your prehealth advisor*: _____

Advising office phone number: _____

Advisor's email address: _____

Office location: _____

*If your school does not have prehealth advising or you don't have access to an advisor, refer to the National Association of Advisors for the Health Professions' (NAAHP's) Find an Advisor service.

Clubs and Volunteer Opportunities

Premed club or society on campus: _____

Premed honor society: _____

Service organization club or fraternity: _____

Other Ideas to Make Contacts and Get Experience:

☐ Contact science department about lab and/or research opportunities.

Notes: _____

_____

_____

☐ Contact local clinic or health service provider for volunteer, paid, part-time, or internship opportunities.

Notes: _____

_____

_____

☐ Contact health care providers you know about shadowing opportunities.

Notes: _____

_____

_____

_____

CHAPTER 2

Undergraduate Preparation

Megan Scharner
Medical University of South Carolina College of Medicine
Class of 2026

I remember going to grab a cup of coffee with a friend while I was navigating the medical school admissions process. Mid-conversation, she asked, "Do you shower every day?" She shared that her daily shower was that one, easy, consistent thing that grounded her — that when she prioritized her daily shower, she was the best version of herself. "What's your shower?" she asked me.

For me, some quiet time in the morning with my coffee and a crossword puzzle — even if it's just a few minutes, it helps me to get in the right headspace for the day ahead. It allows me time to reflect and identify my goals for the day. And if I don't prioritize my time for this daily ritual, I feel it. No matter what your shower is, it is imperative to identify and prioritize it in your daily life as you embark on your medical school journey. Regardless of your background, prior career, gap years or lack thereof, the unique path to and through medical school is both a privilege and a challenge. The power of a daily grounding practice, no matter what it is, will help you to put your best foot forward for both you and your future patients.

Premedical Preparation

College coursework plays a major role in your preparation for medical school. Your major field of study, the mastery of specific scientific principles, and advanced coursework all contribute to that preparation. Let's take a closer look at each of these.

Choice of Major
Contrary to what many college students believe, there is no such thing as the "best" major. **In fact, no medical school requires a specific major of its applicants.** That's because admissions committee members know that students develop the essential skills of acquiring and synthesizing information through a wide variety of academic disciplines and should therefore be free to select whichever major they find interesting and challenging.

Even so, many premedical students choose to major in a scientific discipline. If that's the direction you're heading in, and you're doing so because you are fascinated by science and believe that such a major will be the foundation for a variety of career options, great. If you're doing so because you believe it will enhance your chances for admission, think again.

TABLE 2.1. MCAT Scores and GPAs for Applicants and Matriculants to U.S. Medical Schools by Primary Undergraduate Major, 2023-2024

Applicants	MCAT CPBS		MCAT CARS		MCAT BBLS		MCAT PSBB		Total MCAT		GPA Science		GPA Non-Science		GPA Total		Total Applicants
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Biological Sciences	126.4	2.9	125.7	2.8	126.8	2.8	127.4	2.8	506.3	9.8	3.56	0.41	3.80	0.25	3.65	0.33	30,054
Humanities	126.8	2.8	127.1	2.6	127.0	2.7	128.2	2.6	509.0	9.1	3.52	0.44	3.77	0.28	3.65	0.32	1,661
Math and Statistics	128.2	2.7	127.1	2.8	128.0	2.8	128.6	2.7	511.9	9.6	3.66	0.37	3.76	0.28	3.69	0.32	344
Other	126.0	3.0	125.6	2.8	126.3	3.0	127.2	2.9	505.1	10.3	3.52	0.44	3.76	0.29	3.64	0.34	9,064
Physical Sciences	127.7	2.8	126.5	2.8	127.4	2.8	127.9	2.7	509.5	9.6	3.61	0.39	3.75	0.28	3.67	0.32	4,228
Social Sciences	125.9	3.0	126.0	2.8	126.1	3.0	127.7	2.8	505.8	10.1	3.45	0.48	3.71	0.33	3.59	0.36	4,844
Specialized Health Sciences	125.5	3.1	125.3	2.8	125.8	3.0	126.8	3.0	503.3	10.5	3.49	0.45	3.75	0.28	3.62	0.33	2,382
All Applicants	***126.4***	***3.0***	***125.8***	***2.8***	***126.6***	***2.9***	***127.4***	***2.8***	***506.3***	***10.0***	***3.54***	***0.42***	***3.78***	***0.27***	***3.64***	***0.33***	***52,577***

Matriculants	MCAT CPBS		MCAT CARS		MCAT BBLS		MCAT PSBB		Total MCAT		GPA Science		GPA Non-Science		GPA Total		Total Matriculants
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Biological Sciences	127.8	2.3	126.8	2.4	128.1	2.1	128.8	2.1	511.5	6.9	3.72	0.29	3.87	0.18	3.78	0.23	13,050
Humanities	127.9	2.2	127.9	2.2	128.1	2.1	129.2	1.9	513.1	6.3	3.67	0.32	3.84	0.21	3.76	0.23	861
Math and Statistics	129.4	1.8	127.9	2.2	129.1	2.1	129.6	1.9	516.1	6.1	3.77	0.24	3.83	0.19	3.79	0.21	180
Other	127.6	2.2	126.9	2.3	127.9	2.2	128.8	2.0	511.2	6.9	3.69	0.30	3.85	0.19	3.78	0.22	3,767
Physical Sciences	128.7	2.1	127.4	2.3	128.5	2.1	129.1	2.0	513.8	6.6	3.73	0.28	3.82	0.23	3.77	0.24	2,094
Social Sciences	127.5	2.3	127.3	2.4	127.6	2.2	129.2	1.9	511.6	6.7	3.64	0.34	3.80	0.25	3.73	0.26	2,065
Specialized Health Sciences	127.3	2.2	126.7	2.3	127.7	2.2	128.6	2.1	510.2	6.8	3.69	0.30	3.84	0.20	3.77	0.22	964
All Matriculants	***127.8***	***2.3***	***127.0***	***2.4***	***128.1***	***2.1***	***128.9***	***2.0***	***511.7***	***6.9***	***3.71***	***0.30***	***3.85***	***0.20***	***3.77***	***0.23***	***22,981***

Notes: The means and SDs of MCAT scores are calculated based on data from applicants who applied with MCAT scores (each year, approximately 2% of individuals apply without MCAT scores). Specifically, 51,423 applicants and 22,262 matriculants in 2023 were included in the calculations. Only the most recent MCAT score is used for individuals who took the exam more than once. The means and SDs of UGPA are calculated based on applicants with available GPA data. Specifically, 52,317 applicants and 22,800 matriculants in 2023 were included in the calculations. Each academic year includes applicants and matriculants that applied to enter medical school in the fall of the given year. For example, academic year 2023-2024 represents the applicants and matriculants that applied to enter medical school during the 2023 application cycle.

Source: AAMC FACTS Table A-17, https://www.aamc.org/data-reports/students-residents/report/facts

Admissions committees welcome students whose intellectual curiosity leads them to a wide variety of disciplines.

And no . . . you won't be at a disadvantage if you choose to major in English, for example, rather than biology. You may be surprised to learn that there is very little difference in median total MCAT scores among those who major in the humanities, social sciences, and biological sciences. Table 2.1 shows that students from many different majors are accepted to medical school, as long as they have the basic science preparation needed.

College students take advantage of a variety of programs to prepare for medical school and a career in medicine. Table 2.2 shows the percentage of students who participated in several popular programs in 2023.

TABLE 2.2. How Do Students Prepare for Medical School?

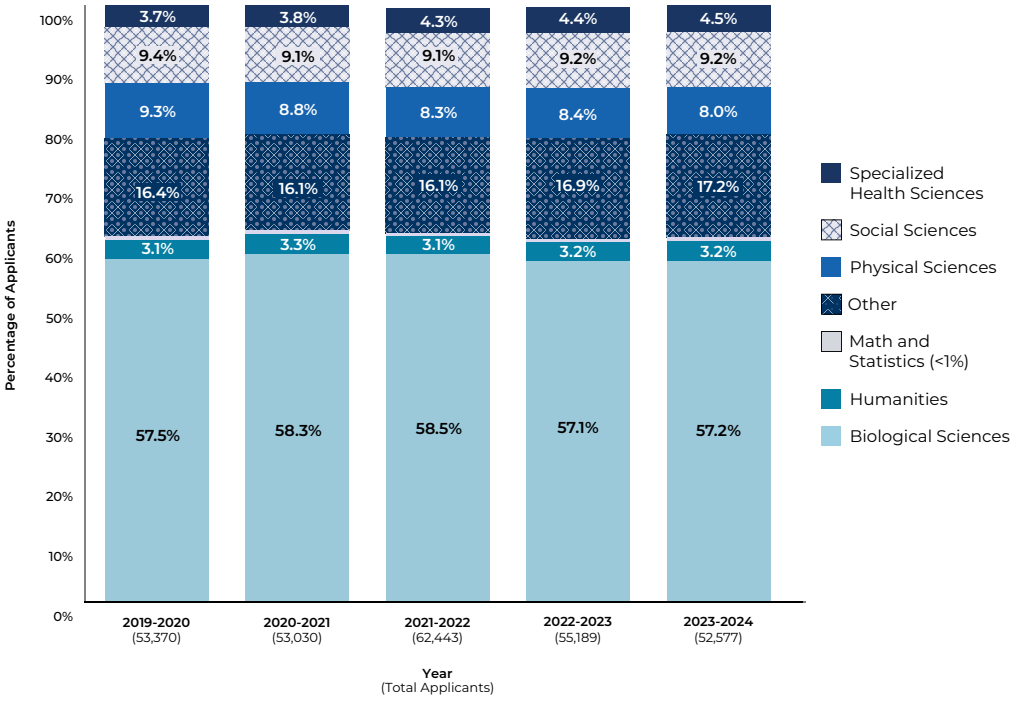
Program	Proportion of Students
Health care field volunteer	90.4%
Laboratory research apprenticeship	52.9%
MCAT® preparation course	38.8%
Nondegree postbaccalaureate program to complete premedical requirements	7.2%
Nondegree postbaccalaureate program to strengthen academic skills	6.6%
Summer academic enrichment	10.6%

Source: AAMC 2023 Matriculating Student Questionnaire (MSQ).

Scientific Preparation

Still, medical schools recognize the importance of a strong foundation in mathematics and the natural sciences — biology, chemistry, and physics — and most schools have established minimum course requirements for admission. These courses usually represent about one-third of the credit hours needed for degree completion (leaving room for applicants to pursue a broad spectrum of college majors, as shown in Figure 2.1).

FIGURE 2.1. Undergraduate major distribution, all applicants, 2019-2020 through 2023-2024.



Source: AAMC Data Warehouse: Applicant Matriculant File.

Many medical schools have progressed to competency-based admissions, meaning they do not require specific courses. For those that do require courses, schools typically expect that their entering students will have mastered basic scientific principles by successfully completing one academic year (two semesters or three quarters) each of biology, physics, general chemistry, and organic chemistry, including adequate laboratory experiences. Increasingly, biochemistry is strongly recommended by schools, too.

TABLE 2.3. Subjects Often Required or Recommended by U.S. Medical Schools*

Required or Recommended Subject
Biology/Zoology
Calculus
College Mathematics
English
Humanities
Inorganic Chemistry
Organic Chemistry
Physics
Social Sciences

*For specific requirements and recommendations, refer to the individual school profiles on the MSAR website (subscription required). You can also view coursework requirements on individual medical school websites.

Source: AAMC MSAR website, 2024.

Figure 2.1 presents information about the undergraduate majors of all medical school applicants to entering classes for the years 2019-2024. Over the past five years, more than half of all applicants reported undergraduate biological science majors, while the remainder reported a variety of majors, including the humanities, mathematics and statistics, physical sciences, social sciences, and other health sciences, as well as a broad "other" category.

The proportions of these different majors have remained relatively constant over time, despite annual fluctuations in the number of applicants.

Although only a few medical schools require applicants to complete a specific course in mathematics, all schools appreciate that mathematical competence provides a strong foundation for understanding basic sciences. A working knowledge of statistics helps students fully grasp medical literature. Many medical schools therefore recommend coursework in mathematics and statistics in addition to the science courses named above. Table 2.3 gives an overview of the most common courses required or recommended by medical schools.

AP, IB, and CLEP Courses

If you intend to apply college credit earned through **advanced placement (AP), international baccalaureate (IB), and college-level examination placement (CLEP)** to meet premedical requirements, you should be aware that some medical schools have requirements about the use of such credit. Please review the MSAR website and the websites of medical schools you're interested in for more information.

Competencies Versus Courses

Finally, for those of you reading this in your early years of college (or in high school), note that medical schools are increasingly defining their prerequisites by competencies rather than by courses. This comes about because, as a collaborative report between the Howard Hughes Medical Institute (HHMI) and the AAMC points out, the scientific knowledge medical schools seek in their applicants can be obtained in a variety of courses as opposed to specific ones. In other words, a student might be able to develop and apply knowledge about chemistry principles in a zoology class or about statistics in a sociology class.

Advanced Coursework

Although upper-level science coursework may not be required by every medical school, it's usually a good idea to show you have challenged yourself academically. Successfully completing advanced courses demonstrates science proficiencies and ultimately strengthens your preparation for medical school. Taking science courses that simply duplicate basic content, however, is not recommended. But don't think that all your upper-level courses must be STEM-based (science, technology, engineering, and math). Practicing physicians often suggest that premedical students take advantage of what might be their final opportunity for formal study in nonscience areas

and take elective courses in subjects of interest, such as music, art, history, and literature. Medical schools also look for applicants with rich and varied coursework and experiences. Beyond that, medical schools encourage honors courses, independent study, and research work by premedical students. Activities such as these demonstrate in-depth scholarly exploration and the presence of the lifelong-learning skills essential to a career in medicine.

Career Changers and Gap-Year Students: Not All Coursework Is "Evergreen"
It's important for applicants who have had a significant break between completing coursework and applying to medical school to check with the schools or look at the MSAR website for details on the oldest date coursework can be accepted. This is especially important for core premedical requirements, though some schools may waive the requirement for individual courses based on an applicant's professional experience (for instance, an applicant whose current work shows a high level of competency in a medically related area).

Some applicants who need to complete numerous courses do so via postbaccalaureate premedical programs for career changers or for those who need to enhance their academic record.

Postbaccalaureate information is available in the AAMC's free postbaccalaureate database.

Premed Competencies
The Premed Competencies were developed to highlight the knowledge, skills, values, and attributes that the medical education community thinks are fundamental for entering medical students to successfully carry out their roles and responsibilities and learn and develop into future physicians. The competencies fall into three categories: Professional Competencies: Thinking and Reasoning, and Science.

The AAMC-HHMI report *Scientific Foundations for Future Physicians* proposes scientific competencies for future medical school graduates and undergraduate students who want to pursue a career in medicine, including:

- Both the knowledge of and ability to apply basic principles of mathematics and statistics, physics, chemistry, biochemistry, and biology to human health and disease
- The ability to demonstrate observational and analytical skills
- The ability to apply those skills and principles to biological situations

These scientific competencies have been incorporated into the AAMC's Thinking and Reasoning Competencies and Science Competencies.

Personal Attributes

As the Premed Competencies suggest, academic and scientific accomplishments alone are not sufficient preparation for medical school. While intellectual capacity is obviously important to being a successful physician, so are other attributes that signify the ability to develop and maintain effective relationships with patients, work collaboratively with team members, act ethically and compassionately, and master the art of medicine in many other ways.

The AAMC publication *Learning Objectives for Medical Student Education: Guidelines for Medical Schools* describes the personal attributes required of a physician. While making note that graduating medical students must be knowledgeable about medicine and skillful in its application, the publication also emphasizes it is vital for students to:

- Make ethical decisions
- Act with compassion, respect, honesty, and integrity

- Work collaboratively with team members
- Advocate on behalf of one's patients
- Be sensitive to potential conflicts of interest
- Be able to recognize one's own limits
- Be dedicated to continually improving one's knowledge and abilities
- Appreciate the complex nonbiological determinants of poor health
- Be aware of community and public health issues
- Be able to identify risk factors for disease
- Be committed to early identification and treatment of diseases
- Accept responsibility for making scientifically based medical decisions
- Be willing to advocate for the care of the underserved

Chances are, some of the most valuable knowledge and skills as a physician you didn't learn in a classroom. These characteristics may be nurtured throughout your college years (and, as you will see in Chapter 8, are among the attributes admissions officers seek when admitting applicants to their programs). You don't need formal programs to learn how to be a kind, empathetic physician. You have already had and will continue to have an abundance of opportunities to develop these qualities through your interactions with friends, classmates, and others while in college and through your life, work, and volunteer experiences.

Extracurricular Activities Related to Medicine

Your undergraduate years offer opportunities to become involved in a wide range of extracurricular activities. Ideally, at least a few of them should involve the medical field. Experience in a health care setting, such as volunteering at shelters or clinics or in other environments to care for ill or elderly people in your community; participating in basic or clinical research efforts; working as an emergency medical technician; shadowing a physician; and supporting people in a sexual assault crisis center, emergency room, or social service agency are all types of activities recommended to those considering a career in medicine.

These pursuits give you the chance to learn more about the medical profession and yourself. You will, for example, be able to:

- Explore different interests
- Experience and evaluate different working environments
- Understand the nature of medical practice and the daily demands placed on physicians
- Assess your ability to communicate and empathize with people from different backgrounds and cultures
- Evaluate your willingness to put others' needs before your own

While this self-analysis can help you decide if a career in medicine is right for you, your involvement with clinical or research activities also helps demonstrate your interests to admissions committees. It shows that you have explored various aspects of the medical field.

Admissions committees evaluate your experiences using at least three different criteria, and greater value is assigned to some types of pursuits than others. Specifically, admissions committees look at the length of time you've invested, the depth of the experience, and lessons learned in relation to any particular activity. This means a single, daylong blood drive or one-time shadowing experience is often perceived as less enlightening than semester or yearlong commitments. By the same token,

active participation in an activity is viewed as more instructive than passive participation (such as observation).

Most importantly, admissions committees want to know what students learned from their experiences. Be prepared to address questions about your community, clinical, or research experiences in your application materials (which will be discussed in Chapter 7, "Applying to Medical School").

Do not approach your extracurricular activities with the idea of "checking off" a wide range of pursuits to impress admissions committees. Three or four in-depth experiences from which you gained valuable lessons are far more significant — and telling — to admissions officers than dozens of short-term involvements.

Prehealth Advisors

Fortunately, you're not on your own when it comes to preparing for medical school. Valuable resources are available to you — some likely right on campus, including your prehealth advisor.

Depending on the individual school, prehealth advisors work on a full- or part-time basis and may be a faculty member (often in a science department), a staff member in the office of an academic dean or the career center, the director or staff in an advising office for preprofessional students, or a physician in part-time practice. Advisors belong to organizations such as the National Association of Advisors for the Health Professions (NAAHP) that assist them in their work — and help them help you. If your school does not have a prehealth advisor, contact the NAAHP about getting a member volunteer to help you. Visit NAAHP's Find an Advisor site for more information. You can find each school's admission requirements on the Required Premedical Coursework and Competencies page, and you can use the MSAR website to view each school's admission requirements profile. You can always reach out to medical school admissions staff if you have specific questions about admission requirements or policies. Be sure to check the medical school's website first, though, to see if the information is available there.

Services Provided

The support provided by prehealth advisors varies from school to school. Contact your school's advisor to find out which services and resources are offered.

Generally, services fall into five categories:

- **Academics.** Advisors are well-informed about premedical coursework on their campuses and often work with faculty at their schools to develop suitable academic programs for premed students. They collaborate with campus academic staff to design study, reading skills, and test-preparation workshops; offer tutoring programs; and inform students they advise about regional and national programs likely to be of interest.
- **Clinical and research experiences.** Advisors often work with advisory groups composed of college and medical school teaching and research faculty and community clinicians. They help applicants identify part-time jobs, volunteer positions, and opportunities for independent study credit in local laboratories and offices.
- **Advising and support.** Advisors help students pursue realistic goals and maximize their potential, both meeting with them individually and providing group opportunities for students to meet with one another. Advisors often establish peer advising and mentoring programs and are particularly sensitive to the needs of students who are underrepresented in medicine or the first in their family to attend college.

- **Assistance to student organizations.** Advisors coordinate the activities of local and national organizations that serve premed students by planning programs, identifying funding sources, and arranging for campus visits from admissions and financial aid officers.
- **Sharing resources.** Advisors disseminate publications and other resources from relevant organizations, including the AAMC and NAAHP, to meet students' need for timely and pertinent information. In addition, advisors provide access to web-based content on health careers programs and educational financing; distribute information about local, regional, national, and international research and service opportunities; and stock a library of publications related to medical school and medical education.

A Wide Range of Guidance

A prehealth advisor may assist you in many ways, including:

- Identifying courses that satisfy premedical requirements
- Determining a sequence for completing those courses
- Finding tutorial assistance, if needed
- Planning academic schedules to accommodate both premed coursework and other educational objectives, such as a study program abroad, a dual major, or a senior honors thesis
- Locating volunteer or paid clinical and research experience
- Strengthening your medical school application
- Preparing for interviews and standardized tests
- Arranging for letters of evaluation
- Determining the most appropriate career paths based on your strengths, values, and life goals

Letters of Evaluation and Committee Letters

Another vital service that many prehealth advisors offer their students (and often their alumni) is the prehealth committee letter of evaluation.

This is usually a composite letter written on behalf of a medical school applicant by the college or university's prehealth committee. It presents an overview of the student's academic strengths, exposure to health care and medical research environments, contributions to the campus and community, and personal attributes such as maturity and altruism. In addition, the letter may address any extenuating circumstances that may have resulted in deficits in the student's performance during a course or semester, provide perspective on challenges the student may have encountered, and explain school-specific courses and programs in which the student has participated.

Some undergraduate institutions do not provide composite letters of evaluation but instead collect individual letters throughout the student's enrollment. Then, at the appropriate time, they distribute the letters to the medical schools where the student has applied. Keep in mind that letter of evaluation distribution, practices, and policies vary at each undergraduate institution. Under the Admissions section of the MSAR website, you can find more information about each school's letter policy. It's a good idea to work with your prehealth advising office to clarify how they intend to send letters on your behalf.

Special Programs

Finally, depending on where you fall in the education process, the following two programs may be of interest.

Combined Baccalaureate-MD Programs
If you're reading this book during the last year or two of high school, you might want to explore a combined baccalaureate-MD program, offered at about a quarter of U.S. medical schools. Graduates of these programs, which range in length from six to nine years, receive both a bachelor's degree from the undergraduate institution and an MD from the medical school. For more details and a list of participating schools, refer to Chapter 11.

Postbaccalaureate Programs
Perhaps you're at a different stage along the educational continuum and have already graduated from college. If your major was something other than science, it's possible you may need to pursue additional coursework before applying to medical school. Postbaccalaureate programs offered at colleges and universities across the country range from formal one- or two-year master's degree programs to certificate programs. They are available to help applicants who may need to strengthen their knowledge in the sciences, complete required premedical coursework, enhance their academic background, or want to change careers. You may search the Postbaccalaureate Premedical Programs database for these programs. You can also find medical schools with postbaccalaureate programs using the search features on the MSAR website.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 2.1

MSAR® Premed Coursework Progress Tracker

Use this worksheet to keep track of your completed premedical courses. The MSAR website includes charts of each medical school's premedical coursework requirements. To compare your completed coursework with all medical schools' requirements, use the My Coursework feature available to MSAR subscribers.

Course	Completed	Enrolled	Needed	N/A*	Notes
Behavioral Sciences					
Biochemistry					
Biology/Zoology					
Calculus					
College English					
College Mathematics					
Computer Science					
Genetics					
Humanities					
Inorganic Chemistry					
Organic Chemistry					
Physics					
Psychology					
Social Sciences					

*N/A = not applicable because it's not required.

Worksheet 2.2

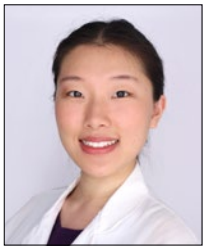
Journal Template for Keeping Track of Lab, Volunteer, and Work Experiences

This worksheet will come in handy when you're writing application essays, tracking your experiences, identifying people to ask for letters of evaluation, and completing the American Medical College Application Service® (AMCAS®) application. You can fill out the online form at this resources page.

Date	Experience	What I did	How this prepares or influences me	No. of hours	Contact name, email, and phone
[Example] *Jan. 15 – April 1, 2023*	*Shadowing*	*Observed Dr. Addams in primary care role*	*I was able to observe patient-physician interactions and learned about an electronic medical record system.*	*25*	

CHAPTER 3

Your Medical School Years: The Education Process



Lily Ge
NYU Grossman School of Medicine
Class of 2025

Starting medical school is like embarking on a grand adventure, where you step into a whole new world brimming with excitement and possibility. It's true that, at first, it may feel like being dropped into a foreign society with its own language, tools, slang, uniforms, and culture. Being overwhelmed at the beginning is natural, but rest assured you're not alone on this journey. Your classmates are beside you, each learning and growing as you navigate this uncharted territory together.

Together, you'll experience late nights in the library, poring over the intricate anatomy of the human body; then, you'll learn from caring for patients once you get onto the wards. These experiences will become the crucible that forges lasting bonds with your classmates. The challenges you face together will strengthen your relationships and open new horizons. I will forever be grateful for the unwavering support system I brought with me to medical school, the ones who always believed in me even when I doubted myself, and for the support system I made during medical school because they have helped me grow in ways I could never have imagined.

In the whirlwind of medical school, be sure to find moments to pause and reflect. Though the road ahead is long, remember that where you stand now was once beyond your wildest dreams. And the same will hold true in the years to come. Every day, every new experience will transform you into a catalyst for change. Just as Newton's Third Law applies to physical objects, it also resonates within medicine — recognize that you, too, can have an equal and opposite impact on those around you. Be a force for positive change, and you'll soon see that as medical students and budding physicians, we represent a more hopeful, knowledgeable, and empathetic future.

Medicine eagerly awaits your arrival. Welcome.

Undergraduate Medical Education: An Overview

At the core, all U.S. medical schools have the same purpose — to educate their students in the art and science of medicine, provide them with clinical experience, and prepare them to enter the next phase of medical training in caring for patients. That is why every school follows a similar program, requiring students to acquire a foundation in the medical sciences, apply this knowledge to patients' diseases and treatment plans, and master clinical skills through a series of clinical rotations. (Read more about Canadian medical schools in Chapter 14.)

It is often said, "When you've seen one medical school, you've seen one medical school." Each institution establishes its own curriculum and course requirements; so, for example, a particular

class required by one institution is an elective course at another. Even when medical schools seem to offer identical courses, the content or execution may differ, so some of the material covered in immunology in one school, for instance, is presented in pathology in another. The sequence in which content is learned — and the method by which the content is taught — may differ as well. Beyond that, the ways students are graded also vary from school to school, with some institutions following a pass/fail system, others an honors/pass/fail system, and still others a letter or number grading system. And just as the culture, campus, and personality of the undergraduate schools you considered differed, they also differ among medical schools. The way you decide which medical school is the best fit for you and your needs will likely be similar to the way you chose your college.

Medical schools must meet very exacting standards to earn and maintain accreditation, as established by the Liaison Committee on Medical Education (LCME®). The LCME, cosponsored by the AAMC and the American Medical Association, accredits medical school programs that grant the MD degree in the United States. Accreditation by the LCME is required for schools to receive federal grants and participate in federal loan programs. In addition, eligibility of U.S. students to take the United States Medical Licensing Examination (USMLE) — discussed on page 30 — requires LCME accreditation of their school. All medical schools listed in this guide are accredited by the LCME. LCME accreditation standards govern a wide breadth of areas of medical school programs and include standards related to curriculum.

Beyond accreditation requirements, the general educational content delivered by most medical schools is similar, although how the curriculum is structured, delivered, taught, and assessed differs from school to school.

A Word About Preclinical Versus Clinical Years

In the past, curriculum was typically structured in a "2+2" model, where the first two years of medical school were primarily classroom-based and focused on medical knowledge, typically referred to as the "preclinical" years and now sometimes referred to as the "preclerkship" years. The second two years of medical school were primarily focused on clinical experiences. In this traditional curriculum format, students typically concentrate their efforts on the scientific underpinnings of medicine during the first two years and apply and refine that knowledge during a series of clinical rotations during the last two years.

As curricula evolve, it is increasingly common for students to have clinical exposure earlier in their training, even during the first year of medical school, and more schools are integrating clinical and basic science learning together. In the later portions of the curriculum, sometimes referred to as the "clinical years," students refine their understanding of underlying medical concepts and apply basic science knowledge, often delving deeper into areas and topics that are of interest and align with future career plans. It is important, therefore, to recognize that preclinical and clinical content can — and do — intersect at any stage in the medical school experience.

Building a Foundation of Knowledge

Generally, you will begin your medical school studies by learning how the human body is supposed to work in terms of both structure and function. The focus will then shift to abnormal conditions and diseases, methods of diagnosis, and treatment options. In addition, there will likely be a concentrated effort toward understanding clinical disciplines and making informed decisions about future career choices. Increasingly, some medical schools are exploring teaching normal and abnormal presentations together through organ system-based courses.

Normal Structure and Function

Along with learning about illnesses and ailments, you will learn how a healthy body works. That is what you will be studying right out of the starting gate, and your courses will be many — and varied.

Typically, your foundational courses will include gross and microscopic anatomy, physiology, biochemistry, behavioral sciences, and neurology.

Abnormalities, Diagnostics, and Treatment

In addition to what you have learned about what "healthy" looks and acts like, the focus of your coursework will also cover structure and function. You will study the full range of diseases and atypical conditions, methods by which diagnoses are made, and therapeutic principles and treatments. At this stage, you will cover content in immunology, pathology, and pharmacology.

Other Topics

You will be exposed to a wide variety of other topics, such as nutrition, medical ethics, genetics, laboratory medicine, substance use, geriatrics, health care delivery systems, research, preventive medicine, human sexuality, and community health, to name just a few. The subjects taught at medical schools are as varied, and potentially as numerous, as the institutions themselves. Topics may also vary depending on a school's geographic location, mission, and patient populations.

And that's just part of the picture. There is much more to "building a foundation" than mastering the scientific basis of medicine. During this period of your medical education, you will learn the basics of building rapport with patients, interpersonal skills, conducting physical exams, interpreting laboratory findings, developing clinical reasoning skills, and considering diagnostic treatment and alternatives — in effect, readying yourself for the clinical rotations of your medical school curriculum.

Finally, keep in mind that practicing medicine is not all science — or even the application of science (such as interpreting lab results to determine a course of treatment). Medical schools recognize that physicians practice in a social environment that requires effective team building, collaboration, and communication skills. As a result, the way students learn and are taught has evolved in recent years. Many medical students now also learn about health systems, such as health care economics, patient safety, and quality improvement, and may also engage with the community to understand more about public health concerns. (This is discussed in more depth on page 25 under "The Changing Face of Medical Education.")

What a Typical Curriculum Includes

Many medical schools are either in the midst of, have completed, or have implemented a change to their curriculum; in a recent survey, 80% of responding medical schools (133 of 166) reported curriculum change either planned, begun, or completed, according to the Curriculum SCOPE Survey 2022-2023. For schools with a traditional curriculum, as described on page 22, a typical structure might include the following (although this is not a complete list of courses and does not include clerkships):

Year 1: Normal structure and function: Biochemistry, cell biology, medical genetics, gross anatomy, structure and function of human organs, behavioral science, and neuroscience. To prepare for clinical rotations, which typically begin later during medical school, clinical skills are very often, if not always, taught in Years 1 and 2 of a medical school's curriculum.

Year 2: Abnormal structure and function: Abnormalities of structure and function, disease, microbiology, immunology, pathology, and pharmacology.

Years 3 and 4: Clinical clerkships: Generalist core topics include family medicine, internal medicine, obstetrics and gynecology, pediatrics, and surgery. Residency preparation and application also occurs during this time.

Other requirements: Neurology, psychiatry, anesthesiology, dermatology, urology, radiology, emergency medicine, and electives and/or selective courses.

Acquiring Hands-On Experience Through Rotations

A major component of your undergraduate medical education, typically during the third and fourth years, will be a series of clinical rotations that usually last four to six weeks each. Under direct supervision of faculty members, you will get firsthand experience working with patients and their families in inpatient and outpatient settings.

What You Will Do

During a rotation, you will be assigned to an outpatient clinic or inpatient hospital unit where you will assume responsibility for "working up" several patients each week — speaking with patients and family members, collecting relevant data and information from them, and presenting findings to a faculty member. Communication, interpersonal skills, interprofessional and collaborative skills, clinical reasoning, and clinical environment operation procedures are also taught and evaluated. Beyond that, you will participate in the ongoing care of patients, either during hospitalizations or through the course of outpatient treatment. When appropriate, you will interact not only with the patients but also with their families. Beyond the traditional clinical rotation opportunities, service-learning opportunities or preceptorships that include clinical experiences are often available.

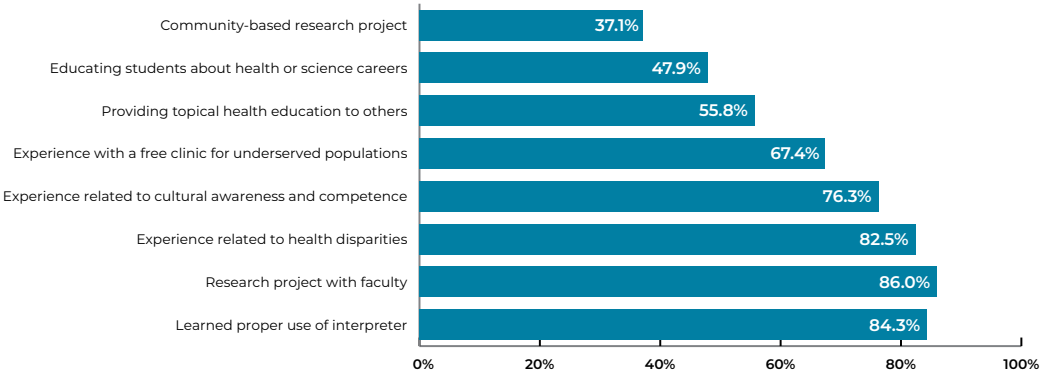
And What You Will Learn

There is no substitute for hands-on experience — and plenty of it. Mastery in any field is aided by deliberate, repetitive practice with supervision and helpful feedback. During your rotations, you will learn to apply basic science knowledge and clinical skills in diagnosing and treating patients' illnesses and injuries and will become adept at interacting with patients (and their families) as you provide information, answer questions, and prepare your patients for likely outcomes. At the same time, you will become effective at working with all members of the health care team, whether at the bedside, during inpatient team discussions ("rounds"), or in case-based lectures and small-group discussions.

Electives

Just like your undergraduate years, you will get to explore special interests and potential career paths through selectives and electives. Offered in basic behavioral clinical sciences and health systems as well as in basic and clinical research, electives are usually available your final year of medical school (although you might be able to take them other times). They may be completed on your own campus, at other medical schools through a visiting student program, through federal and state agencies, in international settings, and through service organizations. Medical students participate in a broad range of activities. The most popular ones are shown in Figure 3.1.

FIGURE 3.1. The most common elective and volunteer activities in medical schools, by percentage of students who participated.



Source: AAMC 2024 Graduation Questionnaire (GQ).

The AAMC Visiting Student Learning Opportunities™ (VSLO®) program enables medical and public health students to pursue short-term learning opportunities in locations away from their home institutions. Program participants include medical and public health students and institutions in the United States and around the globe.

The Changing Face of Medical Education

According to the U.S. Census Bureau, the U.S. population over age 65 is expected to be almost 74 million by 2030 — accounting for one in every five Americans. Demographics such as that, together with advanced technologies, scientific discoveries, and evolving teaching techniques, all contribute to significant changes in medical education. You will experience firsthand the reforms taking place in medical education, in terms of both what you will learn and how you will learn it. Your courses may range from cultural competency to health care financing, and how you will benefit from educational developments such as computer-aided instruction, virtual patients, and human patient simulation.

What You Will Learn

You will likely wield a scalpel in anatomy class early on in medical school, just as students in our parents' and grandparents' generations did 30 and 60 years ago. That type of activity aside, though, there have been many significant changes in medical education content, and schools are continually revising their curricula to reflect advances in science, breakthroughs in medicine, and changes in society. For example:

- Consider the demographic shift we will experience as the baby boomers age. Physicians will spend an increasing amount of time treating age-related problems such as Alzheimer's disease, heart failure, pulmonary disease, and bone disorders. As a result, most medical schools now include in their curricula content on geriatrics, palliative care, pain management, complementary medicine, and other similar patient population-specific material. Medical schools are also increasingly focused on covering patient population-specific content that varies not only based on patient age, but also based on gender and sexual identity, socioeconomic background and status, military service, and other factors.
- Issues such as health literacy, nutrition, drug use, and domestic and intimate partner violence are important components of medical education. Because many of these and other health problems are related to culture and socioeconomic background and status, medical schools

are increasingly focusing on areas such as preventive medicine, health promotion, population health, and health equity.

- Medical schools are focusing more on helping their students develop effective communication and interpersonal skills so they can interact successfully with a diverse group of patients and health professions colleagues. You will be taught specifically how to assess family, lifestyle, and socioeconomic factors that may influence your patients' behavior or their care, and how to effectively collaborate with members of the health care team. Then, of course, there are advances in science and medicine. As researchers make breakthroughs in genetic diagnoses and treatments, for instance, new knowledge is incorporated into the medical school program. There are also expanded courses on medical ethics, examining some of the dilemmas physicians may face amid the advent of new technology; classes on health care economics, which includes instruction on cost of care, value-based care, how to explore patient affordability for treatments, and the health care insurance system; and sessions on evidence-based medicine, patient safety, and quality, providing students with the information and tools they will need to deliver the best possible care. Some examples of topics now included in medical education are shown in Table 3.1.

The topics described here are only an overview of some possibilities. The specific courses you will take as a medical student will depend on the school.

TABLE 3.1. Number of Medical Schools Requiring Given Topics

Specialty	Number of Medical Schools Requiring the Topic*	Specialty	Number of Medical Schools Requiring the Topic*
Informed consent	155	Population health	153
Social determinants of health	155	Culturally responsive health care	153
Patient safety	155	Geriatrics	152
Health disparities	154	Community health and engagement	151
Nutrition	155	Health care economics	149

*n = 155.

Source: 2022-2023 LCME Part II Annual Medical School Questionnaire.

How You Will Learn

Do you imagine sitting in a large lecture hall, surrounded by hundreds of your peers? While you may experience that aspect of medical school, that method of teaching is being replaced (to a significant degree) by other techniques. Here are a few of the most widespread methods:

- The traditional lecture-based approach is increasingly giving way to student-centered, small-group instruction — like the case study teaching method common in both law and business schools as shown in this curriculum report. You may be assigned to small groups of students — overseen by a faculty member — in which you will focus on specific clinical problems. The aim is to instill medical knowledge and skills, as well as help you build the communication and collaboration skills you will need as you continue your medical training and as a fully licensed physician.
- Fast-moving technological advances have certainly affected the medical school education program. You will likely use a computerized patient simulator to apply the basic sciences you have mastered to a clinical context and refine your diagnostic skills. These simulators, easily customized to replicate a wide range of situations, are currently part of the curriculum in most medical schools. They are often customized to cover many aspects of a clinical encounter and offer medical students easy access to a range of medical situations. Human patient simulators allow students to engage in emotional and sensory learning. These interactive experiences foster critical thinking and effective communication skills. You are also likely to have some learning experiences with simulated or standardized patients

in which you interact with a real person trained to portray a patient case. Standardized patients (SPs) can be especially helpful when learning history taking, physical examination, and communication skills, among other skills.

- Another way medical schools use innovative technology is with computer-aided instruction and virtual patients. You will apply newfound knowledge and skills via interactive web-based or software programs that simulate complex cases. Some advantages of computer-aided instruction are that it:
  - Enables visualizing complex processes
  - Allows independent exploration
  - Offers easy access
  - Costs relatively little

To learn more about the specific teaching methods of the medical schools you are interested in, please refer to the applicable school listing on the MSAR website.

Determining How You Want to Practice Medicine

Required courses. Clerkships. Selectives and electives. A lot is occupying your time and energy as you advance through medical school. At the end of your third year and the beginning of your final year, you will prepare to apply to residency programs. But before you can apply, seriously consider how you want to practice medicine and identify the training after medical school that will prepare you for that work.

Choosing a Specialty and Researching Residency Programs
Choosing a medical specialty is one of the most significant decisions you will make during medical school, and the process can be daunting. No one can prescribe which one or more specialties are a good fit for you. Making a good specialty decision requires you to be proactive. You will likely begin the process of figuring out which specialties align with your interests, talents, and passions soon after you enter medical school.

The first step in choosing a specialty has little to do with the medicine at all. First, you need to reflect on who you are and what is important to you in your personal and professional life. Then, you will explore the myriad of different ways you can practice medicine. Next, you will reflect on who you are alongside the many options available and identify where in medicine you are likely to be happy and satisfied.

Upon entering medical school, you can access the AAMC Careers in Medicine® (CiM) program and work through the four-phase career-planning process (described above), using numerous articles, tools, and other resources to support you on your career exploration journey.

Once you have chosen a specialty or various specialties of interest, the CiM program can help you develop a smart strategy for both applying to residency and planning your medical education. Then, you can discover your ideal residency programs or away rotation sites with the Residency Explorer™ tool — a resource designed to empower you in building a tailored list of programs that align with your career goals and preferences. The Residency Explorer tool offers an unparalleled depth of information, providing insight into more than 5,000 individual residency programs across 25 specialties. It enables you to gauge your competitiveness relative to previous applicant pools and align your personal preferences and career interests with program offerings. The user-friendly interface and transparent data simplify your navigation of the complex residency landscape, ensuring you have the critical information needed to excel in your journey.

Applying for Residency

Applying to a residency program is like applying to medical school. You apply and submit your supporting documents online and go through an interview process — except this time, it is with a hospital program for a job opportunity. Most medical students start the process of applying to residency during their third or fourth year. The specialty and training path you choose will determine the application and matching service(s) you use to apply for residency positions. The Electronic Residency Application Service® (ERAS®) is the most widely used centralized online application service you may use to deliver your application, along with supporting documents, to residency programs. The ERAS website includes many tools and resources to help you as you plan your application strategy and gather your supporting documents. The ERAS program also hosts useful webinars that include additional information and give you the chance to ask questions about your MyERAS® application.

Once you have submitted your application and supporting documents to your chosen residency programs, programs evaluate applicants' materials, then extend interviews to applicants who they suspect might fit well with their program. You will interview with these programs, learning more about each and evaluating how they fit with your educational and career goals, while the programs learn more about you and assesses your fit with their structure, mission, goals, and, more broadly, your ability to thrive as a trainee.

Once you complete all interviews and further consider each program, you will rank the programs with which you interviewed to reflect your order of preference for training in each program. Depending on the matching services in which you participate, programs' preferred candidates and candidates' preferred programs will be matched manually or automatically (using an algorithm). According to the matching service's timeline, you will learn whether you matched with a residency program and, if so, which ones. There are four matching services: the National Resident Matching Program® Main Residency Match® (in which most residency programs participate), the AUA Urology Residency Match Program, the SF Match (the San Francisco Match), and the Joint Services Graduate Medical Education Selection Board's program, commonly referred to as the "military match." For more information on the military match, please refer to the Military Health System website.

You can follow Match Day celebrations on social media by using the hashtag #Match2025. Match Day links will be posted on the AAMC Premed Facebook page and the social platform X (@AAMCPreMed).

TABLE 3.2. U.S. Residents by Specialty, 2022-2023

Specialty	Number of U.S. Residents
Allergy and Immunology	323
Anesthesiology	7,241
Colon and Rectal Surgery	110
Dermatology	1,633
Emergency Medicine	9,346
Family Medicine	15,010
Hospice and Palliative Medicine	481
Internal Medicine*	31,794
Medical Genetics	64
Neurological Surgery	1,593
Neurology	3,530
Nuclear Medicine	77
Obstetrics and Gynecology	5,962
Ophthalmology	1,738
Orthopedic Surgery	4,481
Otolaryngology	1,795
Pain Medicine	411
Pathology-Anatomic and Clinical	2,342
Pediatrics	9,539
Physical Medicine and Rehabilitation	1,640
Plastic Surgery	202
Plastic Surgery-Integrated**	1,107
Preventive Medicine	195
Psychiatry	7,739
Radiation Oncology	758
Radiology-Diagnostic	4,614
Sleep Medicine	214
Surgery-General	9,554
Thoracic Surgery	256
Thoracic Surgery-Integrated**	237
Urology	1,834

*The most popular subspecialties declared by U.S. residents in 2022-2023 in internal medicine (total: 31,794) were cardiovascular disease (3,456), pulmonary disease and critical care medicine (2,268), hematology and medical oncology (2,098), and gastroenterology (1,975).

**Integrated programs differ from subspecialty programs in that they include core surgical education.

Source: ACGME Data Resource Book, for the 2022-2023 academic year.

Getting Help

In addition to using CiM on your own, the CiM program works in conjunction with medical schools' career-planning and advising services. Medical schools are required to provide advisors (formally or informally) to help students plan their academic and professional careers. These services are often organized and delivered by the student affairs office or career center and can include workshops, specialty interest groups and panels, networking receptions, and other career-related resources and opportunities.

Sometime in your first year, your medical school will likely start talking to you about exploring your career options and planning your medical career, explaining the career-planning and advising services it offers. (If you would like to start exploring your career sooner, contact your school's student affairs or career services office.) As part of your school's career services, you will likely receive valuable information and support in various forms, including emails and in person, from your student affairs office, your career services office, and your advisors.

Career planning will occur throughout your medical school experience, often within your curricular activities. Often, students are given dedicated time in their fourth year of training to fine-tune career exploration opportunities. As you complete your medical degree, faculty, staff, and advisors will be a source of trustworthy advice that will help guide you toward a satisfying career as a physician.

We will not go into detail about postgraduate work here since you will not need those details until later. But, briefly, the primary purpose of graduate medical education (GME) is to give medical school graduates the skills and knowledge they need to become competent, independent physicians in their desired specialty.

Residency and Fellowship Training

Residency training — the first level of GME — ranges in length from three to eight or more years and is necessary for board certification (refer to Table 3.2). Residency programs are conducted primarily in clinical settings (for example, in hospitals, outpatient clinics, community health centers, and physicians' offices) and require residents to participate fully in patient diagnoses and treatment. As a resident, you will work under the supervision of physician faculty as you develop

experience in your chosen specialty, become proficient with common and uncommon illnesses and conditions, attend conferences, teach less-experienced colleagues, and generally adjust to the demands of practicing medicine.

Just as medical schools vary, so do residency programs. Depending on the specialty you choose, you might complete a preliminary year of broad clinical training before focusing on your specialty. In other fields, you can enter the specialty track directly. (Your medical school advisor and the CiM program can provide more information as you approach this stage of your medical education.)

After residency training, you can continue your graduate medical education by completing fellowship training. This second level of GME usually prepares physicians to subspecialize, but some fellowships are for training in other areas, such as research or education administration.

Graduate medical education can be a challenging and rewarding stage of your career. Many physicians look back on their residency and fellowship years as a time when they gained invaluable lessons that they carry with them throughout their careers.

Interprofessional Education

The delivery of medical care is increasingly a team-based, collaborative effort that includes doctors, nurses, pharmacists, physical therapists, and other health care professionals. Caring for a patient effectively and efficiently depends on practitioners from all disciplines becoming familiar with one another's roles, perspectives, languages, and communication styles.

Because medical educators across the levels of medical education want to help you develop your knowledge and ability, your medical education is likely to involve some form of interprofessional education.

You will learn to share resources, work as a unit, and participate in other activities that encourage interaction among various categories of health care providers.

Through these exercises, you will all become more adept and successful working as a team and be able to deliver higher-quality patient care.

Licensure and Certification: Ready to Practice Independently

All medical school graduates must demonstrate command of the same fundamental concepts before becoming licensed physicians. Physicians' mastery of these fundamentals is ensured through the standards of the National Board of Medical Examiners (NBME) for MD students and the National Board of Osteopathic Medical Examiners (NBOME) for DO students. The NBME and the Federation of State Medical Boards (FSMB) jointly sponsor the USMLE. The NBOME sponsors the Comprehensive Osteopathic Medical Licensing Examination of the United States (COMLEX-USA).

The USMLE exam is the final assessment of your ability to assume independent responsibility for delivering medical care and is administered in three steps, each at a particular stage of medical education:

- **Step 1:** Usually taken at the end of your second year of medical school, Step 1 tests whether you understand and can apply basic science to the practice of medicine. Its focus is on principles and systems of health, disease, and methods of therapy.
- **Step 2:** Many medical schools require you to take and pass the Step 2 Clinical Knowledge (CK) exam before you graduate. The Step 2 CK exam assesses your ability to provide patient care under supervision.

- **Step 3:** After you have completed your first year of residency training, you are eligible for Step 3 — the concluding test that determines your readiness to apply your medical knowledge and clinical skills without supervision, with an emphasis on patient management in outpatient settings.

Similarly, the COMLEX-USA exam is also administered in three parts:

- **Level 1:** This exam is usually taken at the end of the second year of osteopathic medical school. It focuses on your ability to integrate understanding of biomedical science with basic clinical problem-solving.
- **Level 2:** The Level 2 CE Clinical Science Disciplines exam focuses on clinical skills and seven osteopathic competency domains. It is usually taken between the third and fourth year of osteopathic medical school.
- **Level 3:** A comprehensive exam that assesses your understanding of the core competencies required for safe and effective health care delivery without supervision. You will take this exam during your first year in residency training.

After you complete your educational and training programs and achieve passing scores on the USMLE or COMLEX-USA exams, you can apply for licensure in any of the 50 states, 10 Canadian provinces, three U.S. territories, and the District of Columbia.

But . . . there is one additional step: certification. Although it is not required for medical practice, as licensure from a state or provincial medical board is, certification in a specialty is strongly encouraged. Physicians apply voluntarily for this additional credential, which is granted by the American Board of Medical Specialties (ABMS) and involves a comprehensive exam. Those who have satisfied all ABMS requirements are certified and known as "diplomates" of the specialty board.

Continuing Medical Education: Lifelong Learning

Finally, as you likely have realized, your medical education will be a lifelong process. As medicine continues to advance and change, you will have opportunities to learn new skills to stay current with exciting and innovative developments.

The fast pace of change in medicine makes continuing education essential, so most states require participation in accredited continuing medical education (CME) activities. Physicians participate in CME programs throughout their careers, ensuring they stay up to date with the rapid advancements in their specialties and maintain their clinical competence. Offered by medical schools, teaching hospitals, and professional organizations, these CME programs are reviewed by the Accreditation Council for Continuing Medical Education to ensure that such programs achieve and uphold high standards.

CME reflects a commitment to lifelong learning that is a hallmark of the medical profession. If you are interested in what your CME efforts will entail, go to accme.org.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 3.1

Thinking About Medical Specialties

First things first: You do not need to know your medical specialty now — or even need to be thinking about it. However, many applicants envision themselves in a specialty before beginning medical school based on prior experiences and medical interests.

The second thing to keep in mind: Changing your mind about what type of physician you want to be is not a sign that you are less committed to the profession. We know from responses to the AAMC Matriculating Student Questionnaire (MSQ) and Graduation Questionnaire (GQ) that most medical students are either undecided or change their minds about their specialty preference during medical school. In fact, of those who begin medical school with a specialty in mind (as captured by the MSQ), only about one-quarter of medical students stick with this choice throughout medical school (per their responses in the GQ). This means, conversely, about three-quarters of medical students either have no idea what specialty they'll pursue upon matriculation or end up changing their mind during medical school.

It is natural and expected that your choices will evolve as you gain new educational and clinical experiences. Keep your options open to allow for new experiences to inspire you.

That said, if you are an applicant with some exposure to specialties before medical school, you may find it helpful to keep a journal or notes about your experiences while they are fresh in your mind, which you can use once you enter medical school and begin the CiM program. You will likely find it helpful to refer to these notes once you have matriculated as you progress through medical school.

Here are some prompts to help you consider your specialty experiences:

- Do you have a specialty or specialties in mind? _____
- What is your experience with that specialty? _____
- Have you shadowed in that specialty with different physicians or in different settings? _____

  _____
- Have you shadowed in more than one specialty? If so, list them here: _____

  _____
- Take a moment to compare your experiences. Write down how they were similar and different and how you felt about each: _____

You can also visit your school's career center for more guidance about exploring medical careers. A career center may help you find shadowing and other opportunities that can expose you to career options. You could also speak with people who have already completed any experiences you're considering.

A note about shadowing: In recent years, due to the Health Insurance Portability and Accountability Act, or HIPAA, it may be more difficult to obtain permission to shadow a physician. Some programs facilitate paid experiences domestically and abroad, though they can be quite expensive. Check with your prehealth advising office to see if they have experience with a particular program to make sure it's legitimate and safe.

For more information about shadowing, lab, and volunteer experiences, refer to:

- **Shadowing a Doctor**
- **How to Get Research Experience**
- **Finding Health Care-Related Volunteer Opportunities**

CHAPTER 4

Building Toward Greater Diversity

Efeose Airewele
Northwestern University Feinberg School of Medicine
Class of 2026

As an undergraduate, my most formative experiences were global health opportunities in Zambia, Ghana, and Tanzania. I worked with several physicians and was enthralled by their ability to serve communities with limited resources. While I found their efforts inspiring, I was profoundly impacted by the devastating consequences of health inequity. After completing my undergraduate degree, I'd hoped to better understand how health inequities impacted the United States.

The COVID-19 pandemic was my unimaginable teacher. While working with infectious disease physicians in Boston, I learned that COVID-19 was disproportionately impacting people of color and those who already existed on the social fringes of society. For example, I learned that while only 40% of HIV patients in our clinic were Black or Latinx, 77% of our HIV patients with COVID-19 were Black or Latinx. The pandemic's disparate impact highlighted that health inequities are not just an issue abroad but are often the result of broader social injustices that exist in the United States as well.

When it was time to select a medical school, I wanted to choose a program where diversity wasn't just spoken about because it was trendy. It was important to me to find a school where nuanced conversations about diversity were common, feedback was well received by the administration, and financial investments were made toward greater authentic diversity. These priorities helped me choose Northwestern University Feinberg School of Medicine.

Medical schools' efforts to recruit, educate, and support a diverse student body play a role in the broader effort to serve communities justly. As a Christian, my interest in diversifying medicine stems from a desire to better "uphold the cause of the poor and oppressed" in my communities. As schools train a physician workforce that more closely reflects the demographics of their communities, I believe we will see healthier, more equitable communities.

Defining Diversity

Diversity in higher education has become a contentious topic in public forums influencing federal and state-level policies. The AAMC is committed to improving health for all. The research and data show that we have the greatest potential to achieve health equity when the United States has a diverse and culturally responsive physician workforce. When people hear the word diversity, some may think only of race, ethnicity, or gender. But the concept of diversity is much more expansive.

Diversity refers to the richness of human differences — socioeconomic status, race, ethnicity, language, nationality, sex, gender identity, sexual orientation, religion, geography, disability, and age. When considering the concept much more broadly, it may also include individual aspects such as personality,

learning preferences, and life experiences. We also must consider the intersectionality of these various identities and how they may influence an individual, how people perceive them, and their experiences on the path to medical school. To understand how these characteristics are considered during the admission process at many schools, it is crucial to define holistic review practices, which are measures of evaluating an applicant's experiences, attributes, and metrics in relation to institutional mission-alignment. For further exploration of this approach, visit the Holistic Review website. Additionally, for guidance on interpreting the use of holistic review following the Supreme Court decision in the *Students for Fair Admissions, Inc. v. President and Fellows of Harvard College* case, refer to this informative guide. These resources provide comprehensive insights into how consideration of diversity is integrated into the admission process for medical education, leading to more culturally responsive health care providers. Let's look at diversity through the lens of available AAMC data.

- **Consider race and ethnicity.** Increasing diversity by race and ethnicity remains a critical component of advancing diversity in medicine, considering the underrepresentation of particular racial and ethnic groups. The data shows, for example, that 8.9% of applicants identified as Black or African American only, 6.0% identified as Hispanic or Latino only, and 0.2% identified as American Indian or Alaska Native (refer to 2023 FACTS Table A-10). These percentages are not sufficient to address physician shortages and public health needs.

- **What about family income?** The data shows a need for greater socioeconomic diversity in medicine. Parental income of students entering medical school skews heavily to the upper range, with a median income of $150,000. (That's almost double the estimated U.S. median family income of $74,755 in 2022, reported by the U.S. Census Bureau.) More than one in four students comes from a home in which the parents earn $250,000 or more a year. Students who have limited financial resources are less likely to have access to resources to cover test preparation and other expenses associated with the application process. The fees related to your medical school application are likely going to be the largest expense. Usually, these fees will fall into the following three categories: primary application fee, secondary application fee, and college service fee.

    - **Primary application fees** — Most medical schools use the AMCAS program to process applications. Through this service, a student can submit a single set of application materials and have them sent to their chosen schools. The 2025 application fee is **$175** for the first school and **$46** for each additional school. Not all schools use AMCAS, so it's important to check with each medical school you're interested in to determine its admission processes.
    - **Secondary application fees** — Most medical schools require a secondary application. Those fees range in cost. The AAMC Fee Assistance Program provides a waiver to eligible students to cover all AMCAS application fees for one submission which covers up to 20 medical schools. Check with the school regarding their policy.
    - **College service fees** — There is usually a small fee for transferring a transcript from a college registrar, and occasionally a fee for transferring letters of recommendation. Check with your school's registrar to verify whether there will be fees associated with these requests.

  Keep in mind there may be other costs associated with the application process. Some of these expenses may include:

    - **MCAT exam and practice materials** — The initial registration fee for the MCAT exam is **$345**, which covers the cost of the exam, as well as distribution of your scores. The cost of applying to medical school can be a prohibitive factor for many aspiring doctors. For those who qualify for the Fee Assistance Program, the registration fees associated with

the MCAT exam are reduced significantly from $345 to $140. Information regarding fees is available on the MCAT website. MCAT exam practice material costs will vary.

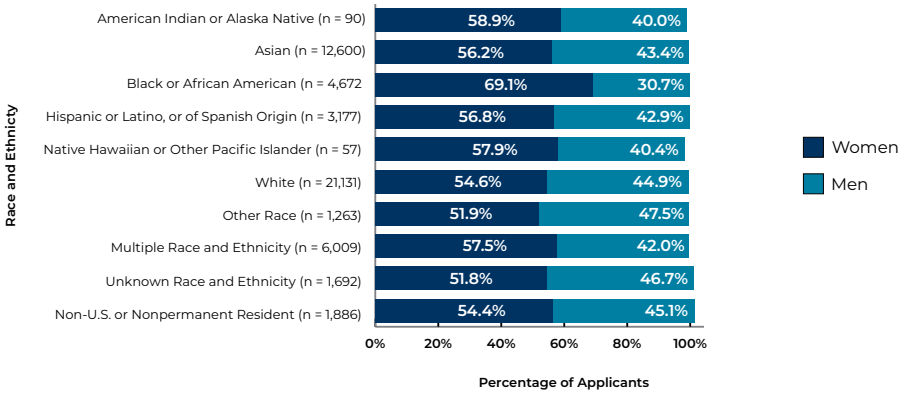
- **Interview costs** — Students traveling to medical school interviews may incur transportation and accommodation costs, as well as what it may cost to purchase appropriate attire for the interview.
- **Application tools** — The purchase of medical school application tools and guidebooks such as the Medical School Admission Requirements subscription will incur varying costs. (Note: the The Official Guide to Medical School Admissions is available for free from the AAMC Store.)

For more specific details on these expenses, visit the Cost of Applying to Medical School fact sheet. As part of our commitment to create a more diverse applicant pool, the AAMC provides resources such as the FIRST program (for more information about affording your education, see Chapter 10), the AAMC Fee Assistance Program (see Chapter 7 for more information), and free or low-cost preparation resources in the AAMC Store. Additionally, applicants are encouraged to explore scholarship opportunities through organizations like National Medical Fellowships to further support their educational journeys.

- **Another perspective — gender.** Women comprised the majority of students enrolled in MD-granting institutions in 2019, and the majority of applicants, matriculants, enrollees, and graduates in 2021. Additionally, as Figure 4.1 displays, there are significantly fewer Black or African American men applicants and matriculants compared with other groups. In 2015, the AAMC published *Altering the Course: Black Males in Medicine* to better understand this trend and explore solutions. Since the release of the report in 2015, minimal increases in the number of Black men applying and matriculating to medical school have occurred. As a result, the AAMC and the National Medical Association partnered to form the Action Collaborative for Black Men in Medicine in August 2020 to identify systemic solutions to address this issue.
- **Consider sexual orientation and gender identity.** Data collection and reporting about sexual orientation and gender identity has improved. AAMC graduation data shows that of the 2024 Medical School Graduation Questionnaire (GQ) respondents, 1.1% self-identified as having a gender identity that is different from the sex they were assigned at birth. Of the GQ respondents, 86.6% self-identified as heterosexual or straight, 6.2% as bisexual, 4.2% as gay or lesbian, 1.5% as queer, 0.6% as asexual, and 0.7% as pansexual.
- **Increasing awareness of disability.** With greater calls for inclusion, there are growing efforts to increase the visibility of individuals with disabilities. AAMC GQ data shows that 11.6% of medical school graduates indicated they have a disability. Of that group, the most-cited disabilities included ADHD (68.2%), psychological disability (14.4%), chronic health disability (15.4%), and learning disability (8.2%).

Increased diversity brings benefits that extend beyond the classroom. Research has shown that diversity in the physician workforce contributes to increased access to health care and to better health outcomes. Diversity among clinician scientists has been linked to an increase in research dedicated to diseases that disproportionately affect racial and ethnic groups. (For more information, see the reading list at the end of this chapter.)

FIGURE 4.1. Applicants to U.S. medical schools by race/ethnicity (alone) and gender, 2023-2024.



Note: Applicants who selected "Another Gender Identity" or did not report gender were excluded. "Alone" refers to race/ethnicity data that is displayed for individuals who selected only a single racial/ethnic category. The "Multiple Race/Ethnicity" category includes those who selected more than one race/ethnicity response.

Source: AAMC Data Warehouse, Applicant Matriculant File.

TABLE 4.1. Matriculants to U.S. MD-Granting Medical Schools by Socioeconomic Status, Academic Years 2018-2019 Through 2023-2024

		Less than a bachelor's degree, or any degree with a service, clerical, skilled, and unskilled occupation (EO1/2)		Bachelor's, master's, or doctoral degree with an executive, managerial, or professional occupation (EO3/4/5)		Not applicable/unknown	
	Academic year	Number	Percentage	Number	Percentage	Number	Percentage
Matriculants	2018-2019	4,516	20.9%	14,837	68.6%	1,616	10.5%
	2019-2020	4,425	20.2%	15,055	68.8%	1,741	10.9%
	2020-2021	4,650	20.9%	15,132	68.0%	1,844	11.0%
	2021-2022	4,901	21.6%	15,192	67.0%	2,026	11.4%
	2022-2023	4,887	21.5%	15,293	67.3%	1,709	11.1%
	2023-2024	4,897	21.3%	15,648	68.1%	1,568	10.6%

Notes: "EO1/2" includes applicants whose parent(s) highest completed level of education was less than a Bachelor's degree or any degree with a service, clerical, skilled, or unskilled occupation. "EO3/4/5" includes applicants whose parent(s) highest completed level of education was a Bachelor's, Master's, or Doctoral degree with an executive, managerial, or professional occupation. "Not Applicable" includes applicants whose parent(s) completed their highest level of education outside of the U.S. and are not legal residents of the U.S.; parent(s) deceased; no parent data; or applicant is not a U.S. citizen or permanent resident. "Unknown" includes applicants where all parental EO levels are "Unknown," one parental EO level is "Unknown" and all other parental EO levels are "Not Applicable," or applicants provided no parental information. Socioeconomic status is not calculated for non-U.S. citizens and non-permanent residents.

Each academic year includes applicants and matriculants that applied to enter medical school in the fall of the given year. For example, academic year 2023-2024 represents the applicants and matriculants that applied to enter medical school during the 2023 application cycle.

Source: AAMC FACTS Table A-24, https://www.aamc.org/media/57171/download?attachment

AAMC Programs and Resources

Considering the benefits of diversity, the AAMC is engaged in a number of programs and initiatives to help increase diversity to include students from a broad range of backgrounds. While these programs are open to all students, some are tailored to the challenges and needs of individuals from groups historically underrepresented in medicine. Here are some of these initiatives.

Career Fairs and Enrichment Programs

Medical schools throughout the country provide various programs and resources designed to recruit students and prepare them for medical education. Often referred to as pathway or enrichment programs, some are held during the school year and others are in the summer. They are designed for high school students, college students, and those who already have completed undergraduate study. It's a good idea to explore your local medical school's website to see what opportunities may be available. The AAMC sponsors several programs:

- **Summer Enrichment and Pathway/Pipeline Programs.** This site includes a free database to help students locate summer enrichment programs on medical school campuses. You can search by school, state, region, area of focus, and length of program. Go to the Medical Pathways and Enrichment Opportunities page to explore programs of interest.
- **Diversifying the Next Generation of Doctors: Career Fair and Workshops.** This event is typically held each fall in conjunction with Learn Serve Lead: The AAMC Annual Meeting. Students are encouraged to come explore the possibilities in medicine and science. College and high school students, parents, prehealth advisors, school administrators, and others interested in careers in medicine and science can meet diversity affairs and admissions officers from U.S. medical schools and other health professions schools. Topics for discussion include medical school preparation, enrichment programs, admissions policies and procedures, financial aid, and more. Attendees can also participate in interactive medical and health activities and workshops. The AAMC also hosts other career fairs in conjunction with meetings for admissions officers, student affairs staff, and biomedical researchers.
- **Summer Health Professions Education Program (SHPEP).** The Robert Wood Johnson Foundation's Summer Health Professions Education Program is a free, six-week academic enrichment program for college freshmen and sophomores interested in careers in medicine, dentistry, pharmacy, nursing, public health, optometry, physical therapy, and physician assistant roles. Components of the program include science- and quantitative-based courses, learning and study skills seminars, career development activities, clinical experiences, integration of wellness topics, and a financial planning workshop. Funded by the Robert Wood Johnson Foundation and offered at 12 U.S. academic health centers, the program includes a stipend, housing, meals, and travel assistance.
- **Medical School Virtual Fair.** Since 2016, the AAMC has connected with more than 116,000 aspiring medical students and applicants through our annual Virtual Medical School Fair. This virtual event is free for attendees and provides the opportunity to connect virtually to admissions officers as well as AAMC staff with expertise in admissions, diversity affairs, financial aid, the MCAT exam, AMCAS application, and SHPEP, among other topics.

Aspiring Docs® — An AAMC Resource to Increase Diversity in Medicine

The AAMC Aspiring Docs® website provides resources and inspiration to help you get started on your path to medicine. The website includes inspiring stories from medical students and doctors, videos of medical students answering applicant questions, and one-page fact sheets to help you prepare to apply. To see what other applicants are saying about being a premed, and learn what medical students and residents are doing every day, follow the Aspiring Docs Diaries blog. You can email aspiringdocs@aamc.org if you'd like to submit a blog post!

Anatomy of an Applicant

Through the Anatomy of an Applicant resource project, the AAMC seeks to amplify the stories of diverse medical school applicants and demystify the core competencies to encourage and shape future applicants' pathways to medical school. The Anatomy of an Applicant project features interview excerpts from medical students, their prehealth advisors, and the admissions officers who accepted them to get an insider's perspective of their pathway to medicine and how they demonstrated the Premed Competencies for Entering Medical Students throughout their

application. To learn what former applicants have to say about their nontraditional medical school journeys, read through the Anatomy of an Applicant profiles.

Additional AAMC Resources
The AAMC also offers a wide variety of publications, online tools, and other information on the Advancing Diversity in Medicine website and the Equity, Diversity, and Inclusion website. Among the resources you will find are the following.

Medical Students With Disabilities: Resources to Enhance Accessibility. This guide informs users about current resources available to medical schools as they accept and matriculate a growing number of medical students with a wide range of disabilities. Specifically, this publication emphasizes the assistive technologies available for medical students. To learn more, go to the Disability and Accessibility in Academic Medicine website.

Medical Minority Applicant Registry (Med-MAR). During the MCAT registration, students who are economically disadvantaged or from racial and ethnic groups historically underrepresented in medicine can select the Medical Minority Applicant Registry (Med-MAR) option to be included in the registry. This web-based program provides medical schools with basic biographical information and MCAT scores of registered examinees, thereby giving institutions opportunities to enhance their diversity efforts.

For information about the definition of "underrepresented" in medicine, visit aamc.org/urm.

Fee Assistance Program. The AAMC believes that the cost of applying to medical school should not be an insurmountable barrier. The AAMC's Fee Assistance Program is available to students whose financial limitations would otherwise prevent them from taking the MCAT exam or applying to medical school. Details about the Fee Assistance Program may also be found in Chapter 7 of this guide.

Data About Applicants, Matriculants, and Graduates. The AAMC collects and presents detailed data about medical students from different racial and ethnic groups. Most of the data is available free of charge on the AAMC website (and a good deal are included in this guide; refer to Table 4.2 at the end of this chapter). Several resources are likely to be of interest:

- A large collection of data about medical school applicants, matriculants, and graduates is available on the AAMC website at aamc.org/facts.
- The AAMC publication *Diversity in Medicine, Facts and Figures 2019* (available at no charge) provides race and ethnicity data on medical school applicants, accepted applicants, matriculants, enrollment, graduates, and faculty.

Data on medical school faculty, including self-identified information, can be found in the AAMC U.S. Medical School Faculty report.

Additional Programs and Resources

Just as the AAMC is committed to diversity, equity, and inclusion, colleges, medical schools, and organizations are also invested in making medical education accessible to all. Explore these other resources as well.

Premedical School Programs at Undergraduate Colleges. Prehealth advisors have an abundance of information and data at their fingertips. Not only can they help you with the application process and refer you to appropriate contacts, but they also know about programs that students from underrepresented groups and disadvantaged backgrounds have found useful.

If your college has a prehealth advisor (and most do), make sure you take advantage of this valuable resource. If your institution does not have a prehealth advisor, you can contact the **National Association of Advisors for the Health Professions (NAAHP)**. The NAAHP website offers a list of NAAHP members who have volunteered to help students without access to a prehealth advisor from a distance.

Medical School Websites. In addition to the individual profiles on the Medical School Admission Requirements (MSAR) website, you'll want to explore the medical school websites for information on their diversity programs and resources. A list of all U.S. and Canadian MD-granting medical schools is available on the MSAR website.

Medical School Diversity Affairs Representatives. Other invaluable resources are medical school diversity affairs representatives. These individuals are dedicated to increasing diversity among medical schools at their institutions and are an excellent source of information for applicants (or potential applicants). You can find contact information for diversity affairs representatives for most U.S. medical schools in the Medical School Admission Requirements Report for Applicants and Advisors: Diversity and Inclusion Information. Contact information is also available within each medical school profile on the MSAR website.

Financial Assistance for Medical School. Don't let the cost of medical school deter you from your dreams. As you'll learn in Chapter 10, more than four-fifths of medical students across the country receive some form of financial assistance. Medical schools — both public and private — work hard to offer a variety of financial aid plans to ensure that capable students are not denied access to their institutions because of financial limitations. In addition to discussing possibilities for assistance with the financial aid officer at the medical schools that interest you, you should familiarize yourself with general information about financing a medical education by reading the relevant material in this guide and reviewing the information about loans and other programs at the AAMC FIRST (Financial Information, Resources, Services, and Tools) site.

Medical Student Organizations. There are national student organizations led by medical student leaders focused on engaging and supporting high school and college students, medical students, and residents. The organizations often offer a range of programs, resources, and conferences to advance students' career interests and provide a community of support. Some of the organizations include:

- Association of Native American Medical Students
- Asian Pacific American Medical Student Association
- Latino Student Medical Association
- Medical Student Pride Alliance
- National First-Generation and Low-Income in Medicine Association
- Student National Medical Association

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TO EXPLORE THE BENEFITS OF DIVERSITY, WE SUGGEST THE FOLLOWING ESSENTIAL READINGS:

Alsan M, Garrick O, Graziani G. Does diversity matter for health? Experimental evidence from Oakland. *American Economic Review*. 2019;109(12):4071-4111. doi: 10.3386/w24787

Antonio AL, Chang MJ, Hakuta K, Kenny DA, Levin S, Milem JF. Effects of racial diversity on complex thinking in college students. *Psychological Science*. 2004;15:507-510. doi: 10.1111/j.0956-7976.2004.00710.x

Barrie U, Williams M, Nguyen M, et al. Characteristics of graduating medical students interested in neurosurgery with intention to practice in underserved areas: implications for residency programs. *Clin Neurol and Neurosurg*. 2022;218:107293. doi: 10.1016/j.clineuro.2022.107293

Denson N, Chang M. Racial diversity matters: the impact of diversity-related student engagement and institutional context. *American Educational Research Journal*. 2009;46(2):322-353. doi: 10.3102/0002831208323278

Greenwood BN, Hardeman RR, Huang L, Sojourner A. Physician–patient racial concordance and disparities in birthing mortality for newborns. *Proc Natl Acad Sci USA*. 2020;117(35):21194-21200. doi: 10.1073/pnas.1913405117

Gurin P. The compelling need for diversity in higher education: expert testimony in Gratz, et al. v. Bollinger, et al. *Michigan Journal of Race and Law*. 1999;5:363-425.

Marrast LM, Zallman L, Woolhandler S, Bor DH, McCormick D. Minority physicians' role in the care of underserved patients: diversifying the physician workforce may be key in addressing health disparities. *JAMA Intern Med*. 2014;174(2):289-291. doi:10.1001/jamainternmed.2013.12756

Moreland CJ, Latimore D, Sen A, Arato N, Zazove P. Deafness among physicians and trainees: a national survey. *Acad Med*. 2013;88(2):224-32. doi:10.1097/ACM.0b013e31827c0d60

Phelan SM, et al. Medical school factors associated with changes in implicit and explicit bias against gay and lesbian people among 3492 graduating medical students. *J Gen Intern Med*. 2017;32(11):1193-1201. doi:10.1007/s11606-017-4127-6. Erratum in: *J Gen Intern Med*. 2018 Apr 17.

Saha S, Guiton G, Wimmers PF, Wilkerson L. Student body racial and ethnic composition and diversity-related outcomes in US medical schools. *JAMA*. 2008;300:1135-1145. doi: 10.1001/jama.300.10.1135

Smith DG. *Diversity's Promise for Higher Education: Making It Work*. Baltimore, MD: The Johns Hopkins University Press; 2009.

Smith DG, Gerbick G, Figueroa MA, et al. *Diversity Works: The Emerging Picture of How Students Benefit*. Washington, DC: Association of American Colleges and Universities; 1997.

Snyder JE, Upton RD, Hassett TC, Lee H, Nouri Z, Dill M. Black representation in the primary care physician workforce and its association with population life expectancy and mortality rates in the U.S. *JAMA Netw Open*. 2023 Apr 3;6(4):e236687. doi: 10.1001/jamanetworkopen.2023.6687

Whitla DK, Orfield G, Silen W, Teperow C, Howard C, Reede J. Educational benefit of diversity in medical school: a survey of students. *Acad Med*. 2003;78:460-466. doi: 10.1097/00001888-200305000-00007

Programs at Medical Schools. Once you've enrolled in medical school, you'll find a variety of academic, student services, and wellness programs are available to you. These programs help students successfully complete their medical studies, with the ultimate goal of increasing diversity among physicians entering careers in patient care, teaching, research, and advancing health equity.

TABLE 4.2. Matriculants by U.S. Medical School and Race/Ethnicity (Alone or In Combination), 2023-2024

State	Medical School	American Indian or Alaska Native	Asian	Black or African American	Hispanic, Latino, or of Spanish Origin	Native Hawaiian or Other Pacific Islander	White	Other	Unduplicated Total
AL	Alabama-Heersink	2	47	15	16	1	118	6	186
AL	South Alabama-Whiddon	1	18	12	7	0	47	3	78
AR	Arkansas	2	30	12	10	0	132	3	175
AZ	Arizona	2	34	6	25	2	65	10	118
AZ	Arizona Phoenix	2	41	9	12	1	62	8	120
CA	California	2	63	2	15	0	50	9	129
CA	California Northstate	0	76	11	6	2	24	6	119
CA	Drew	2	4	36	19	1	1	6	61
CA	Kaiser Permanente-Tyson	2	15	9	13	2	16	2	50
CA	Loma Linda	0	67	16	21	0	68	9	176
CA	Southern Cal-Keck	2	100	17	24	0	54	11	186
CA	Stanford	1	40	7	11	1	27	6	89
CA	UC Berkeley/SF Joint Prog	0	3	2	6	1	5	2	16
CA	UC Davis	7	51	19	32	1	32	4	137
CA	UC Irvine	0	57	16	14	0	24	7	114
CA	UC Riverside	2	29	13	26	0	14	8	86
CA	UC San Diego	9	50	15	30	1	51	14	141
CA	UC San Francisco	3	65	29	36	1	41	4	157
CA	UCLA Drew	0	8	7	6	0	5	1	24
CA	UCLA-Geffen	2	47	21	25	2	42	15	151
CO	Colorado	3	38	9	26	2	121	3	181
CT	Connecticut	0	29	7	13	0	66	5	112
CT	Quinnipiac-Netter	0	41	8	9	0	42	4	95
CT	Yale	2	35	12	14	2	45	3	105
DC	George Washington	2	42	21	18	0	96	17	179
DC	Georgetown	0	92	18	16	1	61	13	201
DC	Howard	5	12	97	8	0	12	4	127
FL	FIU-Wertheim	3	29	6	41	0	59	9	121
FL	Florida	2	31	16	24	1	71	6	135
FL	Florida Atlantic-Schmidt	0	20	0	15	0	45	3	76
FL	Florida State	0	28	10	23	0	70	3	120
FL	Miami-Miller	0	60	12	50	0	92	8	201
FL	Nova Southeastern-Patel	1	9	5	16	0	28	4	53
FL	UCF	0	45	13	10	0	59	3	120
FL	USF-Morsani	2	62	27	23	2	85	9	182
GA	Emory	0	39	25	6	0	72	8	139
GA	MC Georgia Augusta	1	91	34	17	2	133	6	264
GA	Mercer	1	26	18	9	0	120	2	170
GA	Morehouse	2	16	82	8	0	9	1	110
HI	Hawaii-Burns	0	68	0	1	10	14	0	77
IA	Iowa-Carver	0	38	3	11	0	111	3	152
IL	Carle Illinois	0	38	3	2	0	21	1	64
IL	Chicago Med Franklin	1	88	7	14	1	87	20	201

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TABLE 4.2. Matriculants by U.S. Medical School and Race/Ethnicity (Alone or In Combination), 2023-2024

State	Medical School	American Indian or Alaska Native	Asian	Black or African American	Hispanic, Latino, or of Spanish Origin	Native Hawaiian or Other Pacific Islander	White	Other	Unduplicated Total
IL	Chicago-Pritzker	1	30	20	15	1	28	1	88
IL	Illinois	2	89	28	44	2	132	11	291
IL	Loyola-Stritch	1	55	5	12	0	93	8	170
IL	Northwestern-Feinberg	1	57	18	17	0	58	5	145
IL	Rush	1	43	24	12	0	68	4	141
IL	Southern Illinois	1	16	9	4	0	53	1	80
IN	Indiana	2	74	35	50	1	226	11	364
KS	Kansas	3	30	16	20	1	157	5	211
KY	Kentucky	2	18	12	21	0	162	7	201
KY	Louisville	1	31	23	16	0	102	8	163
LA	LSU New Orleans	3	34	19	24	1	129	3	195
LA	LSU Shreveport	3	9	7	6	1	129	4	150
LA	Tulane	2	37	14	7	0	123	3	190
MA	BU-Chobanian Avedisian	0	68	17	10	1	53	7	146
MA	Harvard	1	72	19	16	0	59	4	163
MA	Massachusetts-Chan	2	64	11	23	2	111	6	200
MA	Tufts	2	54	18	23	1	116	8	202
MD	Johns Hopkins	1	62	12	11	0	43	3	120
MD	Maryland	1	69	17	7	1	58	1	147
MD	Uniformed Services-Hebert	2	40	17	16	1	122	0	176
MI	Central Michigan	0	17	5	3	0	69	14	104
MI	Michigan	2	51	15	16	0	90	13	164
MI	Michigan State	1	40	16	17	0	102	22	189
MI	Oakland Beaumont	0	42	9	4	0	57	18	125
MI	Wayne State	3	92	20	27	2	147	30	305
MI	Western Michigan-Stryker	0	16	7	8	0	59	6	84
MN	Mayo-Alix	3	22	9	14	0	68	4	108
MN	Minnesota	9	41	27	12	0	168	9	241
MO	Missouri Columbia	0	28	13	9	0	77	2	128
MO	Missouri Kansas City	2	67	11	7	0	57	1	136
MO	Saint Louis	2	64	7	12	1	97	2	178
MO	Washington U St Louis	1	45	13	21	0	51	4	124
MS	Mississippi	1	13	16	4	0	136	1	165
NC	Duke	2	47	16	12	2	50	0	118
NC	East Carolina-Brody	3	21	13	7	0	46	2	90
NC	North Carolina	0	49	26	22	0	111	11	204
NC	Wake Forest	2	21	13	27	0	94	2	145
ND	North Dakota	8	5	0	0	0	61	2	74
NE	Creighton	1	80	9	16	0	162	7	253
NE	Nebraska	0	9	4	5	0	115	4	132
NH	Dartmouth-Geisel	2	19	7	13	1	57	3	92
NJ	Cooper Rowan	1	42	5	2	0	59	4	112
NJ	Hackensack Meridian	0	57	8	14	0	80	11	162
NJ	Rutgers New Jersey	0	86	14	17	0	57	19	174
NJ	Rutgers-RW Johnson	0	77	15	16	0	59	5	165
NM	New Mexico	5	15	3	41	1	46	2	93
NV	Nevada Reno	2	27	1	8	2	36	2	70
NV	UNLV-Kerkorian	1	15	4	14	2	35	2	66

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TABLE 4.2. Matriculants by U.S. Medical School and Race/Ethnicity (Alone or In Combination), 2023-2024

State	Medical School	American Indian or Alaska Native	Asian	Black or African American	Hispanic, Latino, or of Spanish Origin	Native Hawaiian or Other Pacific Islander	White	Other	Unduplicated Total
NY	Albany	0	49	17	12	0	64	10	143
NY	Buffalo-Jacobs	3	32	31	23	0	104	1	184
NY	CUNY	2	25	37	8	0	11	0	75
NY	Columbia-Vagelos	2	38	25	22	2	69	3	138
NY	Cornell-Weill	1	32	7	17	1	53	7	106
NY	Einstein	2	55	9	19	1	96	10	183
NY	Mount Sinai-Icahn	1	47	20	12	0	39	8	120
NY	NYU Long Island-Grossman	0	10	3	4	0	11	0	24
NY	NYU-Grossman	0	24	8	16	0	63	2	100
NY	New York Medical	2	77	17	24	1	56	3	136
NY	Renaissance Stony Brook	2	54	13	13	1	56	3	136
NY	Rochester	1	39	12	6	0	52	2	104
NY	SUNY Downstate	1	60	28	30	1	81	28	207
NY	SUNY Upstate-Norton	5	47	22	20	0	88	7	175
NY	Zucker Hofstra Northwell	1	34	9	14	0	43	6	99
OH	Case Western Reserve	2	83	17	19	0	91	9	216
OH	Cincinnati	0	52	12	13	1	112	1	177
OH	Northeast Ohio	0	41	19	22	0	108	10	174
OH	Ohio State	1	64	20	20	3	100	9	198
OH	Toledo	1	53	8	5	0	105	10	175
OH	Wright State-Boonshoft	0	30	8	5	1	85	4	126
OK	Oklahoma	5	53	6	12	0	106	5	176
OR	Oregon	10	33	9	12	2	95	9	150
PA	Drexel	3	121	27	31	0	127	9	304
PA	Geisinger Commonwealth	0	36	5	11	0	68	2	115
PA	Jefferson-Kimmel	0	81	20	14	1	141	13	272
PA	Penn State	1	54	9	4	0	75	11	145
PA	Pennsylvania-Perelman	1	54	9	4	0	75	11	145
PA	Pittsburgh	1	52	22	18	0	56	2	148
PA	Temple-Katz	3	59	26	33	0	121	4	222
PR	Caribe	0	0	3	76	1	7	0	77
PR	Ponce	2	14	12	145	0	38	5	180
PR	Puerto Rico	1	1	5	101	0	14	0	102
PR	San Juan Bautista	1	4	3	46	0	18	1	64
RI	Brown-Alpert	1	44	23	16	0	67	3	144
SC	MU South Carolina	2	30	7	16	0	119	5	172
SC	South Carolina Columbia	0	15	9	4	0	78	1	100
SC	South Carolina Greenville	1	14	10	9	0	84	3	110
SD	South Dakota-Sanford	2	1	0	1	0	68	1	71
TN	East Tennessee-Quillen	0	10	5	6	1	60	4	77
TN	Meharry	2	10	90	6	0	13	3	115
TN	Tennessee	0	32	10	13	0	121	13	173
TN	Vanderbilt	0	32	10	21	1	44	2	95
TX	Baylor	1	77	11	38	2	116	4	226
TX	Houston-Fertitta	0	18	12	15	0	21	2	60
TX	TCU-Burnett	0	21	2	4	0	22	2	60
TX	Texas A&M	0	65	7	31	0	113	2	199

(continued)

TABLE 4.2. Matriculants by U.S. Medical School and Race/Ethnicity (Alone or In Combination), 2023-2024

State	Medical School	American Indian or Alaska Native	Asian	Black or African American	Hispanic, Latino, or of Spanish Origin	Native Hawaiian or Other Pacific Islander	White	Other	Unduplicated Total
TX	Texas Tech	2	49	8	22	0	112	4	181
TX	Texas Tech-Foster	0	42	11	43	0	56	4	124
TX	UT Austin-Dell	0	17	5	8	0	25	0	50
TX	UT Houston-McGovern	1	93	21	37	0	123	2	240
TX	UT Medical Branch-Sealy	3	116	19	49	1	91	1	230
TX	UT Rio Grande Valley	0	6	13	24	0	24	0	53
TX	UT San Antonio-Long	5	95	10	46	1	122	5	232
TX	UT Southwestern	3	100	22	39	0	86	6	232
TX	UT Tyler	0	9	2	6	0	29	0	40
UT	Utah-Eccles	1	18	3	18	4	93	2	125
VA	Eastern Virginia	5	52	14	13	1	83	2	151
VA	Virginia	1	62	26	13	0	66	6	158
VA	Virginia Commonwealth	0	65	16	7	0	85	6	184
VA	Virginia Tech Carilion	1	11	0	2	0	31	2	50
VT	Vermont-Larner	2	29	9	14	3	72	9	122
WA	U Washington	7	70	16	24	1	178	8	273
WA	Washington State-Floyd	1	33	3	7	0	47	3	80
WI	MC Wisconsin	3	66	21	34	0	156	4	264
WI	Wisconsin	7	39	17	18	1	106	5	171
WV	Marshall-Edwards	1	7	6	1	0	55	1	72
WV	West Virginia	2	8	2	5	0	93	5	112

Note: Data is not reflective of the number of individuals in each race/ethnicity category, but rather the number of times a particular race/ethnicity category was selected. One individual can self-identify with multiple groups.

Source: AAMC Data Warehouse, Applicant Matriculant Data File.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 4.1

Identifying Premed and Application Programs

Use this worksheet to identify programs you may be eligible for. Many programs primarily sponsored by medical schools are available to students across the United States. You can start searching at Summer Enrichment and Pipeline Programs and ExploreHealthCareers.org, and then use this worksheet to figure out your options.

Before the Application Process

For example: Summer Health Professions Education Program (SHPEP)

Description: Six-week academic enrichment program that offers students both academic and career experiences that will support their dental or medical school career preparation. For more information, go to shpep.org.

Eligibility: _____

Which academic year(s) would I be eligible to participate? _____

When am I eligible to apply? _____ Application deadline: _____

Accepts out-of-state? ☐ Yes ☐ No ☐ Other: _____

Application requirements: _____

During the Application Process

For example: Medical Minority Applicant Registry (Med-MAR)

Description: During the MCAT registration, students who are either economically disadvantaged or from racial and ethnic groups historically underrepresented in medicine can select the Medical Minority Applicant Registry (Med-MAR). This web-based program provides medical schools with basic biographical information and MCAT scores of registered examinees, giving schools opportunities to enhance their diversity efforts. For more information, go to aamc.org/medmar.

Eligibility: _____

Which academic year(s) would I be eligible to participate? _____

When am I eligible to apply? _____ Application deadline: _____

Accepts out-of-state? ☐ Yes ☐ No ☐ Other: _____

Application requirements: _____

During the Application Process

Program: _____

Description: _____

Eligibility: _____

Which academic year(s) would I be eligible to participate? _____

When am I eligible to apply? _____ Application deadline: _____

Accepts out-of-state? ☐ Yes ☐ No ☐ Other: _____

Application requirements: _____

CHAPTER 5

All About the MCAT® Exam

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The MCAT is a difficult exam. It wasn't like any of the exams I'd taken during my undergraduate years. It was an exercise in critical thinking and knowledge application in a way that challenged my existing form of thought. I took the MCAT exam while I was in my junior year of college, so juggling my school responsibilities with studying for the exam was a task. However, I devised a game plan and started studying around six months before my exam date so I could slowly build a strong knowledge foundation.

For the first three months, I focused on content review. Each day I would focus on a different subject to ensure I covered each topic equally. This also confirmed that I progressed through each section when I took practice exams. During those three months, I found prep books and created a list of topics I wasn't confident about. I would complete practice questions and highlight questions that I consistently got wrong. This list helped me to focus my studying and ensured that I could keep track of my weaker concepts.

The following three months were focused on taking practice exams each weekend and reviewing what I got wrong during the week. One of my weakest sections was CARS, so I completed one or two passages per day to improve my reading speed and comprehension. One piece of advice I highly recommend is to commit to some type of spaced repetition study method, whether that be flashcards, Quizlet, Anki, or whatever method works for your study style. The MCAT covers a lot of information, and rote memorization is not a strong strategy. Spaced repetition will continually and consistently test your knowledge base and ensure that old information is still recalled. The MCAT exam is challenging, but formulating a study plan that suits your learning style will lead you to success.

The Role of the MCAT Exam

Scores from the MCAT exam are used in the context of your full application to help admissions officers identify which students are likely to succeed in medical school.

That's done by identifying students who have not only a basic knowledge of the natural, behavioral, and social sciences — the foundation necessary in the early years of medical school — but also strong critical analysis and reasoning skills.

It can be argued that college grades essentially do the same thing. But because an "A" at one school is not necessarily equivalent to an "A" at another, admissions officers don't have a standard measure against which to evaluate students. The MCAT exam fills that void. As a result, virtually every medical school in the United States, and many in Canada, require applicants to submit recent MCAT scores.

Admissions officers look at MCAT scores in conjunction with grades and with many other selection factors, including those related to experiences and personal attributes, when making their decisions.

Using all these components, medical school admissions committees are able to substantially increase their success in predicting who will be successful in medical school.

Application programs and institutions that use MCAT scores include:

- AMCAS
- American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS)
- Texas Medical and Dental Schools Application Service (TMDSAS)
- Ontario Medical School Application Service (OMSAS)
- Other Canadian medical schools requiring MCAT scores
- American Association of Colleges of Podiatric Medicine Application Service (AACPMAS)
- Veterinary Medical College Application Service (VMCAS)
- Schools of Public Health Application Service (SOPHAS)

Eligibility

You're eligible to take the MCAT exam if you plan to apply to a health professions program, including:

- MD-granting institutions
- DO-granting institutions
- Podiatric (DPM) programs
- Veterinary medicine (DVM) programs
- Any other health-related program that will accept MCAT exam results to satisfy a test score admission requirement

When you register, you'll be required to sign a statement verifying your intention to apply to a health professions school.

International Students
There are no additional eligibility requirements for international examinees.

How the Exam Is Structured

The MCAT exam has four multiple-choice test sections:

- Biological and Biochemical Foundations of Living Systems
- Chemical and Physical Foundations of Biological Systems
- Psychological, Social, and Biological Foundations of Behavior
- Critical Analysis and Reasoning Skills

The first three sections listed are organized around foundational concepts in the natural, behavioral, and social sciences. They reflect current research about the most effective ways for students to learn and use science, emphasizing deep knowledge of the most important scientific concepts.

Science education leaders say that some of the most important foundational concepts in the sciences ask students to integrate and analyze information from different disciplines. In that vein, questions in these sections ask you to combine your scientific knowledge from multiple disciplines with your scientific inquiry and reasoning skills. On these three sections of the exam, you'll demonstrate four different scientific inquiry and reasoning skills:

- Knowledge of scientific concepts and principles
- Scientific reasoning and problem-solving
- Reasoning about the design and execution of research
- Data-based and statistical reasoning

The fourth section, Critical Analysis and Reasoning Skills, is similar to many of the verbal reasoning tests you've taken in your academic career. It includes passages and questions that test your ability to comprehend and analyze what you read. This section asks you to read and think about passages from a wide range of disciplines in the humanities and social sciences, including population health, ethics and philosophy, and studies of diverse cultures. The passages are followed by a series of questions that lead you through the process of comprehending, analyzing, and reasoning about the material you've read. This section was developed specifically to measure the analytical and reasoning skills you'll need to be successful in medical school.

What the Exam Measures

The different sections of the MCAT exam are carefully designed to test the concepts and skills most needed by entering medical students.

The Biological and Biochemical Foundations of Living Systems and the Chemical and Physical Foundations of Biological Systems sections are designed to:

- Test introductory-level biology, organic and inorganic chemistry, and physics concepts taught in yearlong courses
- Test biochemistry concepts at the level taught in many colleges and universities in first-semester biochemistry courses
- Test cellular and molecular biology topics at the level taught in many colleges and universities in introductory biology sequences and first-semester biochemistry courses
- Target basic research methods and statistics concepts described by many undergraduate faculty as important to success in introductory science courses
- Determine whether you have demonstrated your scientific inquiry and reasoning, research methods, and statistics skills, as applied to the natural sciences

The Psychological, Social, and Biological Foundations of Behavior section is designed to:

- Test your knowledge and use of the concepts in psychology, sociology, and biology that provide a solid foundation for learning about the behavioral and sociocultural determinants of health in medical school
- Target concepts taught at many colleges and universities in first-semester psychology and sociology courses
- Target biology concepts that relate to mental processes and behavior, as taught at many colleges and universities in introductory biology
- Target basic research methods and statistics concepts described by many undergraduate faculty as important to success in introductory science courses and described in many introductory psychology and sociology courses
- Determine whether you have demonstrated your scientific inquiry and reasoning, research methods, and statistics skills, as applied to the social and behavioral sciences

The Critical Analysis and Reasoning Skills section is designed to:

- Test your comprehension, analysis, and reasoning skills by asking you to critically analyze information provided in reading passages
- Include content from ethics, philosophy, studies of diverse cultures, population health, and a wide range of social sciences and humanities disciplines
- Provide you with all the information you need to answer questions in the passages

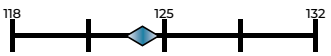
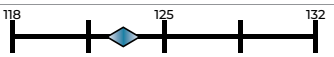
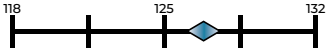
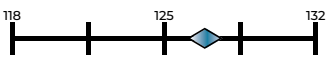
MCAT Scores

You'll receive five scores from your MCAT exam: one for each of the four sections and one combined, total score. The MCAT exam is not graded on a curve; it's equated. The equating process compensates for small differences in difficulty between test forms and ensures that scores have the same meaning no matter when you take the exam or what test form you get. In your score report, you'll receive the information below.

Section Scores

Each of the four sections — Biological and Biochemical Foundations of Living Systems; Chemical and Physical Foundations of Biological Systems; Psychological, Social, and Biological Foundations of Behavior; and Critical Analysis and Reasoning Skills — is scored from a low of 118 to a high of 132, with a midpoint of 125. You'll receive a score for each of the four sections. (Figure 5.1 shows a sample score report.)

FIGURE 5.1. Sample MCAT score report.

Section	Score	Confidence Band	Percentile Rank of Score	Score Profile
Chemical and Physical Foundations of Biological Systems	124	123 – 125	46%	
Critical Analysis and Reasoning Skills	123	122 – 124	36%	
Biological and Biochemical Foundations of Living Systems	127	126 – 128	75%	
Psychological, Social, and Biological Foundations of Behavior	127	126 – 128	65%	
MCAT Total	**501**	**499 – 503**	**51%**	

Total Score

Your scores for the four sections are combined to create your total score. The total score ranges from 472 to 528. The midpoint is 500.

For example, if you scored 127 on the Biological and Biochemical Foundations of Living Systems section; 124 on the Chemical and Physical Foundations of Biological Systems section; 127 on the Psychological, Social, and Biological Foundations of Behavior section; and 123 on the Critical Analysis and Reasoning Skills section, your total score would be 501.

Confidence Bands

Like other standardized tests, the MCAT exam is an imperfect measure of what test-takers know and can do. Scores can be affected by factors like fatigue, test anxiety, and distractions during the test. Then again, an examinee's score might be boosted if they were recently exposed to some of the topics included on the exam. The inclusion of the confidence bands is meant to remind admissions

officers not to overemphasize small differences in test scores and indicate the range in which an examinee's true score likely lies. Nonoverlapping confidence bands show an examinee's potential strengths and weaknesses. Overlapping confidence bands suggest there are no meaningful differences in performance between sections.

Percentile Ranks
The percentile ranks show how you scored relative to other MCAT examinees. You'll receive a percentile rank for each individual section score and for your overall total score. Each percentile rank represents the percentage of examinees who received the same score as you or a lower score. The ranks show your scores compared with the scores of other examinees. Percentile ranks are updated on May 1 every year to reflect the results from the previous three calendar years. MCAT percentile ranks are available on the MCAT Resources page.

Score Profiles
Score profiles are included to show your strengths and weaknesses across the four sections of the exam. This section of the score report can help you determine how to focus your preparation if you decide to retake the exam. Learn more about the score scale and score report.

Valid MCAT Scores
Each medical school sets its own policy about how much time can elapse between when you take the exam and when you apply, as well as the latest exam date it will accept during the application cycle. To find out the acceptable timing for the schools you're interested in, contact them directly or visit the MSAR website, which also has a table showing which schools are accepting scores from the previous version of the MCAT exam in their admission cycles.

Preparing for the Exam

Preparing for the MCAT exam requires giving yourself adequate time to prepare, developing a study plan, and using good study strategies. Students with higher scores have reported making greater use of effective study strategies to prepare.

Before you develop your plan for taking the MCAT exam, ask yourself a few questions: Have I completed all the coursework covering the topics on the exam? Do I feel confident in all content areas? Are there some topics or skills I feel require more in-depth study or practice? Remember, the best study plans are those you can tailor to your needs.

To develop your own study schedule:

- Get started by learning about the study and practice cycle and how to use AAMC practice exams, and follow our guide for Creating a Study Plan for the MCAT Exam.
- See how other examinees prepared with this collection of testimonials: How I Prepared for the MCAT Exam. Check out their study schedules, strategies, and the resources they used, and note their best advice about how to prepare.
- Learn more about the experience and background of MCAT examinees by exploring the Post-MCAT Questionnaire report.

To understand what's on the exam:

- Review the What's on the MCAT Exam? content outline. It contains a complete list of foundational concepts, content categories, skills, and disciplines you will need to know for test day. The outline is also available as a course in the MCAT Official Prep Hub. Read *The Official Guide to the MCAT Exam*, which is the only official comprehensive overview of the exam. It includes 120 practice questions and solutions. The e-book is available through Amazon.

- Read *The MCAT Essentials* for the current testing year.

To study the content on the exam:

- Visit the What's on the MCAT Exam? course outline. Each topic tested on the exam is mapped to Khan Academy lessons and other open access, free resources.
- Visit Khan Academy's MCAT Collection. This collection of over 1,100 videos and 3,000 review questions contains sample content from all four sections of the MCAT exam. It was created by the Khan Academy, with support and funding from the AAMC and the Robert Wood Johnson Foundation.
- Review A Road Map to MCAT Critical Analysis and Reasoning Skills in the Khan Academy MCAT Collection. The AAMC mapped the skills assessed in the CARS section of the MCAT exam to the free videos, worked examples, and practice passage sets in the Khan Academy's MCAT collection.

To practice for the exam:

- The AAMC offers two free full-length practice exams and four low-cost practice exams, as well as low-cost question banks, written by the test developers. Learn more about our practice products.

Test Dates, Registration, and Fees

The MCAT exam dates are published on the MCAT website. Although the AAMC selects exam dates to ensure scores are available to meet most medical school application deadlines, we recommend you check the specific scheduling requirements of the schools of your choice, provided in the MSAR website school profiles.

To be sure you get the most complete and up-to-date information about the MCAT exam, it is crucial that you read the most current version of *The MCAT® Essentials* before you register for the exam. After you've read it, you can register online through the MCAT registration system. The most current information on exam fees, including costs for making changes and testing internationally can also be found on the MCAT website. There are no additional charges for distribution of your test scores to AMCAS or any other application services or institutions that use MCAT scores.

Many medical schools prefer that applicants take the MCAT exam in the spring rather than the summer because of the short time between the availability of late-summer scores and school application deadlines, so consider taking the MCAT exam 12 to 18 months before your expected entry into medical school.

However, it's important to remember that you should not take the exam before you feel ready. With limits in place for how often you can take the MCAT exam in a given year or over a lifetime (read the "Retaking the Exam" section of this chapter), you should have completed basic coursework and should feel comfortable with your knowledge of introductory-level biology, general and organic chemistry, and physics — as well as first-semester psychology, sociology, and biochemistry — before you take the exam.

For more guidance on deciding when to take or retake the exam, please consult with your prehealth advisor.

Fee Assistance Program

The AAMC believes the cost of applying to medical school should not be a barrier to aspiring doctors. Therefore, the AAMC Fee Assistance Program helps qualifying examinees with MCAT registration fees, test preparation products, and other relevant AAMC products and services. To use the Fee Assistance Program, you must be approved for the benefit before registering for the exam. The benefits are not retroactive; you won't be given a refund for any resources or fees incurred before you qualify. Learn whether you're eligible for the Fee Assistance Program.

Testing With Accommodations

The AAMC is committed to giving all individuals an opportunity to demonstrate their proficiency on the MCAT exam, which includes ensuring access to people with disabilities in accordance with relevant law.

If you have a disability or medical condition you believe requires an adjustment to the standard testing conditions, we encourage you to apply for accommodated testing.

For information about application timeframes and types of documentation needed, as well as how to apply, please refer to the MCAT Exam with Accommodations webpage.

Retaking the Exam

It can be a tough decision, but if you're not happy with your performance on the MCAT exam, you have the option to take it again.

There are times when a retake is well worth considering. Perhaps you discovered that your coursework or study didn't cover the topics as thoroughly as you needed. Or there's a large discrepancy between your grade in a relevant subject and your score on a particular section. Or maybe you simply didn't feel well the day of the exam. In all these cases, prehealth advisors may be of great help, and we recommend you discuss the issue with yours. However, be aware that you can't choose which scores are sent to medical schools; admissions committees will see all MCAT exam scores you've earned. (On test day, you have the option to void your MCAT exam if you do not want your test to be scored.) Additionally, there are limits on how often and how many times you may take the MCAT exam: You may take the exam up to three times in a testing year, up to four times in two consecutive years, and up to seven times in a lifetime. Voided exams and "no shows" count toward your attempts in a year or over your lifetime (however, these attempts are not included in the score report sent to medical schools).

Score Reporting

Your scores will be available in the MCAT Score Reporting System, accessible through the AAMC website. No matter which option you use for sending your scores to medical schools, all attempts that are scored will be sent to them. You can't withhold any of your MCAT scores from your applications.

You have two options for sending your MCAT scores to medical schools:

- **Send your scores to AMCAS:** AMCAS is the American Medical College Application Service, which most U.S. medical schools take part in and which you will use to manage sending your application to participating institutions. Your MCAT scores are automatically released to AMCAS. This means you don't need to take any additional steps to insert your scores into your application. You can view a list of participating schools on the AMCAS Program-Participating Medical Schools and Deadlines webpage. Read more about AMCAS in Chapter 7.

- **Send your scores to non-AMCAS schools:** If you're applying to non-AMCAS schools and programs, you'll need to send your scores electronically or by mailing a copy of your official score report to the non-AMCAS schools. Instructions are detailed in the MCAT Score Reporting System.

Gap Year and Career Changers: Taking the MCAT Exam

If you plan to take a gap year(s) or are changing careers, be thoughtful about preparing for the MCAT exam. Consider factors such as how well you know the content tested on the exam and when you would ideally want to begin medical school. This will help you figure out the best time to take the exam.

- **Know when you want to apply:** Many examinees consider taking their MCAT exam in the calendar year before the year they plan to enter medical school. For example, if you are applying in 2025 for entrance to medical school in 2026, you would take the exam in 2025. If you plan to take a gap year(s), think about whether you want to take the exam before, during, or after that time, and build in time to prepare.
- **Mastering the content:** You are the best judge of how prepared you are. First, determine whether you need to take coursework or need more time to study. Some applicants need to take additional coursework, retake coursework that is several years old, or complete postbaccalaureate programs to meet application requirements. Consider this when choosing an exam date because the timeline may affect whether the exam will still be accepted by various medical schools.
- **Retesting and testing limits:** If you think you might need to test more than once in a calendar year, try to schedule an exam date early in the year. This will give you more time to receive your scores and prepare for a retest. Remember: You can take the exam only three times in a single testing year, four times over two consecutive testing years, and seven times in a lifetime.

If you've never taken the MCAT exam and you don't currently have a prehealth advisor to help you prepare, the National Association of Advisors for the Health Professions has volunteer advisors available. Submit a request to NAAHP.org to be connected to a volunteer advisor.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 5.1

Getting Ready to Take the MCAT® Exam Checklist

Ask yourself these questions when you're getting ready for the MCAT exam.

- Am I familiar with what will be on the exam? ☐ Yes ☐ No ☐ Unsure
  (Find out what's on the exam.)
- If no or unsure, what content or sections am I unsure about? _____
- Have I allowed enough time to study and feel comfortable with my knowledge of the exam content?
  - Chemical and Physical Foundations of Biological Systems
    ☐ Yes ☐ No, I need more time ☐ Unsure
  - Biological and Biochemical Foundations of Living Systems
    ☐ Yes ☐ No, I need more time ☐ Unsure
  - Psychological, Social, and Biological Foundations of Behavior
    ☐ Yes ☐ No, I need more time ☐ Unsure
  - Critical Analysis and Reasoning Skills
    ☐ Yes ☐ No, I need more time ☐ Unsure

If you have areas where you need more study, check out the AAMC's preparation resources, which offer the opportunity to get familiar with the test features and functionality. Also, consider forming a study group at your school or with other applicants preparing for the exam. Talk to your prehealth advisor about resources you may have on campus or through your institution.

- Am I within one to two calendar years of wanting to apply to medical school?
  ☐ Yes ☐ No ☐ Unsure
- Have I spoken with my prehealth advisor? Does my advisor agree that I am ready?
  ☐ Yes ☐ No ☐ Unsure
- Have I applied to see if I qualify for the Fee Assistance Program?
  ☐ Yes ☐ No ☐ Unsure
- Do I feel prepared and ready to take the exam?
  ☐ Yes ☐ No ☐ Unsure

If you answered "no" to many of these questions, consult with your prehealth advisor about developing a plan to take the exam. Information about creating a study plan is available on the AAMC website. When you're close to registering for a test date, be sure to read the *MCAT® Essentials for Testing Year 2024* for important information on scheduling, registration, test-day policies, and scoring.

CHAPTER 6

Choosing Your Schools

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Choosing which medical schools to apply to can feel overwhelming, given the multitude of factors an applicant has to consider. However, the key guiding principle should be to focus on what matters most to you. It is essential to identify your non-negotiables and build the list of schools you will consider from there.

When conducting your research, consider several aspects, such as cost, mission alignment, location, proximity to family, structure of preclinical curriculum, and research opportunities, to name a few examples. In my experience, I found the Medical School Admission Requirements™ (MSAR®) website and the AAMC FACTS data, particularly Table A-1, to be invaluable resources. Together they helped me identify schools where I believed I would be competitive and whose mission aligned with my values.

Remember to consult with your prehealth advisor, mentors, current medical students, and alumni who may be able to provide insight into the culture, workload, and overall experience of different medical schools. Additionally, attending medical career fairs, open houses, or virtual events can offer opportunities to interact with representatives and gain deeper insights into each institution.

Take the time to carefully evaluate each school based on your priorities and goals and keep an open mind as you explore various options. Ultimately, your medical school will nurture your personal and professional growth and establish a solid foundation for a successful career in medicine.

The Overall Mission of the School

Many of the differences among medical schools are obvious. Some schools are located on the East Coast, some on the West Coast. Some are private; others are public. Some have a large entering class; others are small. Some have a single main campus, while others have multiple regional campuses. And, as explained in Chapter 3, medical schools vary in the content of their courses, the way they teach, and even the way they grade and evaluate students.

These are all factors you'll want to consider as you narrow your selection, and we touch on them in the following pages. But the differences go even deeper, and at their core, medical schools have diverse missions and priorities. Because of these distinctions, what is significant to one school may be of only moderate importance to another, and these qualities naturally carry into the selection process.

Deciding where to apply requires you to learn not only about the differences among schools but also to analyze yourself — your skills, experiences, career goals, and so forth — to identify the most appropriate matches. Take, for instance, an institution that places a strong emphasis on primary care. Is that the

career path you intend to follow? If so, and especially if you can demonstrate your interest through extensive experience related to that area, you become a more attractive candidate on that basis alone.

Some schools may be actively seeking students from specific geographic or rural areas. Others may be looking for students with a high potential for a research career. And others may want to increase the number of doctors who plan to practice in their state (often a goal of public institutions). The differing missions among schools are reflected in their admission policies and standards.

If you need help with this self-analysis, think back to the various experiences you've had over the years. The ones you found especially rewarding or inspirational are likely to correlate with a specific area of interest and, by extension, a career goal.

Did you volunteer for two summers at a clinic in a **rural, underserved area**? Perhaps that's the direction you'd like to take your career in. If so, you'll want to seek out medical schools that place a high priority on that area.

Were the part-time jobs you had while doing research particularly gratifying? If you'd like to pursue a **research career**, look for schools that have strong reputations in that area or are known for graduating a large percentage of medical students pursuing research careers.

Your interests and career goals are also demonstrated in other ways. Did you spend your junior year tutoring first- or second-year students in entry-level biology or chemistry? Perhaps you'd like to join a **medical school faculty** and educate the next generation of physicians. If so, find medical schools that have a relatively large percentage of graduates in teaching positions, and check whether schools are affiliated with teaching hospitals.

Once again, keep in mind that applying to medical school is a two-way street. While you're looking for a match, so are the schools. Your experiences will provide good insights for the admissions officers and help them determine whether your interests and their missions are congruent. If you don't know which medical career path you want to pursue yet, that's okay. Aim to get as many rich and diverse experiences as possible so you will be a well-rounded applicant.

Kicking Off Your Research

There are several ways you can research schools to identify the ones that best match your own strengths, interests, and goals. Here are some factors to consider in your selection:

- Research reputation and opportunities
- Community-based experiences and opportunities
- Geographic location
- School's teaching methods
- Program of elective courses
- Faculty mentorship
- Placement of recent graduates in specialty residencies
- Residency programs at hospitals affiliated with the school

The Medical School Admission Requirements™ (MSAR®) website. Start your research with the medical school profiles on the MSAR website. You'll find each institution's clear mission statement and a description of its selection factors.

School websites and literature. Also review information provided by schools themselves. Although the specific content varies by school, every school provides detailed material for prospective students.

Advisors. Your prehealth advisor or career counselor will be able to recommend specific schools likely to be a good fit. These advisors have a lot of insight about the application process, so don't overlook this resource. Also, make sure you attend health career fairs to speak with admissions staff from medical schools and participate in premed or prehealth student organizations.

The Educational Program

It's easy to get hung up on a specific region or location, or you may recognize the name of a prestigious school and want to go there simply because it sounds impressive. Consider all your options, though. As you weigh your decision, you'll want to consider the differences among the educational programs themselves.

There's likely going to be a strong relationship between a school's mission and its **curriculum**. You'll be able to gauge whether an institution's objectives align with your interests by analyzing course requirements and elective programs. A medical school with a mission to graduate more primary care doctors may, for example, have a track that provides additional training in that area. A school that emphasizes research may require their students to write a thesis or devote an extended period of time to scholarly pursuits.

As you do your research, also consider what **teaching methods** you find most effective. Do you do well with self-directed or participatory learning exercises, or do you prefer a learning environment with the more traditional, lecture-based style? Although most medical schools use an educational model that combines a variety of methods, every program adapts its own design. Are you looking for classes that promote small-group discussions and problem-based learning exercises? Or are you more comfortable with a traditional teaching approach? Eventually, these are great topics to discuss with current students, but a good starting point for your exploration is a school's website, as well as the AAMC curriculum directory.

There are many other factors you might want to think about. How will you be evaluated? At what point must students pass the first two steps of the USMLE before advancing in their education? What level of academic support is available? Is there a mentor system, for instance? What about cultural organizations and support services for historically marginalized and first-generation students — are they available? Questions such as these will undoubtedly enter into your final decision-making.

How Do GPA and MCAT Scores Factor In?

Don't choose schools based solely on where you think your grades and MCAT® scores will be accepted. While there's no question that your educational record is important and admissions officers seek candidates who are likely to succeed academically in their programs, it's important to realize that academics alone do not predict who will become an effective physician, and admissions officers know that all too well.

There are many instances in which a "high-scoring" applicant is not accepted to a medical school — while an applicant with lower-than-average grades and scores is — which tells you that admissions officers are looking at other factors.

Admissions officers are taking a more holistic approach to evaluating applicants. Through this practice, admissions officers assess candidates more broadly, looking not only at their GPA and MCAT scores but also at their experiences and personal attributes.

You can read about the holistic approach to admissions in Chapter 8, "The Admission Decision."

Attending Medical School in Your Home State

State residents enrolled in state-supported medical schools pay lower tuition than nonresidents. In addition, in-state residents are often given preference for admission (compared with out-of-state residents) for at least some of their spaces because the school receives state government support. With this in mind, you may want to strongly consider the public institutions in your state as you decide where to apply. Note that residency requirements are established by each state. Check with individual medical schools for policies regarding qualifying for in-state or residential status.

Nationally, 59.9% of 2023 matriculants attended schools in their home states.

International Students

Only a small number of international students — those who are not U.S. citizens or permitted to reside permanently in this country — attend U.S. medical schools. If you are an international applicant, know that private medical schools are more likely than public schools to accept international students, and most medical schools require completion of premedical coursework at a U.S. college or university. For more information, refer to the Aspiring Docs® fact sheet on applying as an international applicant.

Public or Private?

You may also be deliberating between public and private institutions. Typically, the most cost-effective option is a public medical school in the state where you live. If you're from out of state, the cost differential between a public and a private school virtually disappears (refer to Table 10.1 in Chapter 10). But don't automatically assume, even if you're interested in a state school near your home, that the private route will be more expensive under all circumstances. Some private institutions have large endowments that allow them to provide significant scholarship aid to qualifying students. These scholarships lower the "effective" tuition rate and permit those students to graduate with less educational debt than if they had attended a public medical school in their home state.

Cost is only one consideration, though. Another element to be aware of when investigating differences between private and public institutions is the school's mission — and how it might relate to your own aspirations and interests. Although all medical schools — public or private — have different missions, certain public institutions may have specific goals related to their state, such as increasing the state's supply of physicians. If the school is in your home state and you'd like to live and work there after graduation, that will be a factor from both your perspective and the school's. Other public institutions were founded by state legislators with an emphasis on the needs of a particular patient population — such as elderly, rural, or underserved groups — which should enter into your evaluation if that objective corresponds to your own career intentions.

Additional Factors to Consider

"Additional" doesn't mean less significant. Many other factors may be important to you as you search for a good fit, including:

Location. Perhaps you simply prefer a specific geographic region. Do you want to be close to family and friends? Do you prefer a warmer or cooler climate? Are you a fan of the East Coast or the South or the West? What about a bustling city environment versus a rural one? These factors play to your comfort level, and all are valid considerations. Beyond that, though, location can also relate to your career goals, as well as to a school's mission. If you hope to specialize in geriatrics, for example, a medical school located in an area with a higher-than-average proportion of older adults may be your best choice.

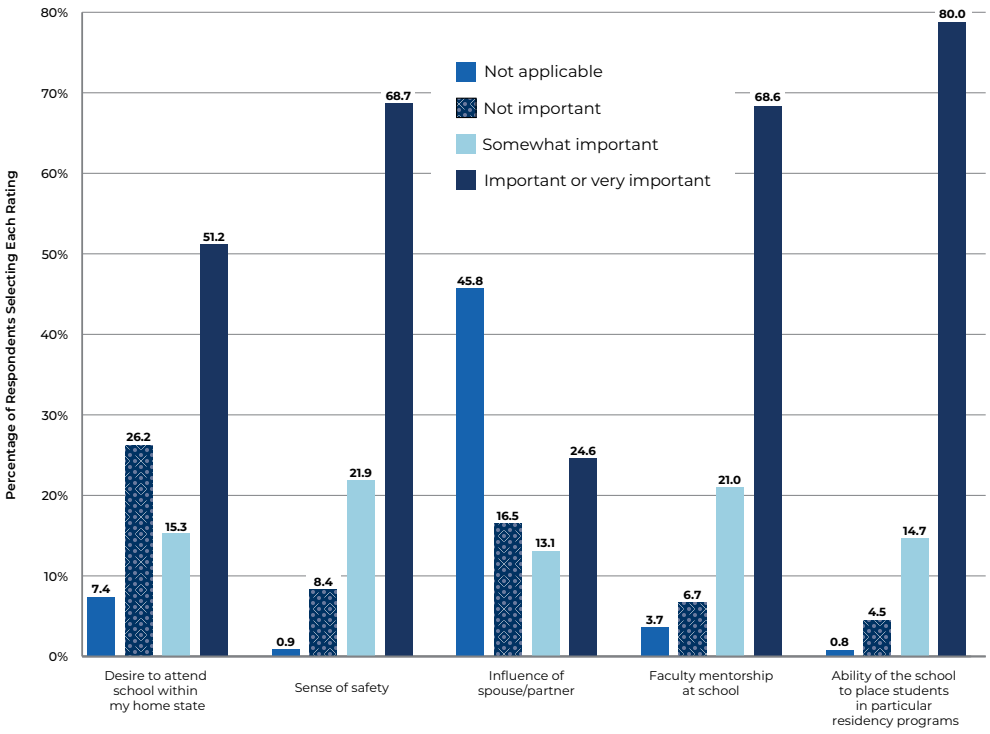
That's looking at it from your perspective. Consider, for a moment, the school's perspective. In some cases, a school may be seeking students from particular geographic regions to bolster its diversity, and you'll want to consider the impact — if any — that your own state residence might have on your application to medical schools in other areas. On the other hand, some schools look for local, in-state students who will continue to work and contribute to communities in that state. Review each school's mission statement to see what they're seeking in their applicants.

Size and demographics. The size and demographics of the medical school — both in terms of its student body and its faculty — may be a consideration for you as well. The school entries on the MSAR website contain data on the prior year's entering class, including the number of students by race, sex, age, and other self-reported factors.

Costs. Medical education is expensive, and the expenses associated with particular institutions will no doubt factor into your decision. You won't know what your actual costs will be (or the degree of assistance you will receive) until a school sends you a financial aid package in conjunction with its acceptance offer. Still, by looking through the school profiles on the MSAR website, you can get a general idea of the relative expenses of each institution and take those numbers into consideration as you narrow your selection.

Figure 6.1 shows how matriculating students felt about specific factors in deciding which school to attend.

FIGURE 6.1. Matriculating students' responses to this question: In choosing the medical school you now (or will) attend, how important were the following factors?



Source: AAMC 2023 Matriculating Student Questionnaire (MSQ).

Special Regional Opportunities

Finally, you should be aware that some states without a public medical school participate in special interstate and regional agreements that give their residents access to a medical education. Currently, there are five interstate agreements:

- Delaware Institute of Medical Information and Research
- Maine Medical Education Foundation Loan
  1-800-228-3734
- University of Utah School of Medicine contract with Idaho
  1-801-581-7498
- Western Interstate Commission for Higher Education
  1-303-541-0200
- WWAMI (Washington, Wyoming, Alaska, Montana, and Idaho) Program
  1-208-885-6696

Learn more about each of these regional opportunities by visiting their websites or calling their program offices.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 6.1

Factors to Weigh Before Applying

Use this worksheet to identify and assess the schools where you may apply.

The MSAR website allows you to filter your search for different medical schools by class size, location, community service requirement, and other features. Every medical school has a different curriculum and style. This worksheet can help you determine which factors are important to you.

School name: _____

Factor	Ideal fit	Good fit	No opinion	Unsure	Not a fit	Notes
Course offerings						
Class size						
Location						
Research programs						
Technology						
Interviews and/or meetings with faculty						
Reputation						
Tuition and financial aid						
Programs for historically marginalized students						
Teaching methods						
Combined-degree offerings						
Campus tour						
Rural or community offerings						
Residency placement						

Impression of school: ☐ Favorable ☐ Undecided ☐ Unfavorable

Likelihood of applying: ☐ Will apply ☐ Undecided ☐ Unlikely to apply

Follow-up questions to ask: _____

CHAPTER 7

Applying to Medical School

Richard Wu
Boston University Aram V. Chobanian & Edward Avedisian School of Medicine
Class of 2025

Congratulations on reaching this point in your journey! Applying to medical school is an incredibly exciting, though stressful, process. Over the course of the application cycle, you will be challenged to be thoughtful, introspective, and resilient. Despite everything that will be thrown at you, never lose sight of the fact that you can do this.

Each step of the application process is an opportunity to reflect on your journey, access your abilities, and learn about yourself. As you write your personal statement, you will be pushed to distill your entire life story into a few paragraphs, and you may find yourself agonizing over which formative events and experiences best represent your path to medicine. As you study for the MCAT exam, you'll be surprised to realize how far you've come academically, and once again you'll become a regular at libraries and cafes. When you take a deep breath and sit down for your first interview, you will find a renewed sense of accomplishment in all you have done as you impress your interviewer with passions that have kept you going all these years. Soon, you will hear your name read at your very own white coat ceremony, and your first step into the medical profession will truly begin.

As you go through this process, remember to remain authentic. Write and speak about the things that matter to you, rather than trying to fit your own story to a perceived mold. Admissions committees will be searching for students who best fit their school's mission and values. My interviewers consistently shared my excitement around my hobbies, commitment to underserved communities, and advocacy work. Ultimately, I ended up at a school that aligned with my passions, and I could not be happier.

It is equally important to remember to be kind and compassionate to yourself. Know your limits and your support systems, and don't be afraid to ask for help or take a break. I found that sacrificing time with friends in favor of editing my secondaries was ultimately not worth it, and my mental health improved drastically by not letting the application cycle take over my life.

Planning ahead will allow you to build in time for yourself! Learn the deadlines and requirements early so you can create a schedule that works for your own needs. I found using an online calendar and a spreadsheet to be instrumental in keeping myself on track. Don't forget to lean on your mentors for advice, and make sure to support your peers going through the same process as well!

I cannot wait to call you a colleague one day, and I wish you the best of luck.

Responsibilities of the Medical School Applicant

As a medical school applicant, you have certain responsibilities. These are reviewed at length at the end of this chapter, but some of the most critical are:

- Meeting all deadlines
- Completing the AMCAS application accurately
- Knowing the admission requirements at each school
- Promptly updating your AMCAS application with any change in contact information
- Responding promptly to interview invitations
- Filing for financial aid as soon as possible
- Withdrawing from the schools you will not attend

For more details, read the AAMC's "Application and Acceptance Protocols for Applicants and Admissions Officers" later in this chapter.

American Medical College Application Service®

You may have heard about the American Medical College Application Service (AMCAS®) from your prehealth advisor, your career counselor, or even your classmates. The AMCAS service is a centralized medical school application processing service offered by the AAMC and used by almost every medical school in the country. It serves as the primary application method for first-year entering classes. This service does not screen applicants; rather, it provides admissions officers with the information and tools they need to select the applicants who are the best fit for their institution.

The AMCAS service offers many benefits to applicants. The most obvious one is that it allows you to apply to as many medical schools as you want with a single application (although many schools require a secondary application, discussed later in this chapter). It also provides applicants with a single point of transmission for official transcripts, letters of evaluation, and other supporting documentation.

Even if you're not yet ready to begin the application process, you can familiarize yourself with it at aamc.org/amcas. There, you'll find an application overview, tips for completing an application, frequently asked questions, video tutorials, and the comprehensive 2025 AMCAS® Applicant Guide. Additionally, the 2025 AMCAS Application Workbook serves as a resource for prospective AMCAS applicants to help prepare you for the 2025 AMCAS application. It includes all the questions contained in the 2025 AMCAS application and, where applicable, the selection choices. (Note: A 2025 AMCAS application should be completed if you intend to start medical school in summer or fall of 2025.)

If you have previously registered for the MCAT exam, the Fee Assistance Program, the PREview® professional readiness exam, or other AAMC programs and services, you've already created an AAMC username and password and received an AAMC ID. Use this same information to access the AMCAS application site. If you don't already have an AAMC ID number, you'll need to register online to create a username and password before you begin your application.

AMCAS Application Sections

The AMCAS application has nine sections. That may sound like a lot, but remember — you don't have to complete it all at once. You can save your work and return to your application as many times as you want until you finish and are ready to submit it. Here's an overview of what to expect:

1. **Identifying Information.** This section asks you to enter your name, birth information, and gender identity or expression.
2. **Schools Attended.** Here, you'll enter high school and college information. Once you've completed this section (and the Identifying Information section), you'll be able to create a Transcript Request Form to request official transcripts from your registrar.
3. **Biographic Information.** You'll use this section to enter your contact information, citizenship status, legal residence, ethnicity, language(s) spoken, and other biographic information. Also, you'll indicate your immigration status in the citizenship subsection. If the U.S. government approved your Deferred Action for Childhood Arrivals (DACA) application, select "DACA" from the designated drop-down list.
4. **Coursework.** You'll enter grades and credits for every course you've enrolled in at any U.S., U.S. territorial, or Canadian postsecondary institution that appears on your official college transcript(s). You're required to provide information for all the college-level courses you've taken, even if you took them during high school. For courses attempted through a study abroad program, carefully follow the instructions outlined in the 2025 AMCAS Applicant Guide. List study-abroad coursework under the foreign college, the foreign listing of your home institution, or the institution at which it was attempted. Do not enter the coursework twice.
5. **Work/Activities.** Here, you'll enter any work and extracurricular activities, awards, honors, or publications you'd like to bring to the attention of the medical schools. You may list up to 15 experiences. You'll then choose the three you consider to be the most meaningful and have up to 1,325 characters to explain why each experience was particularly meaningful to you.
6. **Letters of Evaluation.** In this section, you'll provide information about people writing letters of evaluation on your behalf. You may want to review the AAMC's letters of evaluation guidelines, a useful tool developed to help your letter writers. (This step is covered in more detail later in the chapter.)
7. **Medical Schools**. In this section, you'll designate the medical schools to which you want to submit an application. In addition, you can designate which letters of evaluation you wish to send to specific schools.
8. **Personal Statement.** Here, you'll compose an essay about why you want to go to medical school. (This is discussed more thoroughly later in this chapter.)
9. **Standardized Tests.** And finally . . . your MCAT and PREview scores. In this section, you'll review your MCAT and PREview scores and enter any additional test information, such as GRE scores. Any MCAT scores from 2003 or later will automatically be released to your AMCAS application. All PREview scores from 2020 through the present will be automatically released to your AMCAS application. Please note: It's important to include all the MCAT and/or PREview exams you're scheduled to take on your AMCAS application and update this information as appropriate after you submit your application.

This is a simplified overview of the AMCAS application. Read the 2025 AMCAS Applicant Guide, and explore the various resources for a more thorough understanding of the application on the AMCAS website.

Please also note that the 2025 AMCAS application has the following new features to highlight:

- Additions to the race and ethnicity categories and subcategories for "Self-Identification"
- A new section dedicated to specifying tribal affiliation
- An updated list indicating which schools participate in the PREview exam (schools not participating will not receive PREview scores)
- Mandatory sections marked with a red asterisk (not just mandatory fields)

Transcript Requests via the AMCAS program

In addition to completing your AMCAS application, you must request that official transcripts from all postsecondary institutions you've attended be sent to the AMCAS program. The AMCAS application provides a Transcript Request Form to facilitate this process with your registrar(s). If you've taken courses at a junior college, community college, trade school, or other professional school — regardless of whether you earned credit — within the United States, Canada, or U.S. territories, you must provide an official transcript from that institution. This requirement also applies to any college courses you took in high school. For most applicants, all official transcripts must be received no later than two weeks after the deadline for application materials. Please refer to the 2025 AMCAS Applicant Guide, the AMCAS website, and the AMCAS Transcript Processing Tool for detailed information about official transcript requirements.

Limited Changes After Submission

It's important to check your work carefully before you hit "submit" because you're limited in what changes you can make after submission. You can change your contact information (such as addresses and emails) and add schools or letters of evaluation, but other than that, your application will be submitted to schools exactly as it was completed. Review the AMCAS Postsubmission Actions to see what changes are permitted after submitting your application.

Application Processing and Verification

Once the AMCAS program has received your submitted application and all required official transcripts from each postsecondary school where you were registered, the AMCAS verification process begins. The AMCAS program verifies the accuracy of your academic record by comparing the information you entered on your application with what's on your official transcripts. During the verification process, the AMCAS program converts transcript grades to AMCAS grades based on conversion information provided by colleges and universities and calculates an AMCAS GPA. The AMCAS GPA gives medical schools a standard way to compare applicants' academic records. AMCAS GPAs may differ from the GPA shown on your records at the institutions you attended. Once verification is complete, the AMCAS program makes your application and MCAT and PREview scores available to all the medical schools you designated (MCAT scores from 2003 and later and PREview scores from 2020 and later are automatically included).

The Application and Admission Cycle

The AMCAS application usually opens to applicants in early May of each year and opens for submission in late May. Participating schools begin receiving transmission of verified application data from the AMCAS program in late June.

The deadlines for receipt of primary applications to medical schools that participate in the AMCAS application typically range from the Early Decision Program deadline on Aug. 1 (if this date falls on a weekend or holiday, the deadline shifts to the next business day) to the end of December. (Information on secondary applications is discussed later in this chapter.) However, there's no single application timetable because each school establishes its own deadlines for receipt of required materials. You can

find specific dates on medical school websites and in the school profiles on the MSAR website or on the AMCAS website.

Medical schools vary in the timing of their admission decisions. Most schools use rolling admissions, selecting students for interviews and making admission decisions as applications are received, rather than waiting until after a specific date to begin their evaluation process. All medical schools must wait until mid-October to start offering acceptance letters. You can find out if a medical school uses rolling admissions by checking its website. If an applicant applies to an Early Decision Program, they should be notified about the status of their admission by Oct. 1.

For the 2024 AMCAS application cycle, applicants on average applied to 18 schools. Most of the U.S. medical schools not participating in the AMCAS application for the 2025 entering class are in Texas. The medical schools in Texas listed below participate in the Texas Medical and Dental School Application Service (TMDSAS) for those pursuing the MD degree. You can learn more about this application service and apply to these schools on the TMDSAS website. Applicants pursuing MD-PhD degrees at all schools but one (Texas Tech University Health Sciences Center Paul L. Foster School of Medicine) can do so through the AMCAS application, however.

If you're interested in schools that do not participate in the AMCAS application, please contact them directly for application instructions:

- Baylor College of Medicine
- CUNY School of Medicine – Sophie Davis Biomedical Education Program
- McGovern Medical School at the University of Texas Health Science Center at Houston
- Texas A&M University College of Medicine
- Texas Tech University Health Sciences Center Paul L. Foster School of Medicine
- Texas Tech University Health Sciences Center School of Medicine
- University of Houston Tilman J. Fertitta Family College of Medicine
- University of Texas at Austin Dell Medical School
- University of Texas at Tyler School of Medicine
- University of Texas Health Science Center at San Antonio Joe R. and Teresa Lozano Long School of Medicine
- University of Texas Medical Branch John Sealy School of Medicine
- University of Texas Rio Grande Valley School of Medicine
- University of Texas Southwestern Medical School

You should also contact schools directly for application information if you wish to pursue a joint degree program, such as a baccalaureate-MD or an MD-PhD.

As far as interviews go, many admissions committees begin meeting with candidates in late summer and continue through spring. However, most interviews are held during the winter months. (This part of the admission cycle is discussed in Chapter 8.) By March 15 of the matriculation year, medical schools will have issued a number of acceptance offers at least equal to the expected number of students in its first-year entering class and report those acceptance actions to the AMCAS program. This will continue until the waitlist has been exhausted or all seats in the class have been filled.

Personal Statements and Letters of Evaluation

As you'll learn in Chapter 8, "The Admission Decision," admissions officers want to know more about you than just where you went to college, the courses you've taken, your grades, and your MCAT and PREview or other Situational Judgment Test scores. They want to know you on a more personal level. That's why an essay and letters of evaluation are integral components of your medical school application.

Your Personal Statement

Every applicant is required to submit a personal essay of up to 5,300 characters (about one page) in length. This is your opportunity to distinguish yourself from other applicants and provide admissions officers with insights about why you're interested in medicine — and why you would be a dedicated and effective physician.

Many admissions committees place significant weight on the Personal Statement section, so take the time to craft an organized, well-written, and compelling statement. Here are some questions you may want to consider while writing your essay:

- Why do you want a career in medicine?
- What motivates you to learn more about medicine?
- What should medical schools know about you that isn't described in other sections of the application?

In addition, you may wish to include information such as:

- What hardships, challenges, or obstacles have influenced your educational pursuits?
- Are you able to explain significant fluctuations in your academic record not explained elsewhere in your application?

It's a good idea to use specific examples in your essay. Instead of writing "Challenges in my childhood led me to consider medicine at an early age," write, "The summer I turned 8, my 11-year-old sister was diagnosed with neuroblastoma, and I witnessed firsthand the compassion and understanding with which the doctor dealt with my parents. It was during those first few difficult months that I decided I wanted to be a physician."

Additionally, ensure that your essay is interesting, follows a logical and orderly flow, and relates to your reasons for choosing medicine and why you believe you'll be successful in medical school and as a physician. Beyond that, be sure to use correct grammar and avoid typographical errors and misspellings.

For MD-PhD Applicants

If you're applying to MD-PhD programs, you'll be required to write two additional essays: a relatively brief one focusing on your reasons for pursuing the combined degree and a lengthier one (about three pages) describing your research activities. You can read more about these additional essays in the 2025 AMCAS Applicant Guide or get further guidance from your prehealth advisor or career counselor.

Early Decision Programs

One of your first decisions will be whether to apply to a medical school through the Early Decision Program (EDP) or the regular application process. Although criteria for accepting EDP applicants vary among schools, programs frequently require that applicants show extraordinary credentials. A small percentage of applicants apply through the EDP, and only about half of medical schools offer the option. You can learn more about program requirements on the Early Decision Program webpage.

Letters of Evaluation

In the Letters of Evaluation section, you'll provide information about the people writing your letters. Although you can add up to 10 letter entries, medical schools do not necessarily wish to receive 10 letters per applicant. Most schools request only two or three letters. Medical schools want letters from people who are in a position to judge your ability to be successful in medical school, which includes not only your academic capabilities and accomplishments but also your personal characteristics and skills.

You can find the minimum and maximum letters accepted by each school on the MSAR website. The AMCAS program accepts letters of evaluation on behalf of participating medical schools. This service enables medical schools to receive all letters electronically from AMCAS and allows letter writers to send their letters to the AMCAS application rather than to each individual school. The AMCAS program permits additional letters, so you have the option to designate specific letters for specific schools. More information and a current list of schools participating in the AMCAS Letter Service is available on the AMCAS website.

Medical schools have various requirements for letters of evaluation, but they all require letters in one form or another. If your college has a prehealth advisor, medical schools will probably require a letter from this individual (or from the prehealth committee, if your school has one), as well as a letter from at least one faculty member. In instances where there is no prehealth advisor, many medical schools may ask for additional letters from faculty and often specify that at least one comes from a science professor.

Some medical schools don't specify who should write your letters and welcome additional letters beyond the required ones. However, be aware of any limits on the number they will accept. In all cases, you should review medical schools' websites or the MSAR website for information on specific letter requirements. You may want to provide your letter writers with a copy of AAMC's letters of evaluation guidelines.

Secondary Applications

Your primary application is your AMCAS application, which provides admissions officers with much of the information they need. However, most medical schools also require a school-specific "secondary" application because it allows them to assess a student's reasons for applying to that particular school. (Medical schools will notify you if they would like you to fill out a secondary application, although you can also find out by looking at their profiles on the MSAR website.) Secondary applications may call for additional letters of evaluation, supplemental writing samples, and updated transcripts. Go to the websites of the medical schools you're interested in to learn more.

Application Fees

Medical school application fees fall into four general categories:

- ***AMCAS application.*** For the 2025 AMCAS application cycle, the processing fee is $175 and includes one medical school designation. Additional school designations are $46 each. Tax, where applicable, will be calculated at checkout. Check the AMCAS website for the latest application fee information. Remember, some schools don't use AMCAS, and you may pay different fees in those instances.
- ***Secondary application.*** In the 2025 application cycle, fees for secondary applications ranged from $0 to $200.
- ***College service fees.*** Your college registrar may charge a small fee to send your transcript to the AMCAS program. Occasionally, you'll incur a fee to send your letters of evaluation to the AMCAS program.

- ***MCAT exam fees.*** Although technically not part of the application fee, the costs associated with the MCAT exam are a necessary component of the overall process. The initial registration fee for the MCAT exam is currently $335 and covers the cost of the exam and distribution of your scores. In addition, you may incur fees for late registration, changes to your registration, or testing at international test sites.
- ***PREview exam fees.*** Although technically not part of the application fee, the costs associated with the PREview exam are a necessary component of the overall process for applicants to some medical schools. The registration fee for the PREview exam covers the cost of the exam and the distribution of your scores. In addition, you may incur fees for changes to your registration.

Read more about the MCAT exam in Chapter 5 and get up-to-date information on the MCAT website. For more information on application fees, please refer to the FIRST Fact Sheets. More information about the PREview exam is available on the PREview website.

Criminal Background Check

The AAMC facilitates a national background check on all accepted applicants to participating medical schools via Certiphi Screening, Inc. This service provides required background checks to medical schools and prevents you from paying additional fees to each medical school to run these checks independently.

Be aware that participating medical schools may also require applicants to undergo a separate national background check process if it's required by their own institutional regulations or applicable state law.

Fee Assistance Program

The AAMC believes the cost of applying to medical school should not be a financial barrier to people interested in becoming physicians.

The AAMC Fee Assistance Program helps MCAT and PREview examinees and AMCAS applicants who, without financial assistance, would otherwise be unable to take the MCAT and PREview exams and apply to medical schools that use the AMCAS application. Visit the Fee Assistance Program website for details about the program's eligibility requirements and to access the application. You'll be able to use your Fee Assistance Program award benefits for up to two calendar years. Benefits expire Dec. 31 the year after they are awarded, regardless of when in the year you apply for, and receive, the award. **You may apply for fee assistance only once per calendar year. Fee Assistance Program benefits are never retroactive.**

Applicants who are approved for fee assistance in 2024 will receive the MCAT exam, AMCAS application, MSAR website, and PREview exam benefits.

MCAT Benefits

- Reduced registration fees for MCAT exam dates
- Reduced rescheduling fees for MCAT exam dates
- A suite of MCAT prep products and resources (you'll receive more details about these benefits if you're awarded fee assistance)

Consideration for financial assistance to obtain an updated evaluation to support an application for MCAT exam accommodations (for more information and instructions on how to apply, please visit the Accommodations Financial Benefit webpage). Regardless of how many times you're awarded fee assistance, you'll receive MCAT prep product benefits only once.

MSAR Benefit

- Complimentary access to the MSAR website for two years ($36 value)

AMCAS Benefit

- Waiver for all AMCAS fees for one application submission with up to 20 medical school designations ($1,049 value; additional fees will be charged for each medical school designation beyond the initial set of 20)

PREview Benefit

- Reduced registration fees for PREview exam dates
- Reduced rescheduling fees

ERAS Benefit

- A 60% fee discount on up to 50 ERAS applications

Special Note About Deferred Entry

In recent years, most medical schools have developed delayed-matriculation policies to allow accepted applicants to defer entry without giving up their spot. Deferrals are granted only after acceptance, and deferred applicants are required to submit an AMCAS application for each year they defer. These programs usually require that you submit a written request, and some schools also ask for a report at the end of the deferral period. Matriculation delays are usually granted for one year, although some schools occasionally defer for longer periods of time. Some institutions may require delayed matriculants to sign an agreement not to apply to other medical schools in the interim, while others permit applications to other schools. If you're interested in this option, seek specific information from schools you applied to. You can find out more about each school's policy by viewing their profile on the MSAR website.

Gap Year and Career Changers

If you're applying to medical school after spending more than a year out of college, you'll need to get transcripts from any additional coursework or degree programs you've completed since your undergraduate graduation. Even if you applied previously to medical school, you'll need to resubmit official transcripts. Also, you must resubmit letters of evaluation to your AMCAS application each time you apply.

For more information about gap years, please refer to Making the Most of Your Gap Year.

AAMC Application and Acceptance Protocols for Applicants and Admissions Officers

The AAMC recommends certain protocols, outlined on the following pages, to help ensure that all MD and MD-PhD applicants receive timely notification about the outcome of their application and protect schools and programs from having unfilled positions in their entering classes. Admissions officers and prehealth advisors often refer to these protocols as "traffic rules." Prospective applicants, their advisors, and admissions staff at medical schools and programs should all be aware of these application and acceptance protocols for applicants.

What This Means for You (the Applicant)

These protocols were developed to ensure fairness for applicants and medical schools alike. By reading and acknowledging the guidelines, as well as agreeing to adhere to them, applicants and medical schools affirm they understand the timelines and stresses involved with making these important decisions. They also acknowledge that their decisions affect the choices of other applicants and schools in the midst of making acceptance and admission decisions. Admissions officers know that most applicants are anxiously awaiting notifications, but their committees are also diligently working to build the next class for their medical schools. These rules help ensure that everyone does their best to make timely, ethical, and fair decisions during this hectic time. The protocols are periodically reviewed by the AAMC Committee on Admission and approved by the AAMC Council of Deans. The following protocols were approved on May 7, 2018.

Application and Acceptance Protocols for Applicants

The AAMC recommends the following steps to help ensure that all MD and MD-PhD applicants receive timely notification about the outcome of their applications and to protect schools and programs from having unfilled positions in their entering classes. These protocols are often referred to as "Traffic Rules" by admissions officers and prehealth advisors. Prospective applicants, their advisors, and admissions staff at medical schools and programs should all be aware of these Application and Acceptance Protocols for applicants. An applicant's actions during the admissions process should be conducted in the spirit of professionalism and ethics expected of a future physician.

These guidelines are not intended to supersede the policies, timelines, or discretion of individual schools or programs. Each applicant is expected to become familiar with the procedures and requirements of each school to which they apply. The AAMC understands that an individual's circumstances (e.g., delays in receiving financial aid offer or other compelling personal reasons) may warrant exception from one or more of the following protocols and defers to each school's judgment in such cases. Below are AAMC recommendations for applicants to an MD or MD-PhD program:

1. Understand and comply with these Applicant Responsibilities as well as with the application, acceptance, and admission procedures at each school or program to which you apply.
2. Provide accurate and truthful information in all aspects of your application, interview(s), acceptance, and admission processes for each school or program to which you apply.
3. Submit all application documents (e.g., primary and secondary application forms, transcript[s], letters of evaluation/recommendation, fees, etc.) on or before the school or program's published deadline date.
4. Notify all relevant medical school application services of any change, permanent or temporary, to your contact information (e.g., mailing address, telephone number, and email address).
5. If you will be unavailable for an extended period of time (e.g., during foreign travel, vacation, holidays) during the application/admission process:
    a. Provide instructions regarding your application, and, if applicable, delegate the authority to respond to any offers of acceptance to a parent or other responsible individual in your absence.
    b. Inform all schools or programs at which your application remains under consideration of this person's name, contact information, and authority to act on your behalf. Include dates of your unavailability and inclusive dates for the designation of authority to act on your behalf.
6. Respond promptly to a school's or program's invitation for an interview. If you cannot appear for a previously scheduled interview, notify the school or program immediately that you need to cancel.
7. Begin promptly the steps necessary to determine your eligibility for financial aid. This may include filing need-analysis forms early and encouraging your parents (when required) to file the appropriate income tax forms.
8. 8. In fairness to other applicants, if you have decided before April 30 not to attend a medical school or program that has offered you an acceptance, promptly withdraw your application from that school(s) or program(s).
9. Out of respect for other applicants, if you receive an offer of acceptance from more than one school or program:
    a. Withdraw your acceptance from any school or program you do not plan to attend as soon as you have made that decision;
    b. On or before April 15, narrow your selection(s) to no more than three schools or programs and withdraw your acceptance(s) from all other schools or programs; and
    c. On or before April 30, choose the school or program to which you plan to matriculate and promptly withdraw your acceptances from all other schools or programs.
10. If you receive additional acceptances following April 30, it is your responsibility to promptly notify any school(s) you have decided to not attend. Your decision should be made by the deadline established by the medical school(s).
11. To the extent you have not already done so in furtherance of paragraphs 9 and 10 above, withdraw your acceptance(s) from all other schools or programs as soon as you matriculate at a U.S. or Canadian school or program. For the purposes of these protocols, matriculation means that a student has begun a pre-matriculation program, attended orientation immediately preceding enrollment, or enrolled in classes at a medical school.

Approved by the Council of Deans Advisory Board, May 7, 2018

*If any date falls on a weekend/holiday the recommendation(s) will apply to the following business day.

Application and Acceptance Protocols for Admissions Officers

The AAMC application policies are established protocols for applicants and admissions officers.

The AAMC recommends the following guidelines to ensure that MD and MD-PhD applicants are afforded timely notification of the outcome of their applications and timely access to available first-year positions and that schools and programs are able to reasonably anticipate accepted applicant matriculation in order to avoid unfilled positions in their entering classes. For the purposes of these protocols, matriculation means that a student has begun a pre-matriculation program, attended orientation immediately preceding enrollment, or enrolled in classes at a medical school.

These protocols are often referred to as "Traffic Rules" by admissions officers and prehealth advisors. These recommendations are distributed for the information of prospective MD and MD-PhD students, their advisors, and personnel at the medical schools and programs to which they have applied, and they are offered in the spirit of undertaking the admission process with the high degree of integrity expected of the medical profession. These guidelines are not intended to supersede the policies, timelines, or discretion of the individual schools or programs. The AAMC understands that an individual's circumstances (e.g., delays in receiving financial aid offer or other compelling personal reasons) may warrant exception from one or more of the following protocols, and defers to each school's judgment in such cases.

The AAMC recommends that each MD or MD-PhD granting school or program:

1. Comply with established procedures to:
    a. Annually publish, amend, and adhere to its application, acceptance, and admission procedures.
    b. Abide by all conditions of participation agreements with application services (if using).
2. Promptly communicate admissions decisions:
    a. By October 1, notify Early Decision applicants and the American Medical College Application Service® (AMCAS®) of Early Decision Program (EDP) admission actions.
    b. From October 15 to March 15, notify AMCAS within five business days of all admission actions, either written or verbal, that have been communicated to an applicant.
    c. From March 16 to April 30, notify AMCAS within two business days of all admissions acceptance, withdrawal, or deferral actions, either written or verbal, that have been communicated to an applicant. All admission actions are listed and defined on the AAMC website.
    d. From May 1 to the first day of class, notify AMCAS of all admission actions within 24 hours.
    e. Notify AMCAS of each student's matriculation within 24 hours.
    f. An acceptance action is defined as the point at which a medical school communicates a written or verbal acceptance offer to an applicant.
    g. An acceptance offer to any dual-degree program that occurs after an initial acceptance should follow the above timelines.
3. Notify all Regular MD program applicants of their acceptance on or after October 15* of each admission cycle, but no earlier. Schools and programs may notify applicants of admission decisions other than acceptance prior to October 15.
4. By March 15 of the matriculation year, issue a number of acceptance offers at least equal to the expected number of students in its first-year entering class and report those acceptance actions to AMCAS.
5. On or before April 30, permit **ALL** applicants (except for EDP applicants):
    a. A minimum of two weeks to respond to their acceptance offer.
    b. To hold acceptance offers or a waitlist position from any other schools or programs without penalty (i.e., scholarships).
6. After April 30:
    a. Permit all applicants:
        1. A minimum of five business days to respond to an acceptance offer. This may be reduced to a minimum of two business days within 30 days of the start of orientation.
        2. To submit a statement of intent, a deposit, or both.
    b. Recognize and respect the challenges of applicants with multiple acceptance offers, applicants who have not yet received an acceptance offer, and applicants who have not yet been informed about financial aid opportunities at schools to which they have been accepted.
7. In addition to any condition included in a school's offer letter, after April 30, each school may exercise its school-specific procedures to confirm an accepted applicant's intention to matriculate or to ensure that it fills each seat in its entering class. If a school is unable to confirm an applicant's intention to matriculate, the school may choose to rescind the acceptance.
8. Each school's initial deposit(s) should not exceed $100 and (except for EDP applicants) and should be refundable at least until April 30. If the applicant enrolls at the school, the school should credit the deposit toward tuition.
9. Making an offer of admission to an applicant who has already matriculated at another school could result in the other school having an unfilled slot in its class. Each school is encouraged to take reasonable measures, including asking applicants under consideration whether they have already matriculated at another medical school, and carefully consider that information when deciding whether to make an offer to an applicant.
10. Each school, consistent with its own privacy policies, should appropriately safeguard information related to an individual's application for admission or financial aid.
11. Each school should treat all letters of evaluation submitted in support of an application as **confidential**, except in those states with applicable laws to the contrary. The contents of a letter of evaluation should not be revealed to an applicant at any time.

Approved by the Council of Deans Advisory Board, May 7, 2018

*If any date falls on a weekend/holiday, the recommendation(s) will apply to the following business day.

AMCAS Choose Your Medical School Tool

What is the Choose Your Medical School tool?
The AAMC American Medical College Application Service (AMCAS) created this tool to support medical schools' enrollment management processes and help applicants communicate their intentions about which medical schools they plan to attend. Schools are able to access information about only their accepted and alternate-list (waitlist) applicants. Applicants should use the tool at the direction of the schools to which they have applied.

How does this tool work?
It is important to review and follow each individual school's admission instructions, policies, deadlines, and requirements. We recommend visiting each school's admissions website, checking the Medical School Admission Requirements website, and directly communicating with the schools to which you are applying to make sure you understand and follow their specific instructions.

Note: If any date stated below falls on a weekend or holiday, the next business day applies.

Beginning Feb. 19, applicants holding one or more acceptance offers can select "Plan to Enroll" in the AMCAS application at any school from which they have received an acceptance offer. Making this selection allows schools to view in aggregate the number of applicants who selected "Plan to Enroll" for their schools.

- Until April 30, applicants can, at the time they make this selection, continue to hold other acceptances, remain on alternate lists, and continue to interview at other schools.
- If applicants receive new offers, they can update their selection at any time, but they can select only one school at a time.
- A school will be able to see only the aggregate number of their applicants who have selected that school or another school in the AMCAS tool to assist them with their enrollment management.
- If an applicant selects "Plan to Enroll" at another school, AMCAS will not identify the applicant or the other school.

Beginning April 30, accepted applicants will have two options to select: "Plan to Enroll" or "Commit to Enroll." Selecting "Commit to Enroll" indicates that the applicant has made a final selection and withdrawn all other applications.

- Starting April 30, the AMCAS tool will identify the applicants making either selection. This applicant-specific information will be visible only to schools where the applicant has a current acceptance or alternate-list position.
- If an applicant selects "Commit to Enroll" to a school, all other schools where the applicant also holds an acceptance or alternate-list offer will be notified but will not know the name of the school selected.
- Selecting "Commit to Enroll" does not automatically withdraw applications from other medical schools. Applicants must communicate directly with all schools about their final decision according to each school's specific policy.

What reports will medical schools be able to run?

Medical schools will have access to the following reports:

- **Feb. 19:** Medical schools can run an aggregate report to find out how many applicants in their pool have selected "Plan to Enroll" at their school versus another school. In accordance with current protocols, applicants have until April 30 to start narrowing their accepted offers to one. Until then, the AMCAS tool cannot identify applicants to schools.
- **April 30:** Medical schools can run detailed reports to identify accepted and alternate-list applicants who have selected "Plan to Enroll" or "Commit to Enroll" at their school versus another school.
- **Post-cycle:** Medical schools can see where applicants in their pool matriculated (released in October of the matriculating year).

Timeline: What Applicants and Medical Schools Can Do and When

Date*	Milestone	Applicant Activity	Medical School Actions
February 19**	"Plan to Enroll" becomes available for applicants to select in the AMCAS application.	Applicants can begin to select "Plan to Enroll" for their top medical school choice. Applicants should use the tool at the direction of the schools to which they have applied.	Medical schools can run an aggregate report to determine how many applicants in their pool have selected "Plan to Enroll" for their school or for another school.†
April 15**	Applicant protocols ask applicants to narrow their acceptance offers to three.	Applicants holding more than three offers should narrow their offers of acceptance to three, with no limit on alternate-list offers.	Medical schools continue to submit timely admission actions to the AMCAS program.
April 30**	"Commit to Enroll" becomes available to applicants in the AMCAS tool. "Plan to Enroll" remains available to applicants in the AMCAS tool.	Applicants should use the tool at the direction of the schools to which they have applied and can select "Plan to Enroll" or "Commit to Enroll" in the AMCAS tool. "Commit to Enroll" indicates that they have made their final selection and have withdrawn all other applications. This does not automatically withdraw applicants from other medical schools.	Medical schools can run detailed reports to identify their accepted and alternate-list applicants who have selected "Plan to Enroll" or "Commit to Enroll" at their school versus another school.
Post-cycle (around October)	AMCAS application cycle closes.	Applicants have matriculated.	Medical schools can see where applicants in their pool matriculated.

*If a date falls on a weekend or holiday, the next business day applies.

**AMCAS will email applicants who have an acceptance about the best practices of the Choose Your Medical School tool and the significance of the protocols.

†Schools will be able to access information on only the applicants who were accepted to their school. Schools will not be able to view students who hold zero acceptances.

Example of Applicant Who Reviewed School-Specific Policies

February	**Feb. 1** Alex, the AMCAS applicant, holds four acceptances and is on three alternate lists. **Feb. 19** Alex selects "Plan to Enroll" for Medical School A in the AMCAS tool.
March	**March 15** Alex receives a better offer from Medical School B and changes his "Plan to Enroll" selection from Medical School A to Medical School B. He is holding four acceptances and remains on three alternate lists.

April	**April 15** Alex narrows his selection to three acceptances and withdraws his acceptance from Medical School C with direct communication. He remains on three alternate lists. **April 30** Alex narrows his selection to one school, Medical School B, and keeps his "Plan to Enroll" status the same. He remains on three alternate lists and has withdrawn from two schools. He has also reviewed the school-specific policy for Medical School B and is not required to select "Commit to Enroll."
May	**May 15** Alex receives an offer from the Medical School D. He accepts and selects "Plan to Enroll" for this school in the AMCAS tool. He withdraws his application from Medical School B with direct communication and remains on two alternate lists.
June	Medical School D matriculates on **June 29** and requires applicants to select "Commit to Enroll" 21 days prior to matriculation. On **June 8,** 21 days before matriculation, Alex selects "Commit to Enroll" in the AMCAS tool based on the school-specific policy of the Medical School D. He withdraws all other applications with direct communication to those schools.

For more information, visit the AMCAS Choose Your Medical School Tool.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 7.1

Identifying Your Letter Writers

Be sure that you're familiar with your school's policy on letters of evaluation. It may provide a committee or composite letter on your behalf. If you're responsible for selecting individuals to write your letters of evaluation, look for someone who knows you well and can speak to your readiness for medical school. These letters can be very valuable, so you should be thoughtful in selecting who you ask to write on your behalf.

How to choose an appropriate letter writer and keep track of your interactions with them

Maintain a journal or log that indicates where you've worked and volunteered and what classes you've taken. Review the AAMC Premed Competencies for entering students and think about which faculty and supervisors have observed you demonstrate these competencies. It's important to keep track of the faculty members and supervisors you work with because those people will likely be able to write you a strong letter of evaluation when it comes time to apply. Keep notes about time spent working on particular projects so you can remember what you did. When you finish working with a particular person, you can ask them to write you a reference letter.

Letter writer's name	Why this person would be a good advocate for me	Contact info	Letter complete?
[Example] *Dr. Nelson*	*Can speak to my research and writing experience from biology lab*	*email@school.edu*	☑ Yes!
[Example] *Dr. Smith*	*Can speak to my teamwork and communication skills from volunteering at Habitat for Humanity for the last two summers*	*email@school.edu*	☑ Yes!
			☐ Yes!
			☐ Yes!

CHAPTER 8

The Admission Decision

Mario Markho
The University of Toledo College of Medicine and Life Sciences
Class of 2027

Most medical school applicants share common experiences in their undergraduate years and beyond. You have worked tirelessly for solid grades in class, woken up early on weekends to volunteer or shadow at a local hospital, participated diligently in research and other extracurriculars, and much more. While such accomplishments will be listed in the "Work and Activities" section of your application, their real value lies in how they have changed you as an applicant and how clearly you can express that to an admissions committee. Despite sharing similar experiences, each of us gains a personalized lesson contributing to our story as an applicant.

My favorite part of the application process was taking a moment to sit down — before even starting my personal statement or any essays — and list all my experiences to draw connections between them. Eventually, I was able to connect the dots and fit everything into one cohesive story. It felt like solving a jigsaw puzzle, starting with pieces of my story from graduate school and working my way backward through college, high school, and grade school. I realized my passion for medicine is more than just one essay — it is a web of stories that trace back to my childhood and the foundations of who I am as an individual.

When self-reflection is done intentionally and honestly, the grueling process of writing a personal statement and ultimately preparing for interviews becomes not only easy, but rewarding! These moments give you the chance to demonstrate to admissions committees and interviewers that you are not only skilled for a career in medicine but also bring a viewpoint that is distinct from your medical school peers. Every school has its own idea of the ideal physician, so it's important to recognize that your personal goals and background may not align perfectly with every school you apply to. Rejections will come, and that is normal! There is only one you, and you can only attend one medical school. As long as you are your sincere self on the interview trail, you will find yourself spending the next four years or more flourishing in the right program.

Holistic Review of Medical School Applicants

What does "holistic review" mean, and how does it affect the admission review process?

Holistic review is a flexible, mission-driven approach to recruit and assess an individual's competencies by considering their experiences, attributes, and metrics in order to select applicants who will best contribute to the program's unique goals, learning environment, and the practice of medicine. When admissions committees select individual applicants, they intentionally try to create a broadly diverse class to help fulfill their school's mission and enhance the learning environment. Diversity encompasses all aspects of human differences, including but not limited to:

- Age
- Disability
- Ethnicity
- Gender identity
- Geography
- Language
- Nationality
- Race
- Religion
- Sex
- Sexual orientation
- Socioeconomic status

HOW DO THE SUPREME COURT DECISIONS ON RACE-CONSCIOUS ADMISSIONS IMPACT WHAT I CAN SHARE ABOUT MYSELF IN THE APPLICATION ESSAYS?

When reviewing your application, medical schools seek to understand who you are as an individual, including your identities, communities, and experiences and how these relate to your motivation for pursuing a career in medicine and your career goals. Regardless of the Supreme Court decisions, schools continue to prioritize who they recruit, interview, and accept so that it aligns with their mission. Each individual medical school will always be the authoritative source on what they're looking for in an applicant, but generally, admissions officers tend to look for candidates with particular competencies as evidenced by their experiences, attributes, metrics, and motivations that align with their mission as reflected in their personal statements. (You can view the current mission statements in their MSAR profiles and in the MSAR reports.) These areas can be a way for you to provide concrete examples of how your "why" aligns with the mission of the schools where you apply.

Although the Harvard and UNC cases both involved challenges to what colleges and universities may consider in making admission decisions, neither case challenged what you can share about yourself as an applicant during the admissions process.

Whether you are applying for the 2025 cycle or in the future, reflect on your personal journey and motivations for pursuing medicine to help you present a compelling case for why you are a strong candidate for admission.

Each medical school's admissions office evaluates applicants based on the mission and goals of that institution. Admissions committees must decide which applicants will best serve the needs of their patients, the community, and the medical profession at large. They seek a broadly diverse student body because diversity of backgrounds and perspectives has consistently been shown to drive educational and professional excellence. Schools look for applicants with a track record that demonstrates the knowledge, skills, attitudes, and behaviors that will best prepare them to navigate challenges and thrive as both learners and physicians. Depending on its mission, one school might look for applicants who demonstrate service to communities underserved by the current health care system, while another school might seek applicants who have shown creativity and independent productivity in scholarly activities.

Admissions officers carefully review a multitude of criteria — rather than focusing on just one or two facets — to gain an appreciation of the whole person and their context. Many applicants believe that admissions officers weigh high GPAs and MCAT® scores above all else. (View the MCAT and GPA Grid for Applicants and Acceptees to U.S. MD-Granting Medical Schools, 2021-2022 through 2023-2024 [aggregated]). While these academic metrics are important components of an admission decision, they are only one part of the overall application package. An applicant's competencies, such as their ability to balance multiple priorities and responsibilities, their commitment to learning and growth, and the resilience they've shown in handling various challenges are considered along with grades and MCAT scores. This helps explain why there are many cases in which a high-scoring applicant with a near-perfect GPA may not get into medical school, while other applicants with scores and grades below the average do. Admission decisions involve more than academic metrics.

Competencies

Your competencies include the way in which you apply your knowledge, skills, and abilities, including how you think, achieve results, interact with others, and self-manage. Medical educators identified the following Premed Competencies as important for students to be successful in medical school and in future practice:

- Cultural Awareness
- Cultural Humility
- Empathy and Compassion
- Service Orientation
- Interpersonal Skills
- Teamwork and Collaboration
- Oral Communication
- Commitment to Learning and Growth
- Ethical Responsibility to Self and Others
- Reliability and Dependability
- Resilience and Adaptability
- Human Behavior
- Living Systems
- Critical Thinking
- Quantitative Reasoning
- Scientific Inquiry
- Written Communication

Schools assess your competencies by considering your experiences, attributes, and metrics. Learn more about the Premed Competencies.

Premed Competencies and Anatomy of an Applicant

While each medical school has its own process for reviewing candidates, many medical schools use the Premed Competencies**.** These competencies provide a framework to consider when communicating how your work, activities, and life experiences demonstrate your readiness for medical school. Successful medical school applicants are able to show that they possess the knowledge, skills, values, and attributes in the 17 defined areas shown in Table 8.1.

TABLE 8.1. Premed Competencies Endorsed by the AAMC

Professional Competencies	Thinking and Reasoning Competencies	Science Competencies
Commitment to Learning and Growth	Critical Thinking	Living Systems
Cultural Awareness	Quantitative Reasoning	Human Behavior
Cultural Humility	Scientific Inquiry	
Empathy and Compassion	Written Communication	
Ethical Responsibility to Self and Others		
Interpersonal Skills		
Oral Communication		
Reliability and Dependability		
Resilience and Adaptability		
Service Orientation		
Teamwork and Collaboration		

To help explain the competencies and provide real examples, the AAMC created Anatomy of an Applicant, a resource that shares the pathways of medical students, along with commentary from their prehealth advisors and the admissions officers who accepted them. This resource was developed in direct response to inquiries from applicants, prehealth advisors, and admissions officers who asked the AAMC for help in better understanding how applicants can convey their aptitude in the Premed Competencies. It provides guidance on how the Premed Competencies could be developed and demonstrated through an applicant's experiences in preparation for medical school.

The work and activities you are already involved with — and your life experiences — likely demonstrate these competencies. For example, you can show competency in scientific inquiry by excelling in scientific research, or you can illustrate competency in service orientation by leading a service trip. As you'll see in the Anatomy of an Applicant student profiles, one experience can offer evidence of proficiency across multiple competencies.

These profiles share the personal stories of medical students — their paths to medical school and what they identify as their strongest competencies. Anatomy of an Applicant also includes competency definitions, the parts of an application and what they tell schools about you, and self-assessment worksheets

Experiences

Experiences are your life circumstances and the chosen activities you have taken part in, as well as the context in which these experiences have taken place. Your experiences convey a lot about your background, interests, responsibilities, capabilities, and knowledge. As a result, medical schools are interested in the path you have taken to get where you are at this stage in your life. They also take a close look at what you've learned along the way. It helps them gauge not only how likely you are to be successful in their programs but also to what degree you'll support their mission and contribute value as a physician.

Chapter 2, on undergraduate preparation, mentioned how important your extracurricular activities may be to an admissions committee — and not just clubs and organizations within your college but also outside of school. Your experiences — particularly those related to medicine or research — are an important component that affects your competitiveness as a candidate. For instance, if you are balancing a 20- to 30-hour a week job to pay for school while attending classes or have responsibilities caring for a younger sibling or elderly relative, those experiences are important to share with admissions committees. They communicate information about your life and provide additional context for interpreting your grades. Your experiences — and the insights you gained from them — also help admissions committees identify what's unique about you and how you may contribute to their school and the practice of medicine.

Beyond that, the degree to which you contributed to and participated in these activities is vital. Medical schools value a demonstration of true commitment, so if you've made a significant contribution to an organization, been involved for numerous years, or taken on increasing levels of responsibility, make that clear to the admissions committee. They're interested not only in what you've done but also how you think those experiences have influenced who you are and what you want to do. A series of short-term involvements (volunteering a day here, spending an afternoon there) does not really convey a deep interest, and this lack of motivation is apparent to admissions officials. They're looking for substantial, committed participation in areas that are truly important to you. Only then are they able to gain some insights into your real interests and judge how well your goals and their missions align.

Again, the mission of each school will play a large part in how your experience is evaluated. For example, institutions whose goal is to increase the number of physicians practicing in underserved areas will focus attention on the summer you spent volunteering in a free clinic or doing rural or urban community outreach on health promotion. A medical school with a social justice mission or a focus on addressing health inequities might look for applicants who helped to plan health screenings for underserved populations or engaged in advocacy efforts on a particular topic such as housing insecurity. In general, medical schools especially value community and volunteer experience related to the health care field.

Concept of "Lived Experience"

Here's another thing to consider: Admissions officers are likely to place significance on any obstacles or hardships you've overcome to get to this point in your education. Medical schools view these instances as admirable experiences indicative of some very positive traits, such as resilience and persistence. Applicants are encouraged to use the "Other Impactful Experiences" section in the AMCAS application to highlight these experiences (more information about the background and intended use of this question can be found in the Self-reported Disadvantaged Status Question Update). This section was designed to provide medical school applicants with an opportunity to describe aspects of their background and experiences that may not be easily presented in other parts of the application. It is also intended to provide admissions committees with information

to better understand the context of an applicant's journey and to assist with mission alignment through holistic review. As with other experiences, you can help the admissions committee better understand and appreciate your unique contributions by describing such experiences and how they have influenced you and your desire to be a physician.

Experiences likely to be important to admissions committees:

- Serving as the primary caregiver for an ill family member
- Helping to support your family financially
- Overcoming obstacles or hardships
- Being employed from a young age or while in school
- Working, volunteering, or shadowing in a health care setting
- Participating in research
- Participating in and leading community-based or volunteer organizations

Attributes

Admissions committees want to know if you have what it takes to become a competent and compassionate doctor. This includes the ability to master the science and medicine behind it all, of course, but it also requires that you have some key personal attributes. Admissions committees look at various sources to determine whether you have those attributes. Your attributes are your skills, abilities, personal qualities, and relevant demographic identities. While personal experiences, such as volunteering for three consecutive summers at a medical clinic, certainly convey dedication, admissions committees will look to your personal statement, letters of evaluation, interviews, and metrics to gauge whether you have the necessary foundation and desire to build on these experiences in medical school.

Medical schools analyze this broad range of attributes and give weight to specific characteristics that align with their missions. Examples could include where you live, your motivation for a medical career, languages spoken, curiosity, and maturity.

Metrics

Admissions committees need to evaluate your academic record to consider how well your preparation, knowledge, and reasoning skills signal readiness for medical school.

Academic History
Your academic history helps admissions committees evaluate how well your study skills, persistence, course of study, and grades signal likely success at their medical school. Committees may consider:

- Grades earned in each course and lab
- Grade trends in the last two years of schooling
- Number of credit hours carried in each academic period
- Distribution of coursework among the biological, physical, and social sciences and the humanities
- Need for remediation of unsatisfactory academic work
- Number of incomplete grades and course withdrawals
- Number of years taken to complete the degree program
- The amount of advanced coursework completed in addition to the standard prerequisites and requirements

MCAT Scores
Admissions committees can better understand your likelihood of success when they add MCAT scores into the mix. That's because GPAs and MCAT scores each provide unique information about readiness and future success. Grading scales and standards can differ significantly from college to college, and MCAT scores provide a standardized measure by which to compare applicants. Another reason to look at both is that, sometimes, higher grades can compensate for lower MCAT scores and vice versa.

In general, the better your grades and the higher your scores, the more confidence a school will have in your ability to succeed in your coursework. It is important to remember there's still a wide range of MCAT scores and GPAs among accepted applicants and that those are used in conjunction with other factors, as discussed earlier in this chapter.

AAMC PREview® Professional Readiness Score
Medical schools look for applicants to demonstrate multiple core competencies that collectively signal readiness for medical school, including professional competencies. The PREview exam is designed to assess examinees' understanding of effective and ineffective professional behavior across nine Premed Competencies. A growing number of medical schools have adopted the PREview exam into their holistic review of applications. Their use of the exam signals important areas for student preparation and supports medical school admissions' evaluation of applicants' readiness for more advanced instruction in these areas. In turn, applicants who submit PREview scores have an opportunity to demonstrate their readiness, beyond academic metrics, to receive this advanced instruction. The exam also provides a standardized way for schools to evaluate applicants' professional competencies; they use PREview scores alongside other important, variable information that provides insight into an applicants' professionalism, such as essays, experiences, and letters of recommendation. The number of participating schools continues to grow. Applicants can find the most recent list of schools on the PREview website.

Making the Evaluation

Admissions committees gauge your competency and readiness for medical school in several ways. Although each medical school establishes its own criteria, medical schools balance data about metrics with applicants' experiences and attributes. A 2023 admissions officers survey found that they highly value data and information such as academic metrics, Professional Competencies, some demographic characteristics, and a variety of experiences when identifying applicants for interview or acceptance. A 2021 admissions officers survey found that the relative importance of undergraduate GPAs and MCAT scores decreases as more information about an applicant is gathered. Placing applicants' MCAT scores in the context of their educational opportunities, lived experiences, academic trajectories, and personal attributes during the admission process enables medical schools to meet their missions and goals and not overlook students who would make valuable contributions to their programs.

Several elements within the application process speak to your experiences and attributes. Your personal comments essay, as mentioned in Chapter 7, gives you the opportunity to tell committee members about your extracurricular activities, distance traveled, volunteer efforts, and medical-related work experience. The personal attributes that accompany these activities can often be inferred. For example, a role as an officer in a school club may indicate leadership skills. Working in a medical clinic summer after summer demonstrates motivation to pursue medicine. A long history of volunteering with fundraisers for cancer research suggests commitment to service. Applicants can speak to these experiences in their statements and during interviews to further underscore these connections. You can find more information in the 2025 AMCAS Application Workbook, with

information about the three essay prompts and certification statements within the application on pages 30 and 33 of the workbook.

Please keep in mind that the AMCAS application now includes additional text in the essay prompts and certification statements that provides clarifying language for essay submissions. It reminds applicants that essays must be their own work and not the work of another author or the product of artificial intelligence.

Your letters of evaluation, also described in Chapter 7, attest to your personal attributes. (Consider reviewing the AAMC's letter writer guidelines and providing it to your writers.) While the faculty and administrative staff at your school have experience crafting letters of evaluation, it is often helpful for you to suggest a few key concepts in addition to sharing AAMC resources for letter writers.

Then there are the academic metrics. As you may know, your academic record is part of your AMCAS application and includes both your college transcript(s) and MCAT scores. From there, committee members can evaluate whether you have the grades, range of coursework, and foundation of knowledge they seek in their successful applicants.

Schools assess your competencies by considering your experiences, attributes, and academic metrics in combination. Together, they give shape to what you, as an applicant, may contribute to their medical school and to health care at large. It's not only about what you did and what you know, but also who you are and what you bring to the learning environment and the medical profession.

The Interview Is Key

In general, interviews take place after admissions staff have reviewed applications and selected a subset of applicants from whom they want to collect more information. Being invited to an interview is an indication that a medical school is interested in understanding more about you, the person behind the application. After interviews, admission decisions are made. If you've been invited to an interview, you should feel confident that you've already impressed your reviewers with your strong personal statement, background, letters of evaluation, and academic history. Medical schools usually interview significantly more applicants than their class size, thus the interview is likely to be the number one determining factor at this point in the admission process.

The fact that interviews are given at all is a significant distinction of medical schools; some professional schools don't require them. The medical school interview attests to the degree to which admissions officers seek — and medical schools want — a more thorough understanding of you. You can take the following steps to ensure you're prepared for it.

Review individual medical school interview information in the MSAR reports.

The AAMC has developed the *Medical School Applicant Interview Preparation Guide* to help applicants understand what to expect during the interview process. Refer to the Medical School Applicant Interview Preparation Guide for detailed information on the role of the interview, the interview timeline, types of interviews, common interview topics, and more.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 8.1

Possible Questions to Ask During Interviews

As you research the medical schools you're interested in attending, use this worksheet to keep track of questions you may want to ask during your interview. Print or save this page for individual schools and review it the night before your interview or bring it with you. You can find examples of questions in Selecting a Medical School: 35 Questions I Wish I Had Asked.

Name of medical school: _____

Type of interview: _____

Date of interview: _____

Questions about:

1. Curriculum _____

2. Student involvement _____

3. Special programs _____

4. Financial aid _____

5. Facilities _____

6. Academic evaluations _____

7. Student support _____

8. Residency placement _____

9. Other _____

CHAPTER 9

Applicant and Acceptee Data

A Quick Look at the 2023-2024 Entering Class

- In 2023-2024, 52,577 people applied to the 2023 entering class across all MD-granting medical schools.
- By the fall of 2023, 24,014 applicants had been offered an acceptance to at least one medical school, and 22,980 accepted applicants had matriculated.

These accepted applicants possessed a broad range of MCAT scores, ranging from 474 to 528, with a median score of 512, and undergraduate GPAs ranging from 1.80 to 4.00, with a median of 3.84. Accepted applicants also reported a wide variety of personal characteristics and life experiences, including over 90% reporting community service experiences. Among accepted applicants, women outnumbered men for the seventh consecutive year. The number of accepted applicants identifying as Black or African American or as Hispanic, Latino, or of Spanish origin decreased from the previous year.

This chapter provides relevant data for the entire applicant pool, as well as for accepted and not accepted applicants, for the 2023 entering class. All data presented in this chapter is accurate as of Oct. 29, 2023.* In the following charts:

- “All applicants” refers to all applicants to the 2023 entering class.
- "Accepted applicants” refers to applicants accepted to at least one medical school.
- “Not accepted applicants” refers to applicants not accepted to any medical school.

In the following pages, we provide data related to performance on the MCAT exam; undergraduate GPA, MCAT scores, and undergraduate GPA combined; and undergraduate major, gender, age, type of application, and race and ethnicity.

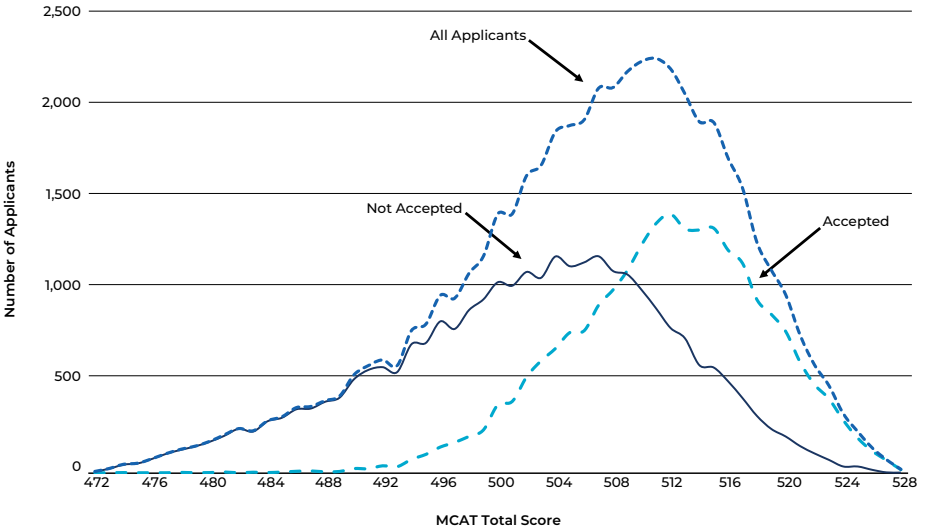
*Source: AAMC Data Warehouse: AAMC Applicant Matriculant Data File.

The applicant resources team thanks Brianna Gunter, AAMC lead research and data analyst, for her significant contributions to this chapter.

Performance on the MCAT Exam

Figure 9.1 summarizes the overall performance of the 2023-2024 applicants who submitted scores from the MCAT exam. The figure shows that these 2023-2024 applicants achieved total scores ranging from 472 to 528; the median score for applicants for 2023-2024 was 508. Accepted applicants had total scores ranging from 474 to 528; 39 accepted applicants had total scores of 488 or below. The total MCAT score most commonly achieved by accepted applicants was 512.

FIGURE 9.1. MCAT total score distribution, 2023-2024 applicants.



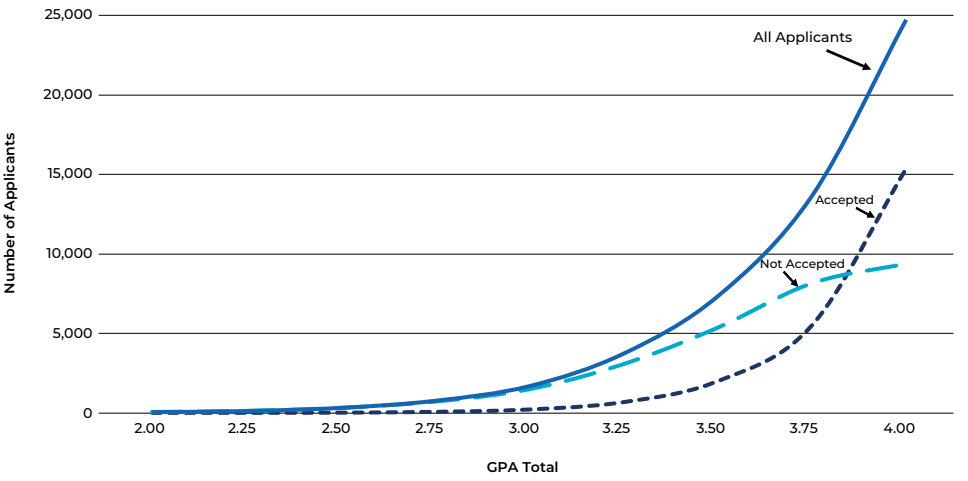
Source: AAMC Data Warehouse: Applicant Matriculant Data File.

No score on a single MCAT section and no total MCAT score guarantees admission to medical school. Figure 9.1 shows that a substantial number of applicants with total MCAT scores of 512 and above were not accepted. This finding reveals the importance of factors other than MCAT performance — including undergraduate academic performance and a variety of personal characteristics and experiences — in the medical student selection process.

Undergraduate Grade Point Average

Figure 9.2 presents information about the undergraduate academic performance of 2023-2024 applicants.

FIGURE 9.2. Grade point average (GPA) total distribution, 2023-2024 applicants.



Source: AAMC Data Warehouse: Applicant Matriculant Data File.

All applicants had cumulative total undergraduate GPAs ranging from under 2.00 to 4.00. Accepted applicants' total undergraduate GPAs ranged from just under 2.00 to 4.00, and 80 accepted applicants had total undergraduate GPAs of 2.75 or below.

As is the case with the MCAT data, the GPA data in Figure 9.2 shows that no undergraduate GPA ensures admission to medical school. Although applicants with total GPAs in the range of 3.75 to 4.00 were more likely to be accepted to medical school, a significant number of such applicants were not accepted.

Again, these findings underscore the importance of other factors such as personal characteristics and life experiences in the medical student selection process.

MCAT Score

Table 9.1 combines MCAT scores and undergraduate GPAs for all 2021-2022 through 2023-2024 applicants to medical school who submitted scores from the new exam. Note that these results are presented without regard to any of the other selection factors. If the data doesn't reflect your particular circumstances, please see the acceptance rates for specific demographic groups.

TABLE 9.1. MCAT Total Scores and Total GPAs of Applicants and Acceptees, 2021-2022 Through 2023-2024 (Aggregated)

GPA Total	Acceptees (Accs), Applicants (Apps), and Percentage of Applicants Accepted	MCAT Total									
		472-485	486-489	490-493	494-497	498-501	502-505	506-509	510-513	514-517	518-528
3.80-4.00	Acceptees	12	13	62	370	1,105	2,781	5,208	8,440	9,018	10,645
	Applicants	278	420	935	2,004	3,826	6,914	9,948	12,646	11,973	12,843
	Accs/Apps	4.3	3.1	6.6	18.5	28.9	40.2	52.4	66.7	75.3	82.9
3.60-3.79	Acceptees	10	12	72	364	947	1,962	3,167	4,538	3,711	2,439
	Applicants	654	787	1,516	2,741	4,397	6,124	7,836	8,005	5,678	3,369
	Accs/Apps	1.5	1.5	4.7	13.3	21.5	32.0	40.4	56.7	65.4	72.4
3.40-3.59	Acceptees	6	8	51	283	652	1,242	1,686	1,945	1,476	733
	Applicants	893	929	1,547	2,545	3,468	4,451	5,001	4,290	2,624	1,194
	Accs/Apps	0.7	0.9	3.3	11.1	18.8	27.9	33.7	45.3	56.3	61.4
3.20-3.39	Acceptees	8	9	35	170	404	714	793	838	522	253
	Applicants	1,086	932	1,358	1,845	2,395	2,724	2,505	2,043	1,091	448
	Accs/Apps	0.7	1.0	2.6	9.2	16.9	26.2	31.7	41.0	47.8	56.5
3.00-3.19	Acceptees	3	10	23	90	230	312	364	314	191	80
	Applicants	999	758	930	1,214	1,407	1,422	1,279	919	451	188
	Accs/Apps	0.3	1.3	2.5	7.4	16.3	21.9	28.5	34.2	42.4	42.6
2.80-2.99	Acceptees	3	9	12	31	83	149	137	96	59	20
	Applicants	806	518	537	631	662	662	512	294	158	62
	Accs/Apps	0.4	1.7	2.2	4.9	12.5	22.5	26.8	32.7	37.3	32.3
2.60-2.79	Acceptees	1	3	6	16	32	52	40	28	24	10
	Applicants	581	284	305	319	302	242	201	119	68	26
	Accs/Apps	0.2	1.1	2.0	5.0	10.6	21.5	19.9	23.5	35.3	38.5
2.40-2.59	Acceptees	1	0	2	3	9	15	18	9	3	5
	Applicants	437	168	154	150	119	98	72	41	12	18
	Accs/Apps	0.2	0.0	1.3	2.0	7.6	15.3	25.0	22.0	25.0	27.8
2.20-2.39	Acceptees	0	1	1	4	6	4	6	2	—	—
	Applicants	250	100	68	49	44	40	25	10	—	—
	Accs/Apps	0.0	1.0	1.5	8.2	13.6	10.0	24.0	20.0	—	—
2.00-2.19	Acceptees	0	0	0	0	1	3	—	—	—	—
	Applicants	110	33	27	16	14	17	—	—	—	—
	Accs/Apps	0.0	0.0	0.0	0.0	7.1	17.6	—	—	—	—
1.41-1.99	Acceptees	0	0	0	—	—	—	—	—	—	
	Applicants	66	12	11	—	—	—	—	—	—	
	Accs/Apps	0.0	0.0	0.0	—	—	—	—	—	—	

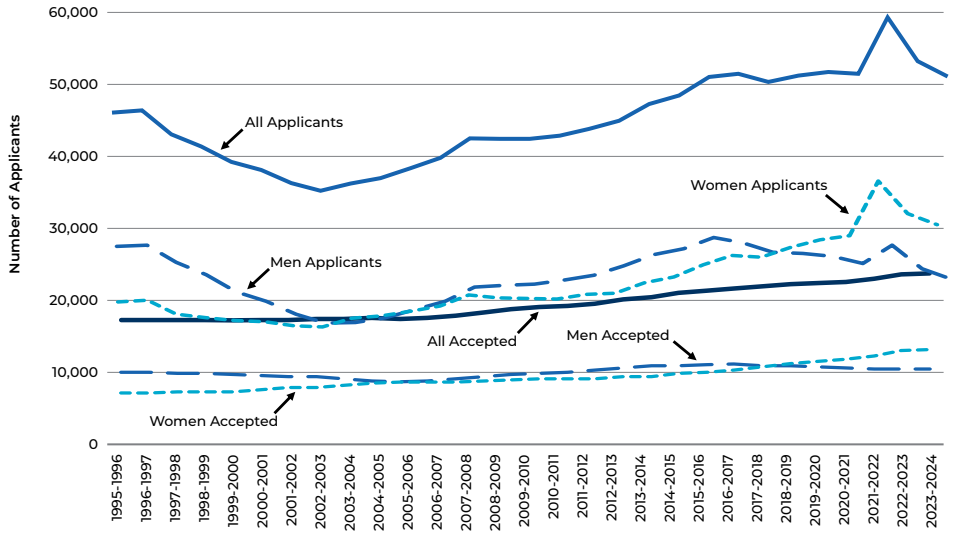
Note: Dashed cells indicate the MCAT/UGPA range combinations with fewer than 10 applicants; blank cells indicate MCAT/UGPA range combinations with zero applicants.

Source: AAMC Data Warehouse: Applicant Matriculant File.

Gender

Figure 9.3 presents information about the number and gender of all applicants and accepted applicants for entering classes from 1995-1996 through 2023-2024. In 2022-2023, the applicant pool decreased 4.7% from the previous year.

FIGURE 9.3. Applicants by gender and acceptance status, 1995-1996 through 2023-2024.



Source: AAMC Data Warehouse: Applicant Matriculant Data File.

The number of men applicants to the 2023-2024 entering class decreased by 1,350 from the number of men applicants to the previous year's entering class. The number of women applicants to the 2023-2024 class decreased by 1,428 from the previous year's number.

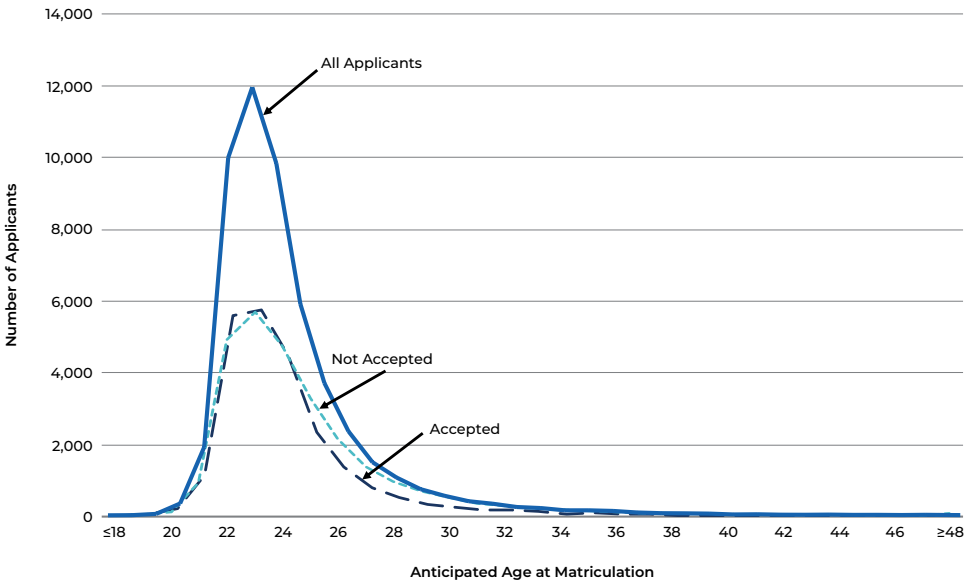
Although the number of accepted applicants remained fairly constant from 1995-1996 through 2002-2003, it started to increase in 2003-2004, from 17,542 that year to a high of 24,014 in 2023-2024. The number of accepted men applicants has fluctuated since 1995-1996, with a low of 8,810 in 2003-2004 and a high of 11,271 in 2015-2016. The number of accepted women applicants has increased, with small fluctuations, from a low of 7,437 in the 1995-1996 entering class to a high of 13,298 in 2023-2024. The gap between men and women applicants has gradually shifted. From 2005-2006 through 2017-2018, men applicants outnumbered the number of women applicants. Beginning in 2018-2019, women applicants have outnumbered men applicants. In 2023-2024, 7,189 more women than men applied to medical school. The gaps between accepted men and accepted women applicants have also shifted. Since 2017-2018, accepted women applicants have outnumbered the men applicants. For the 2023-2024 entering class, 2,689 more women than men were accepted.

The national ratio of men to women applicants was 49.2 to 50.8 for the 2003-2004 entering class — the first time that the number of women applicants to medical school was greater than the number of men applicants. For the 2005-2006 entering class, there were once again more men applicants than women applicants, with a men-to-women ratio of 50.2 to 49.8. This trend continued until 2017-2018, when women applicants outnumbered men, with a men-to-women ratio of 49.5 to 50.4. This continued to be the case in 2023-2024 (42.9 to 56.6).

Age

Figure 9.4 shows that the age distribution for all applicants to the 2023-2024 entering class was broad. The number of applicants between 21 and 28 years of age applying to matriculate totaled 47,795, the number of applicants under 21 was 424, and applicants over 28 totaled 4,399. Figure 9.4 shows a similar finding for accepted applicants to the 2023-2024 entering class; 24,014 accepted applicants were between 16 and 62 years of age at the time of expected matriculation.

FIGURE 9.4. Age distribution, 2023-2024 applicants.



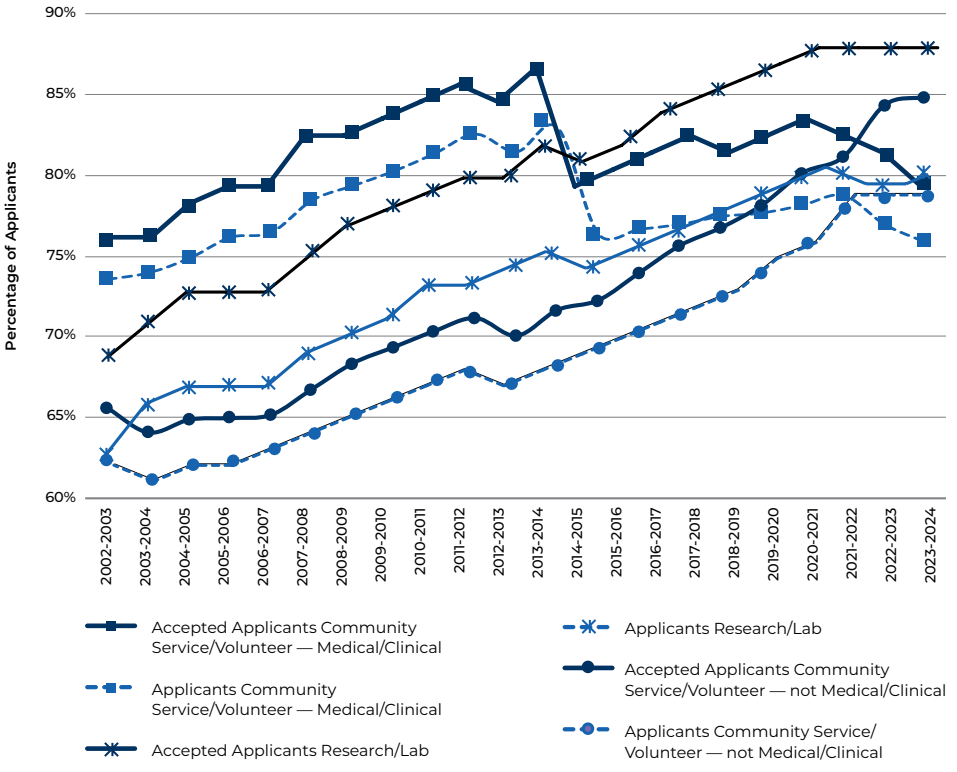
Source: AAMC Data Warehouse: Applicant Matriculant Data File.

Applicant and Accepted Applicant Experiences

Figure 9.5 summarizes the volunteer and research experiences of AMCAS applicants and accepted applicants to the 2023-2024 entering class. The figure shows a clear increase in the percentage of both applicants and accepted applicants reporting volunteer medical, community service, and research experience since 2003. For the 2023-2024 entering class:

- Seventy-nine percent of accepted applicants reported community service and/or volunteer medical or clinical experience, an increase of about 3% since 2002.
- Seventy-five percent of applicants reported community service and/or volunteer medical or clinical experience, an increase of about 2% since 2002.
- Eighty-eight percent of accepted applicants reported research and/or lab experience, an increase of about 19% since 2002.
- Eighty percent of applicants reported research and/or lab experience, an increase of about 17% since 2002.
- Eighty-five percent of accepted applicants reported nonmedical or nonclinical community service and/or volunteer experience, an increase of about 20% since 2002.
- Seventy-nine percent of applicants reported nonmedical or nonclinical community service and/or volunteer experience, an increase of about 17% since 2002.

FIGURE 9.5. Percentage of AMCAS applicants and accepted applicants reporting selected experiences, 2002-2003 through 2023-2024.

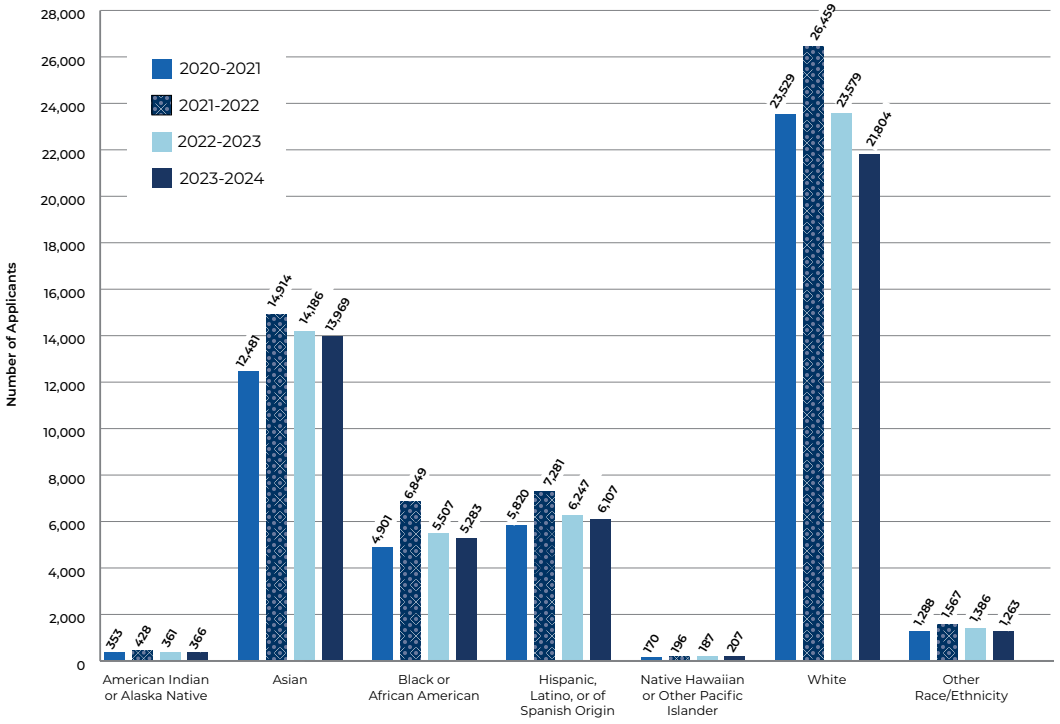


Source: AAMC Data Warehouse: Applicant Matriculant Data File.

Racial/Ethnic Self-Identity

Figure 9.6 shows self-reported race and ethnicity data for applicants to the 2020-2021 entering class through the 2023-2024 entering class. Applicants could select multiple races and ethnicities, so the sum of those shown does not equal the total number of applicants. Also, we could not include applicants for whom we have no race and ethnicity data. Additional information for applicants from groups underrepresented in medicine is available in Chapter 4.

FIGURE 9.6. Distribution of self-identity: all applicants, 2020-2021 through 2023-2024.*



*Self-identities are reported for U.S. citizens or permanent residents only and may be alone or in combination with some other self-identity.

Source: AAMC Data Warehouse: Applicant Matriculant Data File.

CHAPTER 10

You Can Afford Medical School

Shelbie Powers
University of Houston Tilman J. Fertitta Family College of Medicine
Class of 2025

"Can I afford this?" You are not alone in asking this question.

As I bought study materials, paid for my applications, and ultimately chose what school to attend, I never doubted my academic ability or if being a physician was the "best" job for me. Quite frankly, I've never imagined myself doing anything else. But the fear of paying for my education was almost enough to stop me.

These are all the things I wish I'd known when I applied to medical school, while in graduate school and working as a scribe:

- Consider buying used textbooks or renting them.
- Don't buy more than three resources to study, and don't buy them all at once.
- Apply for scholarships. It's work to find them, but it is worth it.
- Submitting primary applications was the scariest thing I'd done. I didn't know how expensive it would be. Be sure to budget for all application fees.
- Apply for the AAMC Fee Assistance Program. Many schools will grant waivers for their secondary applications if you receive Fee Assistance Program benefits.
- Talk to your advisor about additional scholarship opportunities.
- Consider whether you'll need to move for medical school. This will likely be expensive. Start planning for these expenses as soon as you can. Consider the cost of moving versus repurchasing large furniture. Don't forget living expenses for your first month. You might have to live in the location before financial aid is disbursed.
- Ask current students for lodging recommendations. Review your school's cost of attendance (COA) to gauge living expenses and plan your budget accordingly. Look at your school's room and board costs in the COA before choosing where to live. Know your recurring fees and estimate the flexible expenses.
- Most U.S. medical students take out loans. Remember to borrow what you need to cover your living expenses. But keep in mind that you aren't required to borrow the full amount you qualify for.

And finally, remember you're here because you belong here. Don't let the fear of affording medical school take away the excitement of this experience.

Building a Strong Financial Plan

You'll need to develop a strategy to cover the costs associated with your education. Don't let the numbers discourage you. There's help available, and you will be able to repay the loans you incur.

Table 10.1 shows that annual tuition, fees, and health insurance for the first year at state medical schools in 2023-2024 averaged about $40,493 for residents and $64,473 for nonresidents; at private schools, the average was $64,729 for residents and $66,176 for nonresidents.

According to recent surveys conducted by the AAMC, 70% of newly graduated MDs have medical school education debt, and 64% reported receiving some degree of help through scholarships, stipends, and grants (which you generally don't have to repay). So, it can be done, and it is . . . by tens of thousands of medical students every single year. But first, you need a plan.

Before you borrow money, it's important to understand — and adhere to — the basic principles of successful money management. Below are three basic recommendations that should help you build a strong financial foundation.

TABLE 10.1. Tuition, Fees, and Health Insurance for 2023-2024 First-Year Students in U.S. Medical Schools (in Dollars)

Private Schools	
Student Category	Average Cost
Resident	$64,729
Nonresident	$66,176
Public Schools	
Student Category	Average Cost
Resident	$40,493
Nonresident	$64,473

Source: 2023-2024 AAMC Tuition and Student Fees Questionnaire.

1. Live Within Your Means

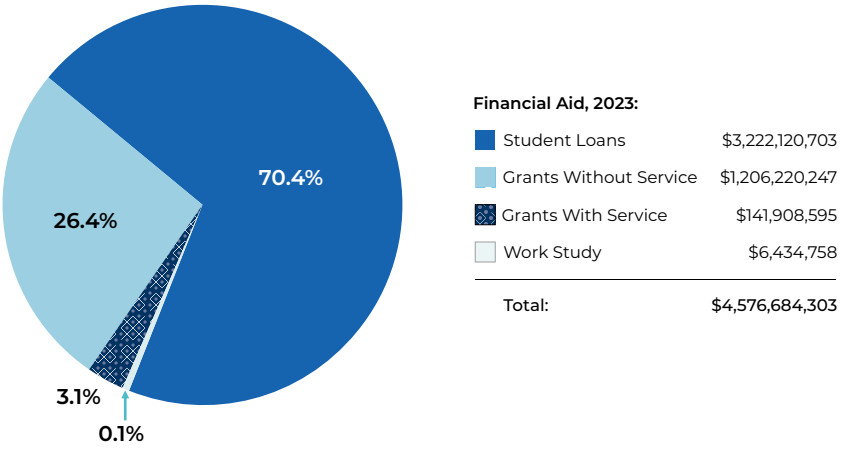
If you don't have a plan of action for your finances, all other efforts to afford medical school and handle your money wisely will be undermined. A spending plan is the cornerstone of a solid financial foundation. Let's face it: Money will be tight during medical school, and a realistic spending plan will be critical to your financial well-being. A well-crafted plan will help you maintain better control of your spending, ensure you cover your essential expenses, and prepare you for unexpected expenses by building an emergency fund.

Your Total Income – Your Total Expenses = Your Discretionary Income

Creating a budget involves the following items:

- Income — Document incoming funds, which likely will be in the form of financial aid (loans, scholarships, or grants). Remember, you don't need to accept all the financial aid that is offered to you. Determine what is truly needed so that you do not borrow too much.
- Expenses — Identify outgoing expenses, like tuition, fees, housing, food, and miscellaneous. Use your school's COA as a guideline for determining what expenses you may have.
- Discretionary income — Subtract your expenses from your income to determine whether your budget leaves you with any discretionary income. If your expenses exceed your income, then you will need to make adjustments to your income or expenses.
- Once you know what items should be included in your budget, use the following resources to create your budget:
  - The AAMC Financial Information, Resources, Services, and Tools (FIRST) program provides several budgeting articles and tools that can help you, including a student budget worksheet.
  - The AAMC Financial Wellness program provides a budgeting module, an online budgeting tool, and a tool that can help you track your monthly expenses.

FIGURE 10.1. **Distribution of financial aid among medical students.**



Note: Includes data from the 150 fully accredited medical education programs that reported financial aid information in 2023. Percentages may not sum to 100 due to rounding.

Source: 2023 LCME Student Financial Aid Questionnaire Part I-B.

2. Manage Your Debt Wisely

- It's understandable that most medical students borrow loans to fund their education. The median medical education debt for the class of 2023 was $200,000. The ability to manage debt wisely is important, and it becomes even more critical for you — a prospective medical student — when you consider the degree to which you will likely rely on loans.
- Be conscious of the amount you borrow — and be comfortable knowing that your future income will allow you to repay your student loan debt.
- Educate yourself about various financing possibilities before you attend medical school, and diligently search for free money, such as scholarships, grants, and loan repayment assistance programs.
- Understand the responsibilities — beyond making payments — that come with student loans. These responsibilities include knowing what loans you have incurred, where to send payments, and when payments are due. You'll also be responsible for notifying your loan servicer(s) of any changes to your name, contact information, or enrollment status.
- Stay organized. Maintain accurate financial aid records, copies of application forms, and any related paperwork. This also means opening and reading all mail pertaining to your student loan debt. The MedLoans Organizer and Calculator is a tool to help you keep your loans organized. Every accepted medical school student is given access to this free tool.
- Many financial resources are available, including resources provided by your prehealth advisor, the information in this book, and the AAMC FIRST program. FIRST provides resources to help medical school applicants and students make smart decisions about student loans, effectively manage their education debt, and expand their financial skills. The AAMC also provides financial management assistance through a financial literacy program. This program provides practical information on budgeting, credit, debt management, and more. Register for your free Financial Wellness account.
- The financial aid offered by each medical school may be a significant factor when you're deciding which offer to accept. For information on this and other considerations, refer to Chapter 6, "Choosing Your Schools."

3. Maintain Good Credit

- As part of the financial aid application process, some financing options may require a credit check. If you have credit issues, contact the medical school's financial aid office to discuss options and next steps for securing financing for your education.
- There are numerous resources to help you manage, maintain, and strengthen your credit. Having a good credit score can increase your ability to qualify for and obtain better interest rates for credit-based loans, land a job, and rent an apartment. For more information, please see this article, and review FIRST's Monitoring, Maintaining, and Improving Your Credit Score webinar.

Tips to Help Your Credit Score

- Pay your bills on time
- Limit your credit accounts
- Keep balances below your credit limit
- Pay down or eliminate debt whenever possible
- Stay current on all outstanding credit obligations
- Check your credit report regularly at AnnualCreditReport.com

Types of Financial Aid

How Will You Pay for Medical School?

First, remember that you're not alone. While the ultimate financial responsibility for your medical education rests with you and your family, there are many resources and tools to help you. The financial aid staff at your medical school will assist you, but you'll also want to talk to your prehealth advisor and familiarize yourself with the FIRST Fact Sheets.

Loans

It's likely that your primary financial funding for medical school will come from federal student loans, as shown in the Debt, Costs, and Loan Repayment Fact Card (Figure 10.2). Federal loans are generally the first type of loan offered and include the following:

- Direct Unsubsidized Loans
- Direct PLUS Loans

In addition to the federal Direct Loan program, there are low-interest, need-based, federal loan programs available through the U.S. Department of Health and Human Services (HHS). These include:

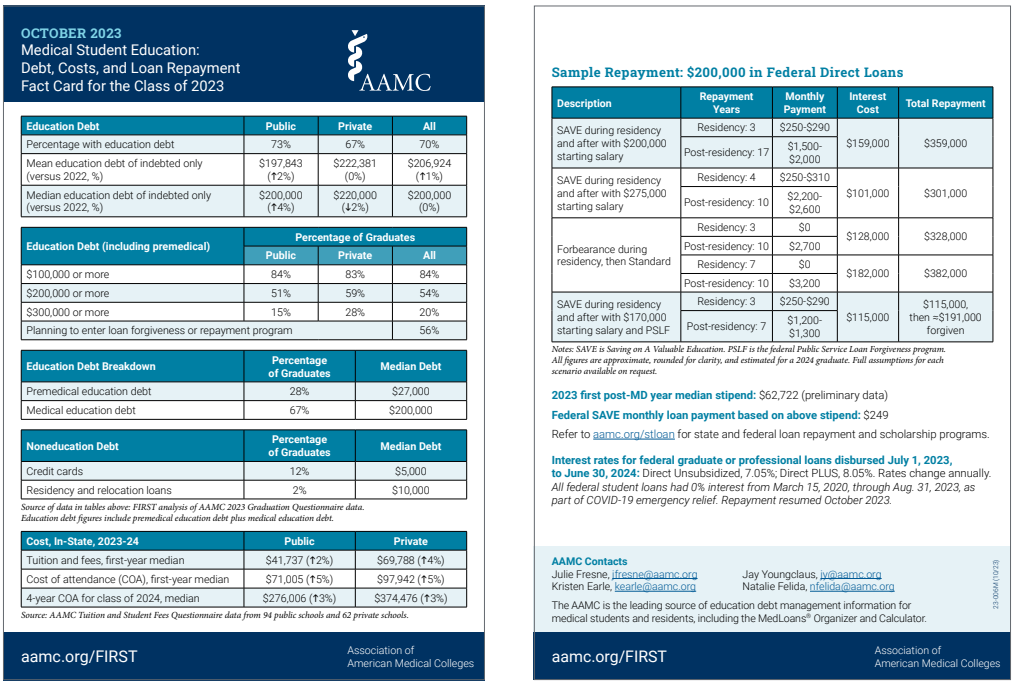
- Loans for Disadvantaged Students (LDS)
- Primary Care Loans (PCL)

Not all schools award loans from HHS, and not all students will qualify for these loans. Students should check with the financial aid staff at the schools they are interested in attending to find out whether the school participates in the program and whether they meet eligibility requirements.

Private loans can also be used to finance your medical education; however, borrowers will need to make sure this is the best option for their situation. These loans are borrowed from a financial institution or organization, not the federal government. It is often recommended that borrowers obtain a federal loan rather than a private loan because the borrower benefits associated with federal student loan programs will not likely be available with a private loan. To learn more about how these loans differ, review the Federal vs. Private Education Loans FIRST fact sheet and talk with the financial aid staff at your school.

Many times, it can be overwhelming to think about borrowing and repaying student loans; however, a medical career yields strong job security and excellent income potential and should give any medical school graduate, practicing in any specialty, the ability to repay their education debt and provide for a secure living and retirement.

FIGURE 10.2. Medical student education: debt, costs, and loan repayment fact card.



OCTOBER 2023
Medical Student Education:
Debt, Costs, and Loan Repayment
Fact Card for the Class of 2023

AAMC

Education Debt	Public	Private	All
Percentage with education debt	73%	67%	70%
Mean education debt of indebted only (versus 2022, %)	$197,843 (↑2%)	$222,381 (0%)	$206,924 (↑1%)
Median education debt of indebted only (versus 2022, %)	$200,000 (↑4%)	$220,000 (↓2%)	$200,000 (0%)

Education Debt (including premedical)	Percentage of Graduates		
	Public	Private	All
$100,000 or more	84%	83%	84%
$200,000 or more	51%	59%	54%
$300,000 or more	15%	28%	20%
Planning to enter loan forgiveness or repayment program			56%

Education Debt Breakdown	Percentage of Graduates	Median Debt
Premedical education debt	28%	$27,000
Medical education debt	67%	$200,000

Noneducation Debt	Percentage of Graduates	Median Debt
Credit cards	12%	$5,000
Residency and relocation loans	2%	$10,000

Source of data in tables above: FIRST analysis of AAMC 2023 Graduation Questionnaire data.
Education debt figures include premedical education debt plus medical education debt.

Cost, In-State, 2023-24	Public	Private
Tuition and fees, first-year median	$41,737 (↑2%)	$69,788 (↑4%)
Cost of attendance (COA), first-year median	$71,005 (↑5%)	$97,942 (↑5%)
4-year COA for class of 2024, median	$276,006 (↑3%)	$374,476 (↑3%)

Source: AAMC Tuition and Student Fees Questionnaire data from 94 public schools and 62 private schools.

aamc.org/FIRST

Association of American Medical Colleges

Sample Repayment: $200,000 in Federal Direct Loans

Description	Repayment Years	Monthly Payment	Interest Cost	Total Repayment
SAVE during residency and after with $200,000 starting salary	Residency: 3	$250-$290	$159,000	$359,000
	Post-residency: 17	$1,500-$2,000		
SAVE during residency and after with $275,000 starting salary	Residency: 4	$250-$310	$101,000	$301,000
	Post-residency: 10	$2,200-$2,600		
Forbearance during residency, then Standard	Residency: 3	$0	$128,000	$328,000
	Post-residency: 10	$2,700		
	Residency: 7	$0	$182,000	$382,000
	Post-residency: 10	$3,200		
SAVE during residency and after with $170,000 starting salary and PSLF	Residency: 3	$250-$290	$115,000	$115,000, then =$191,000 forgiven
	Post-residency: 7	$1,200-$1,300		

Notes: SAVE is Saving on A Valuable Education. PSLF is the federal Public Service Loan Forgiveness program. All figures are approximate, rounded for clarity, and estimated for a 2024 graduate. Full assumptions for each scenario available on request.

2023 first post-MD year median stipend: $62,722 (preliminary data)

Federal SAVE monthly loan payment based on above stipend: $249

Refer to aamc.org/stloan for state and federal loan repayment and scholarship programs.

Interest rates for federal graduate or professional loans disbursed July 1, 2023, to June 30, 2024: Direct Unsubsidized, 7.05%; Direct PLUS, 8.05%. Rates change annually. *All federal student loans had 0% interest from March 15, 2020, through Aug. 31, 2023, as part of COVID-19 emergency relief. Repayment resumed October 2023.*

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The AAMC is the leading source of education debt management information for medical students and residents, including the MedLoans® Organizer and Calculator.

23-00647(10/23)

aamc.org/FIRST

Association of American Medical Colleges

Grants and Scholarships

When it comes to financing your medical education, the best money is free money, often referred to as "gift aid," which you normally don't have to repay. If you are offered grants and/or scholarships, they will likely only cover a portion of your overall educational costs. Check with your medical school's financial aid staff to find out whether any grants and scholarships are available to you. Also be sure to check national, state, and local organizations and businesses for grant and scholarship opportunities.

Campus-Based Aid

Some schools have endowment funds that allow them to offer institutional funding through loans, grants, or scholarships. Many times, this campus-based funding can provide a great financial value for students in terms of better interest rates, interest subsidies, flexible repayment terms, and other benefits. Check with the schools you are interested in attending to find out whether they offer any campus-based aid programs. If you are awarded campus-based aid, ask whether the aid will be offered yearly or offered for only a particular year of medical school.

The Financial Aid Application Process

The financial aid process may vary slightly by institution, so you'll want to learn about each school's requirements and processes. Many times, this information can be found on the financial aid website for a school. Generally, to qualify for federal aid, most schools require that you're a U.S.

citizen or permanent resident, making satisfactory academic progress, and in compliance with federal aid eligibility requirements. These requirements can be reviewed at StudentAid.gov.

Regardless of the medical school, there's a standard process for applying for federal financial aid.

Step 1. Fill Out the FAFSA
Completing the Free Application for Federal Student Aid (FAFSA) is the first step toward getting federal aid for medical school. Completing the FAFSA online is easy and free. The schools listed on your FAFSA will receive your financial information and determine your eligibility for aid. The FAFSA does not ask graduate/professional students to enter parental information; however, some schools may require this information for campus-based aid. Be sure to find out whether this is a requirement for obtaining aid at the school you are interested in attending.

Step 2. Investigate Other Sources of Aid
Contact the medical school's financial aid staff (or consult their website) to investigate all available financial aid resources.

Step 3. Receive and Reply to the Aid Offer
Once your FAFSA and other required forms are received and processed by a medical school's financial aid office, you'll receive a financial aid offer indicating the types and amounts of financial aid you qualify for — along with directions for accepting or declining the aid. Be sure to follow the instructions to receive your financial aid in a timely manner. For more information on aid offers, review Understanding Your Financial Aid Offer.

The financial aid office at each school is guided by various principles, regulations, and other factors when offering aid. The aid offer is determined by eligibility for federal aid, available institutional resources, family resources, and the institution's mission. The school uses the cost of attendance and other factors to make a final determination of aid eligibility. For eligibility and additional details, talk with the financial aid officer at the medical school you plan to attend. If you're not sure what to ask, review the Top 10 Questions Premeds Should Ask Medical School Financial Aid Officers.

How Medical Schools Determine Eligibility for Financial Aid

Medical schools are sensitive to the financial needs of students. Guided by federal regulations, the financial aid officer will determine your aid eligibility based on the following:

How Much Does It Cost?
The cost of medical education includes tuition, fees, books, supplies, equipment, and living expenses. These components make up the school's COA and vary by school. You can find out the tuition and fees and COA of each medical school on the MSAR website or by visiting the school's financial aid webpages.

What Are Your Resources?
The next figure calculated is the amount you'll be required to pay toward the cost of your education.

Even though you're considered independent for purposes of federal loans, some institutions require parental financial information to determine eligibility for institutional grants, scholarships, and school-based loans. School officials use this information to assess the student's ability to pay rather than willingness to pay, helping ensure that certain types of aid are awarded to students with the greatest need.

What Aid Do You Qualify For?
The financial aid office will review their COA, the information submitted on your FAFSA, and other factors based on their financial aid policies to determine your aid eligibility for the upcoming

academic year. The medical school will send you an aid offer detailing the amount and type of financial aid available to you.

You'll be asked to accept or decline the offer (or a portion of it). The amount of financial aid an institution offers may be an important factor in choosing which school to attend. Review Chapter 6 for additional information and guidance on making your selection. To further help analyze your financial aid offer, all accepted applicants are given complimentary access to the MedLoans Organizer and Calculator. This tool can be used to estimate the total cost associated with borrowing funds for medical school.

Federal Loans and Repayment

The benefits of federal student loan programs include:

- **Peace of mind.** Payments are not required until after medical school is over. Payments can even be postponed throughout residency if a borrower doesn't want to make payments during that time.
- **Fixed interest rates.** Rates will not rise (once the loan has been disbursed), and interest rate reductions may be available to borrowers who elect automatic electronic monthly payments.
- **Various repayment plans.** Flexible plans are available to make payments affordable — even during residency.
- **Education tax credits or deductions**. Some borrowers may be eligible for tax benefits; consult Publication 970 from the IRS for more information.

As you near graduation, financial aid staff and your loan servicer(s) will supply the details you need to successfully manage your debt after graduation.

Forgiveness and Repayment Assistance Programs

Loan forgiveness and repayment assistance programs are available for students interested in reducing their education loan debt through service. These are great options if your career goals align with those of the repayment or forgiveness program. The programs vary in structure, requirements, and award amounts.

The federal government provides both service commitment and loan repayment assistance benefits to medical students interested in pursuing careers in primary care and to those committed to working in medically underserved areas.

Additionally, the federal government has a loan forgiveness program to reward borrowers who choose to work in public service, and borrowers can also take advantage of income-driven repayment plans that also offer loan forgiveness.

The U.S. Armed Forces have programs that offer support to students enrolled in civilian medical schools in exchange for service in the military branch that provided the funding. After residency, some may even choose to be employed by the Veterans Administration, which also offers loan repayment assistance.

Some state programs also provide loan repayment assistance or forgiveness to students and graduates in return for a commitment to serve in areas of need.

For additional details on service commitment and loan forgiveness, please review the Loan Forgiveness, Scholarship, and Service Programs Fact Sheet.

A Final Word About Financing Your Medical Education

The AAMC has a variety of financial information, resources, services, and tools for students and residents interested in learning about debt management and money management. For help with accomplishing your financial goals and understanding your options for paying for medical school, review FIRST's fact sheets, videos, webinars, and other resources.

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 10.1

Monthly Budget Worksheet for Students

For more information about budgeting, review the FIRST Fact Sheets and the Financial Wellness program.

Monthly Income:

Financial aid	
Investment income	
Gifts	
Other	
Total Monthly Income	

Monthly Fixed Expenses:

Tuition and fees	
Books and supplies	
Savings	
Rent/mortgage	
Phone	
Taxes (federal, state)	
Vehicle payments	
Other transportation	
Personal loans	
Education loans	
Insurance (life and health)	
Home/renter insurance	
Auto insurance	
Auto registration/taxes	
Other	
Total Fixed Expenses	

Monthly Variable Expenses:

Food/household supplies	
Dining out	
Clothes	
Laundry/dry cleaning	
Gas, oil, auto maintenance	
Parking	
Medical/dental/eye care	
Entertainment	
Travel/vacation	
Utilities	
Music/books/journals	
Personal care	
Subscriptions	
Cable TV and internet	
Credit card payments	
Charity/contributions/gifts	
Savings for interviews/relocation	
Test prep course/materials	
Exam/licensing fees	
Other	
Total Variable Expenses	
Plus Total Fixed Expenses	
Equals Total Monthly Expenses	
Total Income	
Less Total Expenses	
Equals Total Discretionary Income (or Deficit)	

CHAPTER 11

Baccalaureate-MD Programs

Demi Elrod
BA-MD Candidate, Six-Year Combined BA-MD Program
University of Missouri – Kansas City School of Medicine
Class of 2026

From a very young age, I knew that medicine was the right path for me. However, I frequently worried I would never be able to afford medical school. As a first-generation student from a low-income family, achieving my dream of becoming a doctor seemed daunting, especially considering the costs of applying to medical school and the burden it would place on my family and me. That's why I prioritized applying to direct medical programs during high school — to alleviate the associated costs and anxieties about being accepted into medical school.

Direct or combined baccalaureate medical degree programs can be incredibly empowering and valuable for students with specific needs and goals. Depending on the program, some, like mine, allow students to earn both degrees in six years, while others offer guaranteed admission to medical school once students complete their bachelor's degree. This flexibility accommodates students who are certain about pursuing medical school after graduation, but also wish to explore other interests such as studying abroad or pursuing arts and language studies. Alternatively, faster-paced programs may be more suitable for those eager to accelerate their medical education.

I would highly recommend pursuing a combined program to anyone confident that medicine is their calling, especially to those that may come from a disadvantaged background who may benefit from a direct path to realizing their dreams.

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Benefits of Baccalaureate-MD Programs

Combined baccalaureate-MD programs (also referred to as BS-MD or BA-MD programs) are designed to streamline the path to becoming a doctor by integrating undergraduate education with medical school training. Below are some key purposes of these programs, which vary by institution.

- **Reduced costs overall.** By condensing the years of education, students can potentially save on tuition-related costs. Students often skip the gap year many applicants take before applying. Some schools offer financial support and scholarships for students in the undergraduate portion of their programs.
- **Reduced stress of medical school admissions.** Some programs allow students to bypass the traditional medical school application and interview process, which can be highly stressful and competitive.

- **Seamless transition.** These programs provide a more continuous educational experience, integrating undergraduate courses with premedical or early medical school coursework, promoting a smooth progression into medical training.
- **Attracting top talent.** Combined programs often appeal to high-achieving, motivated students who are committed to a career in medicine early on. They offer a clear, structured path for students focused on becoming a physician.
- **Early exposure to medicine.** These programs help students confirm their commitment to the medical field early on by immersing them in medical coursework and clinical experiences sooner than in traditional pathways.
- **Diversity and inclusion.** Some programs specifically aim to increase diversity in the physician workforce by recruiting students from underrepresented and disadvantaged backgrounds.
- **Focused guidance.** Students in these programs often receive close mentorship from both undergraduate faculty and medical school professors, fostering a stronger support system for their academic and professional development.
- **Focused opportunities for engagement.** Some programs offer opportunities for students to engage in structured research projects with faculty mentors.

These programs are designed for students who are certain about pursuing medicine and offer various advantages, such as reducing the burden of admissions and allowing for a more focused educational experience.

First and foremost, make sure that this is the correct pathway for you. Combined baccalaureate-MD programs are designed for students who are certain they want to study medicine, and many times the student makes a commitment to attend the associated medical school. It is important for you to decide whether you want to study medicine at this particular medical school, as this decision may need to be made at the point of entry into the combined program.

As a potential applicant, familiarize yourself with the mission, statement of goals, and requirements of each combined-degree program you are interested in to ensure an appropriate match between your educational and professional goals and those of the program. This information can usually be found on the medical school's website. For example, some programs have restrictions on the type of bachelor's degree a participant can pursue, and you should ensure that your desired major is allowable in the program. Make sure that the program allows you the flexibility to experience life and learning as a college student.

These programs typically represent relationships between a medical school and one or more undergraduate colleges (either in the same geographic region or based on mission-aligned students from around the United States); thus, they can be a part of the same university system or span different institutions. Learning about all the schools involved in a baccalaureate-MD program can help you better understand the program's mission, features, and your future classmates.

Admission is open to qualified, mature students at the high school or early college level who are committed to a future career in medicine. Admitted students tend to have a set of life experiences and academic credentials that signal their maturity, exposure to science, and commitment to medicine. For more information, refer to the MSAR website, specifically the "Combined Degree" section in the "Overview" for baccalaureate-MD programs. State-supported schools with a goal of increasing physician workforce in their region generally admit few out-of-state applicants to their baccalaureate-MD programs; private schools tend to have greater flexibility about state of residency.

While academic requirements vary among the schools sponsoring these programs, they typically include successful completion of prerequisite courses in biology, chemistry, physics, English, mathematics, and social science, as well as a minimum GPA and standardized test scores at the high school or early college level. Provisional admission to the MD portion of the program may occur at the same time as admission to the undergraduate program or after completion of a prescribed number of semesters with a minimum GPA in the sciences or overall coursework. In some programs, students are not required to take the MCAT exam; in other programs, a minimum MCAT score must be attained to progress through the program. Some programs will allow multiple MCAT attempts. There are many different requirements, so be sure you view each program's website for full details and are comfortable with the requirements.

Progressing through the program from the undergraduate to the medical curricula is usually contingent on a student achieving specific criteria in terms of standardized test scores, GPA, meeting the school's expectations for personal and professional behavior, and for some programs, completion of a research project.

If you're interested in a combined baccalaureate-MD program, consult your school counselor to ensure you're enrolled in a curriculum that incorporates the courses required for admission to the program and prepares you for the premedical phase of this pathway. The requirements may involve specific high school or college courses. If you're a college freshman or sophomore interested in these programs, speak with your school's prehealth advisor or with the admissions office at the medical school; acceptance processes vary by school. For additional information about specific programs, contact each program directly. Admission to these programs is extremely competitive, and other relevant extracurricular activities are generally required, so be sure to ask your counselor or contact the program about such requirements.

This chapter contains a list of combined baccalaureate-MD programs by state and by number of years to complete them. For further information about the programs, refer to the MSAR website. Chapter 4 contains information about diversity initiatives in medicine, and Chapter 7 provides details about the holistic review of candidates who apply to medical school.

How to Find and Prepare for Baccalaureate-MD Programs

Baccalaureate-MD programs can be a great option for high school seniors considering a career in medicine. If you're a high school student, talk with your school counselor about programs that may be good options for you. You can use the MSAR website to search for medical schools with baccalaureate-MD programs. Also, explore opportunities at your school or in your community to get engaged in health care settings and shadow health care professionals. These experiences will help you understand how you fit within a career in medicine and perhaps even identify the type of medical setting that suits your interests, aptitudes, goals, and personality.

Each year, the list of programs changes. New programs are added, while others may be paused or discontinued entirely. You can use the worksheet at the end of this chapter to evaluate the mission statements of the programs you are interested in and decide which ones may be a good fit for you.

Medical Schools Offering Combined Baccalaureate-MD Programs, by State, 2024-2025

ALABAMA

University of Alabama at Birmingham Marnix E. Heersink School of Medicine

ARIZONA

University of Arizona College of Medicine - Tucson

(Note: The program spans seven years, integrating three years of undergraduate studies with medical school. While obtaining a BS is optional and not a requirement for the program, students have the choice to pursue it alongside completing their prerequisites or to enter medical school directly upon completion of the prerequisites.)

CALIFORNIA

University of California, San Francisco, School of Medicine

COLORADO

University of Colorado School of Medicine

CONNECTICUT

University of Connecticut School of Medicine

DISTRICT OF COLUMBIA

The George Washington University School of Medicine and Health Sciences

Howard University College of Medicine

FLORIDA

Florida Atlantic University Charles E. Schmidt College of Medicine

Florida International University Herbert Wertheim College of Medicine

Nova Southeastern University Dr. Kiran C. Patel College of Allopathic Medicine

University of Central Florida College of Medicine

(Note: This program has been discontinued and will not be accepting any further applicants or matriculants.)

University of Florida College of Medicine

(Note: This program will complete its final admission cycle with the rising third-year undergraduate cohort of 2024-2025 and will no longer be accepting applications moving forward.)

University of Miami Leonard M. Miller School of Medicine

University of South Florida Morsani College of Medicine

GEORGIA

Medical College of Georgia at Augusta University

ILLINOIS

University of Chicago Pritzker School of Medicine

University of Illinois College of Medicine

INDIANA

Indiana University School of Medicine

KENTUCKY
University of Louisville School of Medicine

MICHIGAN
Wayne State University School of Medicine

MINNESOTA
University of Minnesota Medical School

MISSOURI
University of Missouri - Kansas City School of Medicine

NEW JERSEY
Cooper Medical School of Rowan University
Rutgers New Jersey Medical School
Rutgers Robert Wood Johnson Medical School

NEW MEXICO
University of New Mexico School of Medicine

NEW YORK
Albany Medical College
CUNY School of Medicine
Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Renaissance School of Medicine at Stony Brook University
SUNY Downstate Medical Center College of Medicine
State University of New York Upstate Medical University Alan and Marlene Norton College of Medicine
University of Rochester School of Medicine and Dentistry

OHIO
Case Western Reserve University School of Medicine
University of Toledo College of Medicine and Life Sciences
University of Cincinnati College of Medicine

PENNSYLVANIA
Drexel University College of Medicine
Lewis Katz School of Medicine at Temple University
Sidney Kimmel Medical College at Thomas Jefferson University

RHODE ISLAND
Warren Alpert Medical School of Brown University

SOUTH CAROLINA
University of South Carolina School of Medicine - Columbia

TENNESSEE
Meharry Medical College School of Medicine

TEXAS

Baylor College of Medicine
University of Houston Tilman J. Fertitta Family College of Medicine

VIRGINIA

Virginia Commonwealth University School of Medicine

WEST VIRGINIA

Marshall University Joan C. Edwards School of Medicine

Medical Schools Offering Combined Baccalaureate-MD Programs, by Number of Years, 2023-2024

6 YEARS

Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
University of Missouri - Kansas City School of Medicine

6-7 YEARS

Sidney Kimmel Medical College at Thomas Jefferson University
University of Miami Leonard M. Miller School of Medicine

7 YEARS

Albany Medical College (8-year option available)
Cooper Medical School of Rowan University
CUNY School of Medicine
Florida International University Herbert Wertheim College of Medicine
Indiana University School of Medicine
The George Washington University School of Medicine and Health Sciences (8-year option available)
Medical College of Georgia at Augusta University
Meharry Medical College School of Medicine
Rutgers New Jersey Medical School
Rutgers Robert Wood Johnson Medical School
University of Toledo College of Medicine and Life Sciences (8- and 9-year options available)
University of Arizona College of Medicine - Tucson

(Note: The program spans seven years, integrating three years of undergraduate studies with medical school. While obtaining a BS is optional and not a requirement for the program, students have the choice to pursue it alongside completing their prerequisites or to enter medical school directly upon completion of the prerequisites.)

University of Florida College of Medicine

(Note: This program will complete its final admission cycle with the rising third-year undergraduate cohort of 2024-2025 and will no longer be accepting applications moving forward.)

University of Illinois College of Medicine
University of Minnesota Medical School
University of South Carolina School of Medicine - Columbia
University of South Florida Morsani College of Medicine

8 YEARS

Albany Medical College
Baylor College of Medicine
Case Western Reserve University School of Medicine
Drexel University College of Medicine
Florida Atlantic University Charles E. Schmidt College of Medicine
The George Washington University School of Medicine and Health Sciences
Howard University College of Medicine
Nova Southeastern University Dr. Kiran C. Patel College of Allopathic Medicine
Rutgers Robert Wood Johnson Medical School
(Note: This program will continue for 2024 and 2025 only. Please inquire with the university for more information if you plan to apply.)
State University of New York Upstate Medical University Alan and Marlene Norton College of Medicine
Renaissance School of Medicine at Stony Brook University
University of Alabama at Birmingham Marnix E. Heersink School of Medicine
University of California, San Francisco, School of Medicine
University of Cincinnati College of Medicine
University of Colorado School of Medicine
University of Connecticut School of Medicine
University of Houston Tilman J. Fertitta Family College of Medicine
University of Louisville School of Medicine
University of New Mexico School of Medicine
University of Rochester School of Medicine and Dentistry
Virginia Commonwealth University School of Medicine
Warren Alpert Medical School of Brown University
Wayne State University School of Medicine

9 YEARS

University of Cincinnati College of Medicine

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 11.1

Baccalaureate-MD Programs to Consider Applying To

1. **Name of Baccalaureate-MD Program** _____

What is the mission of this program? _____

I'm interested in this program because: _____

No. of years: _____ Accepts out-of-state? _____ Application deadline: _____

When eligible to apply: ☐ First year of college ☐ High school senior ☐ Other _____

2. **Name of Baccalaureate-MD Program** _____

What is the mission of this program? _____

I'm interested in this program because: _____

No. of years: _____ Accepts out-of-state? _____ Application deadline: _____

When eligible to apply: ☐ First year of college ☐ High school senior ☐ Other _____

3. **Name of Baccalaureate-MD Program** _____

What is the mission of this program? _____

I'm interested in this program because: _____

No. of years: _____ Accepts out-of-state? _____ Application deadline: _____

When eligible to apply: ☐ First year of college ☐ High school senior ☐ Other _____

4. **Name of Baccalaureate-MD Program** _____

What is the mission of this program? _____

I'm interested in this program because: _____

No. of years: _____ Accepts out-of-state? _____ Application deadline: _____

When eligible to apply: ☐ First year of college ☐ High school senior ☐ Other _____

CHAPTER 12

MD-PhD Programs

Gloria Xue
MD-PhD Candidate, Medical Scientist Training Program
Indiana University School of Medicine
Class of 2029

"Would I be happy being a clinician or do I need a physician-scientist career to feel fulfilled?" Most MD-PhD students have mulled over this question at some point.

As a second-year MD-only student, I had just completed a summer immersed in research under the guidance of a physician-scientist. I was considering applying for an internal transfer to the Medical Scientist Training Program (MSTP). After much self-reflection, I realized that I desired rigorous, integrated training in both research and clinical practice.

Medical students have several avenues for gaining research experience, such as standalone PhD programs, MS degrees, and yearlong enrichment programs. However, the dual MD-PhD degree offers unique opportunities by providing a streamlined curriculum that integrates clinical activities with research, including longitudinal research experiences, and faculty mentoring.

You should carefully consider the types of MD-PhD programs offered and how to align these programs with your personal research interests. Program sizes vary significantly, with some admitting more than 20 students each year and others with fewer than five. Additionally, program strengths can differ based on affiliations with institutions such as those with cancer centers or children's hospitals.

While much of the available information is geared at students going directly into MD-PhD programs, it is also possible to transfer internally from an MD-only track. If you are interested, you should monitor application announcements or contact the school's MD-PhD administrative office to maintain an open line of communication.

Choosing to pursue an MD-PhD is a profound decision that requires introspection and a clear understanding of one's career goals. By carefully evaluating the unique opportunities and challenges of MD-PhD programs, you can find a path that aligns with your aspirations and strengths. Ultimately, the journey towards becoming a physician-scientist promises a fulfilling career that seamlessly integrates clinical practice and research.

The Education of a Physician-Scientist in a Combined MD-PhD Program

According to the AAMC Student Records System, about 89.25% of 2022-2023 graduates earned an MD-only degree, about 2.86% earned a joint bachelor's-MD degree, and 3.1% earned a joint MD-PhD degree.

Physician-scientists — those trained in both medicine and research — are greatly needed in today's world. A synergy results when experimental thinking and clinical practice are joined, and that combination is found among those who have completed both MD and PhD programs. These individuals help translate the achievements of basic research into active clinical practice and, in doing so, strengthen the link between medical knowledge and research as they study, prevent, diagnose, and treat disease. If this is the path you prefer, you'll enjoy a busy, challenging, and rewarding career.

Advantages of the MD-PhD Dual Degree

One route to a career as a physician-scientist is enrollment in a combined MD-PhD program. Although you can complete a PhD program before or after receiving your MD degree, there are several advantages to pursuing joint MD-PhD education:

- The greatest advantage of the dual-degree program is the integration of research and clinical training. This integrated approach may include training opportunities across departments and interactions with teams of both basic scientists and clinical investigators.
- You can save a significant amount of time. Most MD-PhD programs can be completed in seven or eight years, compared with the nine or more years it would take to earn both degrees independently.
- Students in MD-PhD programs have access to opportunities for research and faculty mentoring to an extent frequently unavailable to MD-only students. As a result, these students are often able to enhance their mastery of the basic science needed to identify patients' underlying clinical problems and, ultimately, use that information to develop improvements in diagnosis and treatment. To learn more about available programs and how to apply, see the information at MD-PhD Dual Degree Training.

PROFESSIONAL SCHOOL FAIR — MD-PHD: IS IT RIGHT FOR YOU?

In this videocast, leaders of medical school MD-PhD programs describe undergraduate preparation and application processes and discuss training in MD-PhD programs and postgraduate career opportunities.

Paths to a Research Career

If you're interested in a career in research, but you aren't sure whether you want to pursue a dual MD-PhD degree, here are some other options you can explore:

- **PhD in biomedical sciences.** You can earn a PhD in biomedical sciences in graduate programs at medical schools. Such programs typically include one or two years of core coursework, lab rotations to help you select a mentor in your chosen field of research, and three to four years of doctoral research. Learn more about available programs and how to apply on the AAMC website.
- **MS degree or PhD in clinical investigation.** You might also consider graduate work leading to a master's degree or PhD in clinical investigation. These programs, which you can pursue jointly or after receiving your MD degree, are offered at many medical schools and biomedical graduate schools throughout the United States.
- **Year-enrichment program.** Another option is to take a year away from your MD program to conduct research under the direction of a mentor in a scholars' program. Two such programs are the Fogarty Extramural Programs and the NIH Medical Research Scholars Program. In addition, many medical schools offer similar opportunities for their students.

Research Specialties
Like their PhD-only counterparts, people who hold a combined degree can pursue many scientific specialties. Most students earn their PhDs in biomedical disciplines such as biochemistry, biomedical engineering, biophysics, cell biology, genetics, immunology, microbiology, neuroscience, and pharmacology.

It's important to know, however, that not every research specialty is offered at every medical school and that curricula can vary from institution to institution. In some schools, for example, MD-PhD students complete their graduate work in the social sciences or humanities — fields of study outside laboratory disciplines — in areas such as anthropology, computational biology, economics, engineering, health care policy, mathematics, physics, and sociology.

To learn more, refer to the information in MD-PhD in the Social Sciences or Humanities: Is it Right for Me? You may also view a summary of MD-PhD programs that offer areas of study in social sciences, humanities, or other non-transitional fields of graduate study.

Clinical Specialties
MD-PhD students can pursue many clinical specialties. The clinical specialty choices of MD-PhD graduates over the past five years indicate strong interest in internal medicine, pathology, and pediatrics.

Compared with MD-only graduates, MD-PhD graduates are more likely to enter residencies in radiation oncology, child neurology, and pathology and less likely to go into family medicine, emergency medicine, and obstetrics/gynecology. The majority of dual-degree students enter research residency programs after graduation. A very small percentage of program graduates choose not to enter clinical residency and go straight into a research postdoctoral fellowship training.

The Typical Program

Almost all U.S. and Canadian medical schools have MD-PhD programs in one or more areas of specialization. (Visit the AAMC website to find a list of MD-PhD programs available at AAMC-member medical schools.) Some programs are relatively small, with a total of a dozen or so students over eight years of training (one or two new students each year), while others are much larger, with a total enrollment of around 190 (up to 24 new students enrolled annually). The total number of MD-PhD matriculants in the United States in 2023 was 707, with 50.2% women and 48.7% men, as shown in Table B-8: U.S. Medical School MD-PhD Applications and Matriculants by School, In-State Status, and Gender, 2023-2024.

Although programs differ, some core elements are common to almost all MD-PhD programs. The typical program takes seven to eight years to complete and includes:

- Completion of the first two years of combined medical and graduate school coursework
- Three to five years of doctoral research, including the completion of a thesis project
- A return to medical school for core clinical training and electives during the final years of the medical curriculum

At most schools, integrated approaches to graduate and medical education have been introduced throughout the curriculum — quite extensively in some programs. In addition, most programs engage students in a wide range of other activities to enrich their training experience.

Residency Programs After Graduation

After medical school, most MD-PhD students transition to residencies just like a traditional medical student. A number of residency programs around the country offer highly structured programs in which research is fully integrated into clinical training. These programs differ in their overall composition but generally offer a shortened residency training period. For more information, see Career Paths for MD-PhD Graduates and Physician Scientist Training Programs (PSTPs).

Application and Admission

Nearly all MD-PhD programs participate in the American Medical College Application Service (AMCAS), described in Chapter 7.

If you choose to pursue a dual-degree program, you'll designate yourself as a combined MD-PhD training applicant and complete two additional essays: one explaining why you are interested in the joint training program and the other describing your research experience. Specifics in the application process — and the prerequisites required for admission — vary from school to school. Some institutions, for example, require GRE scores. For complete information about a dual-degree program that interests you, review the program description at the medical school's website.

WHERE PHYSICIAN-SCIENTISTS WORK

Nearly 80% of MD-PhD graduates who responded to a national survey are employed as faculty in academic medical centers or work at the NIH, at research institutes, in industry, or in federal agencies.

Factors Considered by Admissions Committees

Admissions committee members will review the application materials for the usual experiences, attributes, and metrics important for admitting students to MD-only programs (see Chapter 8). But because MD-PhD applicants plan to become both physicians and scientists, committee members will also look for evidence of an applicant's passion and aptitude for research. They accomplish this largely through reviewing the applicant's personal statement, which includes a description of research experiences and letters of evaluation from faculty or researchers with whom the applicant has worked. In particular, committee members seek confirmation of:

- Relevant and substantive research experience during or after college
- An appreciation for and understanding of the work of physician-scientists
- Intellectual drive, research ability, and perseverance

If you hope to pursue the MD-PhD joint degree, you'll be expected to have clinical experience — through volunteer work, shadowing a physician-scientist, or specific training. Other experiences that admissions committee members look for are similar to those of the MD-only candidate: leadership positions, community service activities, and teaching roles.

Finally, it's important to be aware that although significant weight is placed on an applicant's interest and experience in research activities, the applicant is also expected to demonstrate a degree of academic excellence similar to that of people accepted into an MD-only program. For students applying to enter MD-PhD programs in 2023, for example, the mean GPA and total MCAT score were 3.70 and 511.1 respectively (as reported by AMCAS). Keep in mind, though, that the range of GPAs and MCAT scores for accepted applicants is quite broad in conjunction with other selection criteria.

Acceptance Policies

Just as application requirements vary from school to school, so do acceptance policies. Some institutions permit an applicant who is not accepted to the MD-PhD dual-degree program to pursue admission to the MD-only curriculum. Other medical schools will accept applications from MD-PhD candidates only for both degree programs together, and failure to gain admittance to one program precludes consideration from the other. Because school policies differ, clarify these matters with individual schools before applying, and let admissions office staff know of your interest in pursuing an MD-only program (if that is the case) should you not be admitted to the dual-degree program.

Financing MD-PhD Programs

The sources of funding for MD-PhD programs vary from school to school. Many schools offer full support for both the MD and PhD components of their education, including tuition waivers, stipends, and health insurance. At other institutions, different degrees of support are available, sometimes only for the PhD component of the program. Before applying to an MD-PhD dual-degree program, you should check with individual programs about the level of financial assistance available.

A significant amount of funding comes from institutional sources, as well as individual and institutional grants. The latter include the Medical Scientist Training Program (MSTP) sponsored by the NIH, as well as other NIH grants. The MSTP currently has 51 participating programs with approximately 1,000 trainees. For more information about the program, see the NIH website.

You can review the list of medical schools participating in the MSTP. You may also want to contact the program officials at the institutions of interest and review school websites for complete information.

Bear in mind that, although most MD-PhD programs offer support for their students, additional resources are available. Most require competitive applications submitted by the trainee and a research mentor. Resources include fellowships from private sources and a number of NIH institutes. Review a list of these opportunities on the NIH's Student Resources page.

Gap Year and Career Changers

If you have a significant break between earning your bachelor's degree and applying to medical school, use some of that time to gain more research and medically related experience (such as working, shadowing, or volunteering in hospitals and clinics). This will help make you a competitive applicant — you can draw on that experience as you complete your medical school applications and interviews. However, if you already have significant research and medically related experience as an undergraduate and are ready to apply, a gap year is not recommended.

For more information about gaining research experience, refer to the Aspiring Docs® Fact Sheet, How to Get Research Experience.

Additional Information

For additional information and guidance about applying to and enrolling in combined MD-PhD programs, please visit the AAMC webpage on dual-degree programs and contact your prehealth advisor and the MD-PhD program director at the medical schools of interest.

Want to learn more? You can find answers to questions frequently asked by students.

For additional information about MD-PhD programs, refer to:

Brass LF, Akabas MH, Burnley LD, Engman DM, Wiley CA, Andersen OS. Are MD-PhD programs meeting their goals? An analysis of career choices made by graduates of 24 MD-PhD programs. *Acad Med*. 2010;85(4):692-701. doi: 10.1097/acm.0b013e3181d3ca17

Paik JC, Howard G, Lorenz RG. Postgraduate choices of graduates from medical scientist training programs, 2004-2008. *JAMA*. 2009;302(12):1271-1273. doi: 10.1001/jama.2009.1355

Association of American Medical Colleges. *National MD-PhD Program Outcomes Study*. AAMC; 2018.

Martinez-Strengel A. Trends in U.S. MD-PhD program matriculant diversity by sex and race/ethnicity. *Acad Med*. 2022;97(9):1346-1350. doi: 10.1097/ACM.0000000000004747

Yellin J. MD-PhD program graduates: MD-PhD program graduates: Current workplaces, research effort, and types of research they do. *Analysis in Brief*. 2018;18(2).

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 12.1

MD-PhD Programs to Consider Applying To

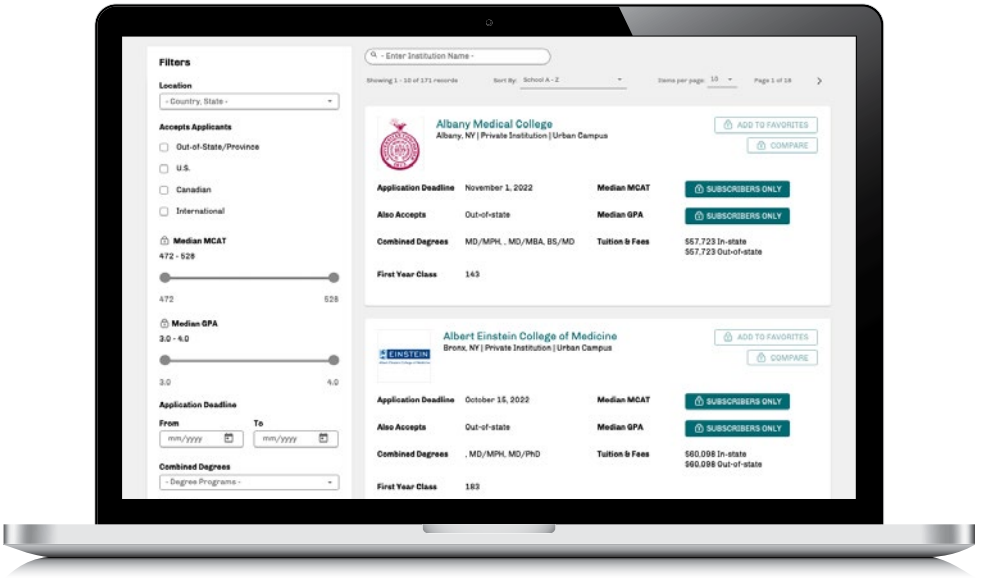
When researching your options, view the AAMC's table of information on MD-PhD programs online and fill in the chart below to see if you fit the application criteria and may want to apply to the program (students-residents.aamc.org/media/8131/download).

Program Name	Medical Science Training Program (MSTP) Funded?	Positions Funded?	Internal MD Students?	Internal PhD Students?	Transfer Students?	Non-U.S. Citizens or Non-State Residents Accepted?	GRE Required?	Summer Positions?	Consider Applying?

CHAPTER 13

U.S. Medical Schools

Accredited by the Liaison Committee on Medical Education



MSAR Website — Complete U.S. Medical School Profiles

For complete, detailed information about each U.S. medical school, including MCAT and GPA data, school-specific admission requirements and policies, applicant and acceptee statistics, and side-by-side medical school comparisons, purchase an MSAR subscription. For more information about the MSAR website, a preview of the site, and a complete list of site features, data, and information, visit aamc.org/msar.

U.S. Medical Schools

ALABAMA

University of Alabama at Birmingham Marnix E. Heersink School of Medicine
Frederick P. Whiddon College of Medicine at the University of South Alabama

ARIZONA

University of Arizona College of Medicine - Phoenix
University of Arizona College of Medicine - Tucson

ARKANSAS

Alice L. Walton School of Medicine
University of Arkansas for Medical Sciences College of Medicine

CALIFORNIA

California Northstate University College of Medicine
California University of Science and Medicine School of Medicine
Charles R. Drew University of Medicine and Science College of Medicine
Kaiser Permanente Bernard J. Tyson School of Medicine
Keck School of Medicine of the University of Southern California
Loma Linda University School of Medicine
Stanford University School of Medicine
University of California, Davis, School of Medicine
University of California, Irvine, School of Medicine
University of California, Los Angeles, David Geffen School of Medicine
University of California, Riverside, School of Medicine
University of California, San Diego, School of Medicine
University of California, San Francisco, School of Medicine

COLORADO

University of Colorado School of Medicine

CONNECTICUT

Frank H. Netter MD School of Medicine at Quinnipiac University
University of Connecticut School of Medicine
Yale School of Medicine

DISTRICT OF COLUMBIA

The George Washington University School of Medicine and Health Sciences
Georgetown University School of Medicine
Howard University College of Medicine

FLORIDA

Florida Atlantic University Charles E. Schmidt College of Medicine
Florida International University Herbert Wertheim College of Medicine
Florida State University College of Medicine
Nova Southeastern University Dr. Kiran C. Patel College of Allopathic Medicine
University of Central Florida College of Medicine
University of Florida College of Medicine
University of Miami Leonard M. Miller School of Medicine
University of South Florida Morsani College of Medicine

GEORGIA

Emory University School of Medicine
Medical College of Georgia at Augusta University
Mercer University School of Medicine
Morehouse School of Medicine

HAWAII

University of Hawaii John A. Burns School of Medicine

ILLINOIS

Carle Illinois College of Medicine
Chicago Medical School at Rosalind Franklin University of Medicine and Science
Loyola University Chicago Stritch School of Medicine
Northwestern University Feinberg School of Medicine
Rush Medical College of Rush University Medical Center
Southern Illinois University School of Medicine
University of Chicago Pritzker School of Medicine
University of Illinois College of Medicine

INDIANA

Indiana University School of Medicine

IOWA

University of Iowa Roy J. and Lucille A. Carver College of Medicine

KANSAS

University of Kansas School of Medicine

KENTUCKY

University of Kentucky College of Medicine
University of Louisville School of Medicine

LOUISIANA

LSU Health New Orleans School of Medicine
LSU Health Shreveport School of Medicine
Tulane University School of Medicine

MARYLAND

Johns Hopkins University School of Medicine
Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine
University of Maryland School of Medicine

MASSACHUSETTS

Boston University Aram V. Chobanian & Edward Avedisian School of Medicine
Harvard Medical School
Tufts University School of Medicine
University of Massachusetts T.H. Chan School of Medicine

MICHIGAN

Central Michigan University College of Medicine
Michigan State University College of Human Medicine
Oakland University William Beaumont School of Medicine
University of Michigan Medical School
Wayne State University School of Medicine
Western Michigan University Homer Stryker M.D. School of Medicine

MINNESOTA

Mayo Clinic Alix School of Medicine
University of Minnesota Medical School

MISSISSIPPI
University of Mississippi Medical Center School of Medicine

MISSOURI
Saint Louis University School of Medicine
University of Missouri - Columbia School of Medicine
University of Missouri - Kansas City School of Medicine
Washington University School of Medicine in St. Louis

NEBRASKA
Creighton University School of Medicine
University of Nebraska Medical Center College of Medicine

NEVADA
Kirk Kerkorian School of Medicine at UNLV
University of Nevada, Reno, School of Medicine

NEW HAMPSHIRE
Geisel School of Medicine at Dartmouth

NEW JERSEY
Cooper Medical School of Rowan University
Hackensack Meridian School of Medicine
Rutgers New Jersey Medical School
Rutgers Robert Wood Johnson Medical School

NEW MEXICO
University of New Mexico School of Medicine

NEW YORK
Albany Medical College
Albert Einstein College of Medicine
Columbia University Vagelos College of Physicians and Surgeons
CUNY School of Medicine
Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Icahn School of Medicine at Mount Sinai
Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo
New York Medical College
NYU Grossman Long Island School of Medicine
NYU Grossman School of Medicine
Renaissance School of Medicine at Stony Brook University
SUNY Downstate Health Sciences University College of Medicine
State University of New York Upstate Medical University Alan and Marlene Norton College of Medicine
University of Rochester School of Medicine and Dentistry
Weill Cornell Medicine

NORTH CAROLINA
Brody School of Medicine at East Carolina University
Duke University School of Medicine
University of North Carolina at Chapel Hill School of Medicine
Wake Forest University School of Medicine

NORTH DAKOTA
University of North Dakota School of Medicine and Health Sciences

OHIO
Case Western Reserve University School of Medicine
Northeast Ohio Medical University
The Ohio State University College of Medicine
University of Cincinnati College of Medicine
University of Toledo College of Medicine and Life Sciences
Wright State University Boonshoft School of Medicine

OKLAHOMA
University of Oklahoma College of Medicine

OREGON
Oregon Health & Science University School of Medicine

PENNSYLVANIA
Drexel University College of Medicine
Geisinger Commonwealth School of Medicine
Lewis Katz School of Medicine at Temple University
Penn State College of Medicine
Perelman School of Medicine at the University of Pennsylvania
Sidney Kimmel Medical College at Thomas Jefferson University
University of Pittsburgh School of Medicine

PUERTO RICO
Ponce Health Sciences University School of Medicine
San Juan Bautista School of Medicine
Universidad Central del Caribe School of Medicine
University of Puerto Rico School of Medicine

RHODE ISLAND
Warren Alpert Medical School of Brown University

SOUTH CAROLINA
Medical University of South Carolina College of Medicine
University of South Carolina School of Medicine - Columbia
University of South Carolina School of Medicine - Greenville

SOUTH DAKOTA
University of South Dakota Sanford School of Medicine

TENNESSEE

East Tennessee State University James H. Quillen College of Medicine
Meharry Medical College School of Medicine
Thomas F. Frist, Jr. College of Medicine at Belmont University
University of Tennessee Health Science Center College of Medicine
Vanderbilt University School of Medicine

TEXAS

Anne Burnett Marion School of Medicine at TCU
Baylor College of Medicine
McGovern Medical School at the University of Texas Health Science Center at Houston
Texas A&M University College of Medicine
Texas Tech University Health Sciences Center Paul L. Foster School of Medicine
Texas Tech University Health Sciences Center School of Medicine
University of Texas Health Science Center at San Antonio Joe R. and Teresa Lozano Long School of Medicine
University of Houston Tilman J. Fertitta Family College of Medicine
University of Texas at Austin Dell Medical School
University of Texas at Tyler School of Medicine
University of Texas Medical Branch John Sealy School of Medicine
University of Texas Rio Grande Valley School of Medicine
University of Texas Southwestern Medical School

UTAH

Spencer Fox Eccles School of Medicine at University of Utah

VERMONT

Robert Larner, M.D., College of Medicine at the University of Vermont

VIRGINIA

Eastern Virginia Medical School at Old Dominion University
University of Virginia School of Medicine
Virginia Commonwealth University School of Medicine
Virginia Tech Carilion School of Medicine

WASHINGTON

University of Washington School of Medicine
Washington State University Elson S. Floyd College of Medicine

WEST VIRGINIA

Marshall University Joan C. Edwards School of Medicine
West Virginia University School of Medicine

WISCONSIN

Medical College of Wisconsin
University of Wisconsin School of Medicine and Public Health

CHAPTER 14

Canadian Medical Schools

Victor Shen
University of British Columbia Faculty of Medicine
Class of 2027

It is an unfortunate reality that admission into Canadian medical schools is notoriously challenging, demanding a combination of merit and a touch of luck. While many believe a traditional life sciences background is essential, this is no longer the case. Entry recommendations often supersede entry requirements now, paving the way for nontraditional paths.

In my case, I have a background in computer science, which is where my journey began. I chose to pursue medicine not because I was set on it from the start, but because while studying computer science, I stumbled into a newfound passion for integrating modern technologies with health care. Inherently, we as people are multidimensional, with ever-evolving passions and interests that lead us down diverse paths. And to this day, I maintain my interest in both computer science and medicine, finding ways to integrate the two fields in both my studies and research. Unequivocally, my decision to transition into medicine was not a departure from my original interests, but rather an expansion of them.

I truly believe that my journey reflects a broader trend within Canadian medical schools to embrace varied backgrounds, both academic and non-academic, recognizing that students can acquire the necessary knowledge and skills through nontraditional paths. So, to all the potential applicants out there, I encourage you to explore based on your interests rather than your perception of the "right" path. By doing so, you will empower yourself with unique opportunities and invaluable perspectives that will enrich not only your medical education, but also the medical community as a whole.

Selection Criteria

Canadian medical schools vary with respect to the number of years of undergraduate instruction they require of applicants. They also vary in the recommended content covered during premedical undergraduate education. Table 14.1 shows that physics, inorganic and organic chemistry, biology, biochemistry, humanities, and English are the most commonly required subjects.

Language of Instruction
Three Canadian medical schools — Laval, Montréal, and Sherbrooke — are all located in the province of Québec and require students to be fluent in French because all instruction is in that language. Instruction at 13 other Canadian schools is in English, and the University of Ottawa offers the MD curriculum in both French and English.

TABLE 14.1. Subjects Often Required or Recommended by Canadian Medical Schools*

Required or Recommended Subject
Biochemistry
Biology
Biology/Zoology
Calculus
College Mathematics
English
Humanities
Inorganic Chemistry
Organic Chemistry
Physics
Social Sciences

*For specific requirements and recommendations, refer to the individual school profiles on the MSAR website (a subscription is required to access the full profile information). You can also view coursework requirements on individual medical school websites.

Source: AAMC MSAR website, 2024.

In Canada, universities fall under provincial jurisdiction, and the majority of student spots in each faculty of medicine are allocated to permanent residents of the province in which the university is located.

Not all faculties of medicine accept applications from international students. Conversely, some faculties of medicine may reserve positions for international students, possibly as part of agreements with foreign governments and institutions. Statistics compiled by the Association of Faculties of Medicine of Canada show that most medical schools admit international students. In 2022-2023, for example, 68 U.S. students applied to 11 schools in Canada, with 1.5% of those students being accepted and 3.0% being offered acceptance, according to the Canadian medical schools that supplied data. In the same year, 296 non-U.S. international students applied to the nine Canadian medical schools that supplied data, and their success rate was 2.0%. The success rate for Canadian applicants to the same schools was 15.1%. Additional information about Canadian medical schools can be found in the Association of Faculties of Medicine of Canada 2025 publication of *Admission Requirements of Canadian Faculties of Medicine*.

Positions filled by international students in Canadian medical schools are not necessarily subsidized by provincial or territorial governments. This means that international students, including U.S. students, may pay higher tuition and fees than Canadian residents.

Academic Record and Suitability

Although an excellent academic record is a very important factor in gaining admission to a Canadian medical school, admissions committees also put a great deal of effort into assessing applicants' suitability for a medical career based on other factors, too. Personal suitability is assessed differently by each school, but in general, applicants who can demonstrate they possess the qualities considered important in the practice of medicine may sometimes be admitted even without an outstanding academic record. Conversely, applicants with outstanding records who don't possess these qualities may not gain a place in medical school.

Most applicants to Canadian medical schools are interviewed before acceptance, so the interview information in Chapter 8 is also relevant.

MCAT

Twelve of the 17 Canadian medical schools require applicants to take the MCAT exam: Alberta, British Columbia, Calgary, Dalhousie, Manitoba, McMaster, Memorial, Queen's, Saskatchewan, Toronto, and Western Ontario. The MCAT exam is required by McGill for applications from non-Canadian universities.

Tuition and Other Compulsory Fees

Because the medical schools in Canada fall under the jurisdiction of provincial governments, annual tuition and compulsory fees vary considerably. Applicants who reside in the province where the medical school is located may pay annual fees ranging from $3,729 to $26,652, with an average

of $17,446 (refer to Table 14.2). Applicants who are Canadian citizens or permanent residents in a different province may pay fees ranging from $8,360 to $26,652, with an average of $18,621; foreign student applicants can expect to pay fees ranging from $28,615 to $91,760, with an average of $46,138.

TABLE 14.2. Tuition and Student Fees for 2023-2024 First-Year Students at Canadian Medical Schools (in Canadian Dollars)*

Categories of Students	Range	Average**
In-Province	$3,729-$26,652	$17,446
Canada, Out-of-Province	$12,200-$28,099	$20,057
Visa	$28,615-$95,219	$64,562

*Figures based on data provided in fall 2024.
**Average in-province and out-of-province data was derived from all 17 Canadian schools. Average visa data was derived from five schools that accept foreign students.

Source: Association of Faculties of Medicine of Canada. Admission Requirements of Canadian Faculties of Medicine in 2024. AFMC; 2024.

Other Considerations

Canadian faculties of medicine do not discriminate on the basis of race, religion, or gender in admitting new students. The admission of aboriginal students (First Nations, Inuit, and Métis) is encouraged at Canadian medical schools, and most schools allocate positions specifically for aboriginal applicants, including, Laval, Sherbrooke, Montréal, McGill, Ottawa, Queen's, McMaster, Western Ontario, Northern Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia.

The number of female applicants has leveled off in recent years, with correspondingly consistent proportions of women in schools' entering classes. Women have made up approximately 61.3% of the applicant pool for the past five years, and the success rate for women is slightly higher than that for men. Overall, 15.1% of applicants received at least one offer of admission.

Expenses and Financial Aid

Tuition and student fees for Canadian and non-Canadian students in the 2023 entering class are provided in Table 14.2 and in individual medical school entries on the MSAR website. Expenses vary from school to school and from student to student. Tuition at several Canadian schools is slightly higher for the first year than for successive years. Some financial aid information is provided in the individual school entries. Eligible Canadian students may apply for a Canadian student loan, or they may apply to the Department of Education in their province for a provincial student loan.

Canadian Medical Schools

ALBERTA

University of Alberta Faculty of Medicine and Dentistry
University of Calgary Cumming School of Medicine

BRITISH COLUMBIA

University of British Columbia Faculty of Medicine

MANITOBA

Max Rady College of Medicine, University of Manitoba

NEWFOUNDLAND

Memorial University of Newfoundland Faculty of Medicine

NOVA SCOTIA
Dalhousie Faculty of Medicine

ONTARIO
McMaster University Michael G. DeGroote School of Medicine
Northern Ontario School of Medicine
School of Medicine at Queen's University
University of Ottawa Faculty of Medicine
University of Toronto Temerty Faculty of Medicine
Schulich School of Medicine & Dentistry at Western University

QUÉBEC
Faculty of Medicine at Université Laval
McGill Faculty of Medicine
Université de Montréal Faculty of Medicine
Université de Sherbrooke Faculty of Medicine and Health Sciences

SASKATCHEWAN
University of Saskatchewan College of Medicine

Worksheets at the ends of chapters in this guide are available in fillable PDF format.

Worksheet 14.1

Questions About Canadian Medical Schools to Ask During Interviews

As you research Canadian medical schools you're interested in attending, use this worksheet to keep track of questions you might ask during your interview. Print or save this page for individual schools and review it the night before your interview or bring it with you. You can find examples of questions in Selecting a Medical School: 35 Questions I Wish I Had Asked.

Name of medical school: _____

Type of interview: _____

Date of interview: _____

Questions about:

1. Curriculum _____

2. Student involvement _____

3. Special programs _____

4. Financial aid _____

5. Facilities _____

6. Academic evaluations _____

7. Student support _____

8. Residency placement _____

9. Other _____

Acronyms

AAMC
Association of American Medical Colleges
aamc.org

AMCAS®
American Medical College Application Service®
aamc.org/amcas

CiM
Careers in Medicine®
aamc.org/cim

COA
Cost of Attendance

EDP
Early Decision Program
https://students-residents.aamc.org/applying-medical-school-amcas/early-decision-program

ERAS®
Electronic Residency Application Service®
aamc.org/eras

FAFSA
Free Application for Federal Student Aid
www.fafsa.gov

FIRST
Financial Information, Resources, Services, and Tools
aamc.org/first

GQ
Graduation Questionnaire
aamc.org/data/gq

HHMI
Howard Hughes Medical Institute
hhmi.org

HIPAA
Health Insurance Portability and Accountability Act

LCME®
Liaison Committee on Medical Education
lcme.org

MCAT®
Medical College Admission Test®
aamc.org/mcat

Med-MAR
Medical Minority Applicant Registry
aamc.org/medmar

MSAR®
Medical School Admission Requirements™
aamc.org/msar

MSQ
Matriculating Student Questionnaire
aamc.org/data/msq

NAAHP
National Association of Advisors for the Health Profession
naahp.org

NBME
National Board of Medical Examiners
nbme.org

NHSC
National Health Service Corps
nhsc.hrsa.gov

NIH
National Institutes of Health
training.nih.gov

NRMP®
National Resident Matching Program
nrmp.org

NSLDS
National Student Loan Data System
nsldsfap.ed.gov

PREView®
AAMC PREview® Professional Readiness Exam
aamc.org/preview

SHPEP
Summer Health Professions Education Program
shpep.org

SJT
Situational Judgement Test

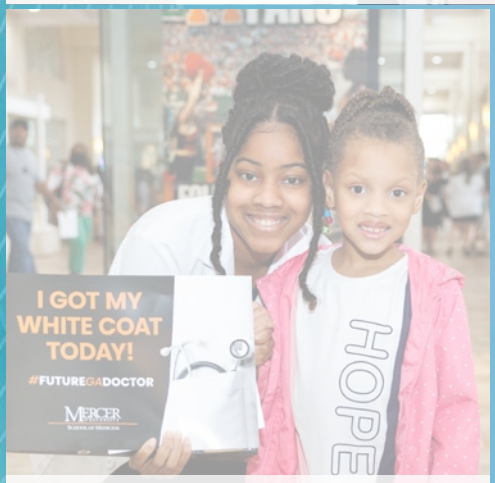
TSF
Tuition and Student Fees Reports
aamc.org/data/tuitionandstudentfees

USMLE
United States Medical Licensing Examination
usmle.org

VSLO®
Visiting Student Learning Opportunities™
aamc.org/vslo

BACK COVER: ABOUT THE IMAGES

MSM students at the annual Hugh M. Gloster Society Celebration fundraising event in Atlanta.



MUSM student celebrates receiving her white coat with family.

MCG University students studying together.

MD-PhD graduates from the Emory School of Medicine.

2024 Official Guide to Medical School Admissions

This comprehensive guide to medical school admissions helps you:

- **Identify prospective medical schools.**
- **Understand admissions decisions.**
- **Navigate the application process.**
- **Organize and plan with premed worksheets.**

The guide is published by the AAMC, an organization that represents U.S. and Canadian medical schools, administers the MCAT® exam, and manages the American Medical College Application Service® (AMCAS®). Visit aamc.org for more information.

RESEARCH MEDICAL SCHOOLS

The AAMC also publishes comprehensive online profiles of each U.S. and Canadian medical school, featuring information directly from the MCAT exam and the AMCAS application and through a partnership with medical school admissions offices. When it's time to search for medical schools, subscribe to the AAMC's Medical School Admission Requirements™ (MSAR®) site.

AAMC

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