

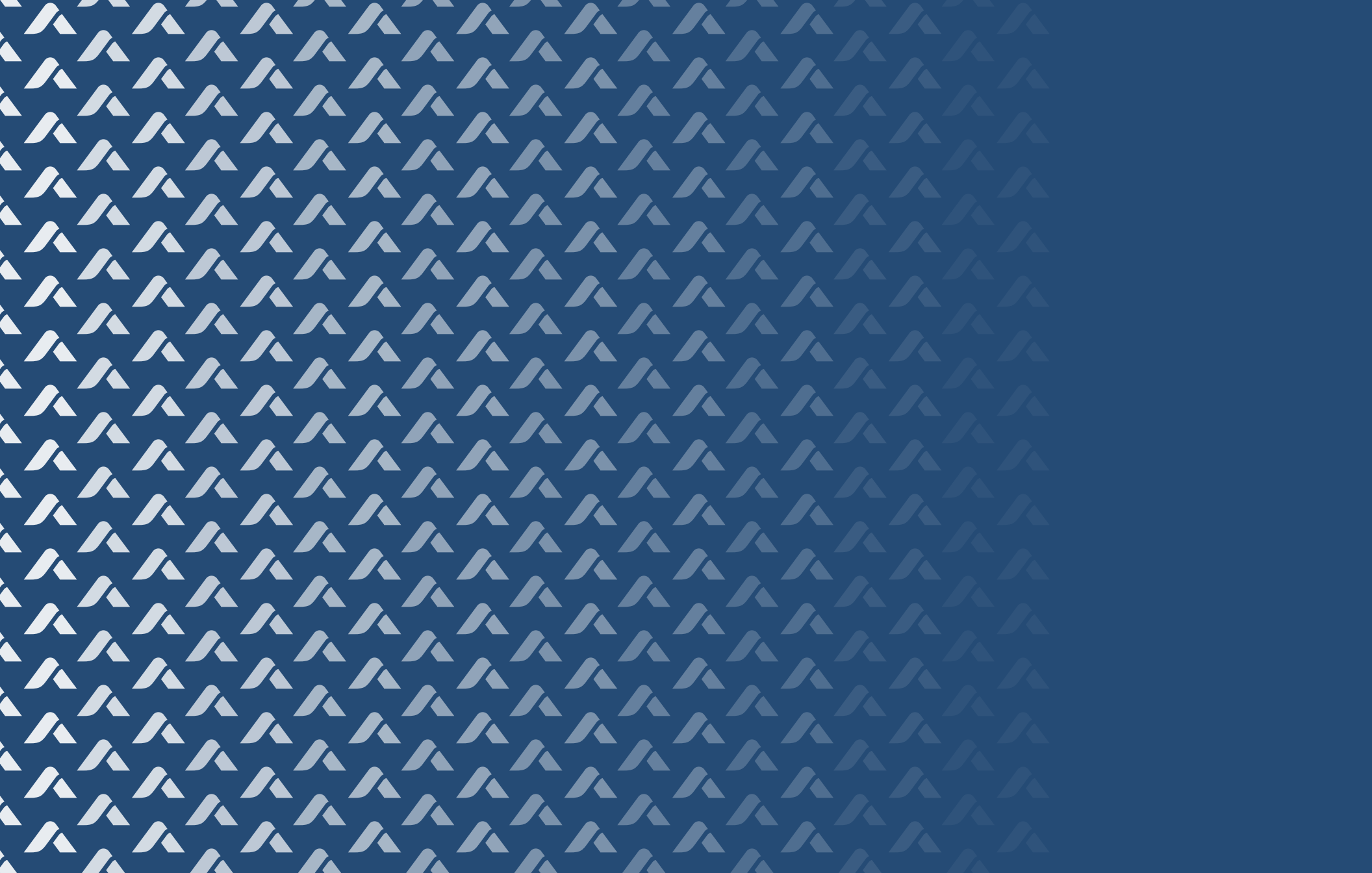
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Uzsoki Utcai Kórház  
Semmelweis Orvostudományi Egyetem  
Korlátozott Felelősségű Társaság

# A GUIDE TO MEDICAL SCHOOL ADMISSIONS FOR PRE-MED STUDENTS



ATLANTIS  
Innovating Healthcare Education



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# LETTER FROM THE AUTHORS

## Dear Atlantis Fellows,

Our names are Alice and George and we are Atlantis pre-med advisors.

We were lucky to have excellent guidance during our own (not so distant) pre-med days, so we created this guide in hopes of sharing what we learned with you. Basically, we want to help you get into medical school. At the very least, this document can be used as an aid in familiarizing yourself with the numerous steps along the way. The content in this guide can be applied to any MD or DO school in the United States.

As a disclaimer, we want to emphasize that the process of applying to medical school varies greatly from person to person. There are many components and moving parts to the medical school application process — therefore, it is impossible to predict if any one part of your application will directly affect your chances of admission. You may hear advice from other sources that differs from what you will find in this handout. We would also like to clarify that the information here is not affiliated with either one of our colleges or medical schools.

Understandably, some fellows have voiced concerns that, because they are not aiming for the top-tier medical schools, our advice may not be very helpful to them. We would like to emphasize that we both applied to and interviewed at a wide range of schools, and have worked with hundreds of students who have applied or are applying to medical school. Thus, we hope you will find this guide more relevant than intimidating, regardless of which medical schools you are aiming for.

Please also know that it is completely normal to feel overwhelmed by the information in this guide! We recommend that you do not try to read it all in one sitting. Instead, check back and refer to sections as needed and take time to digest and think over what you read here.

We hope you find this guide helpful, and we wish you the best of luck!

Sincerely,

**Alice Li**

Stanford Medical School Class of 2020

**George Bugarinovic**

Harvard Medical School Class of 2020

Here is a brief summary of our own backgrounds, so you know where we are coming from:



ALICE

I graduated from Harvard College in 2014, majoring in Human Developmental and Regenerative Biology and minoring in Global Health and Health Policy. My main extracurriculars included dance, the Health Advocacy Program, and stem cell biology research. I took two gap years. In my first year I backpacked through Spain on the Michael C. Rockefeller Fellowship, and in my second year I worked in thoracic oncology clinical research at UCLA.



GEORGE

I graduated from Johns Hopkins University in 2015 with majors in Public Health and Natural Sciences. My main extracurriculars included varsity basketball, research, and community outreach. I spent the majority of my gap year in my hometown of Kansas City, Kansas. During this time, I worked in a developmental biology lab at the Stowers Institute for Medical Research, helped out with my former high school's basketball team, did a bit of medical interpreting (Serbian), and participated in an Atlantis Fellowship in Toledo, Spain.

# | GLOSSARY OF TERMS

The acronyms start before you even get to medical school!

Here is a list of some of the most common ones you will come across as you prepare to apply.

**AAMC:** Association of American Medical Colleges. This is the nationwide organization that facilitates the medical school application process for almost all US Doctor of Medicine (MD) schools. They also develop an important exam you will be taking for admission to medical school, commonly known as the MCAT (see below).

**AMCAS:** American Medical College Application Service. This is the AAMC's application tool through which you will submit your "primary" application. The official guide to filling out the AMCAS is currently posted online and can be downloaded on the [website](#). Note that some schools in Texas instead use the [Texas Medical and Dental Schools Application Service](#) (TMDSAS). Doctor of Osteopathic Medicine (DO) schools use the [American Association of Colleges of Osteopathic Medicine Application Service](#) (AACOMAS).

**MCAT:** Medical College Admission Test. This is the exam you will take to apply to medical school. It is analogous to the SAT or ACT for college admissions, but significantly different in format, difficulty, and required preparation.

**MSAR:** Medical School Admissions Requirements Guide. The AAMC has assembled this guide to help inform applicants about medical schools. The MSAR includes crucial information about each medical school, such as the average GPA and MCAT of matriculating students, in-state versus out-of-state tuition, location, curriculum, composition of student body, mission statement, etc. Having all of this information in one place can be very helpful when deciding which and how many schools to apply to.

**BCPM:** Biology Chemistry Physics Math. Together, these types of courses will form your "science GPA." See section titled "GPA" for more information.

**MMI:** Multiple Mini Interview. This is a relatively new interview format used by an increasing number of medical schools. The MMI structure provides prompts with timed responses instead of the traditional question-and-answer interview. See section titled "The Multiple Mini Interview (MMI)."

**Rolling vs Non-Rolling Admissions:** Rolling admission means that a school reviews applications in the order of receipt. Consequently, acceptance offers are made in the same order. This means your chances of getting accepted into a school with rolling admissions are higher if you apply earlier. Non-rolling admissions means a school will review all applicants in the same cycle (year) together, regardless of application submission date. Most medical schools use rolling admissions.

# | DECIDING IF YOU SHOULD PURSUE MEDICAL SCHOOL + ALTERNATIVES TO THE MD DEGREE

## Should I apply to medical school?

Before beginning the hefty process of applying to medical school — not to mention going through all the effort involved with building up your application along the way — you need to seriously ask yourself if medical school is the right decision for you. The investment goes far beyond four years of school and hundreds of thousands of dollars in expenses; entering the medical profession places you on a lifelong track of service and learning.

Glamorous and relieving as it may seem, being accepted to medical school is just one checkpoint in the lengthy process of becoming a physician. Receiving your MD degree upon medical school graduation is only a next step. Applying to residency requires a similar time commitment as applying to medical school and these programs last anywhere from three to eight years after medical school. Both during and after the completion of residency training, there will be accreditation and medical education exams throughout your career. Long story short: once you begin medical school, you are in the medical world for the long-haul.

Furthermore, you should be aware that every year a fair percentage of applicants do not get into any of the 20+ (or 30+) medical schools they apply to.

This is not to say you should be discouraged from applying simply because of that “C” in organic chemistry or because you have not done any research. Just be realistic in your expectations of yourself. It is important that you are cognizant of how well you could perform in the context of the academic rigor required of any medical school. Should you feel your application is lacking in a particular area or if you are unsure about applying, please speak with a pre-med advisor(s) at your college to get a better idea of how realistic your application may be. In most cases, it is better to apply at a later date than to submit an inadequate or flawed application.



***Venturing into medicine is a journey with no final destination, so your ability to ‘enjoy the ride’ is vital.***



There are several options outside of becoming an MD-certified physician that may provide you with similar clinical interaction and/or scientific involvement. Some of the most common non-MD medical careers include (but are not limited to):

**Doctor of Osteopathic Medicine (DO):** With a DO, you would still be able to prescribe medicine, see patients, and do everything that an MD does. In general, the nature of DO medicine is more holistic and you may find this type of medicine more appealing to you than allopathic medicine.

Factually speaking, DO schools tend to accept students with lower GPAs and MCAT scores. Applying to MD residencies in the US can be more difficult from a DO than MD school, however this distinction seems to be blurring with time.

You can read more about applying to a DO school [here](#).

**Physician Assistant (PA):** Degrees include MPAS, MHS and MMSc.

You can read more about becoming a PA at the American Academy of PAs (AAPA) website [here](#).

**Nurse:** Degrees include RN, BSN, LPN, LVN, ADN, MSN, etc.

You can read more about types of nursing degrees [here](#).

**What are some alternatives to getting an MD degree?**

**Pharmacist (Pharm.D):**

You can read more about becoming a pharmacist [here](#).

**Scientist/Researcher:** Degrees include PhD, MA, MS, etc.

You can explore other health career options by seeking advice from your school's pre-med advisor, pre-health upperclassmen, a physician-mentor who is close to you, your own primary care physician, etc.



# | APPLYING TO MEDICAL SCHOOL 101: A TIMELINE

## FOR THE YEAR IN WHICH YOU ARE APPLYING (APPLYING SUMMER, ENROLLING FALL)

### | WINTER/EARLY SPRING BEFORE APPLYING

Start working on personal statement.

Ideally you will have already asked for letters of recommendation from your professors/mentors/coaches/advisors (or other potential writers) throughout college. Now is the time to update these individuals to let them know you are applying to medical school this cycle.

### | MAY

AMCAS online application opens.

Applicants can create an account and start filling out courses, activities, the biographical section, etc.

Finalize your personal statement.

### | BY LATE APR

Our latest recommended date to take the MCAT. (Ideally you will have already taken the MCAT a few months earlier or even in the previous summer; for full explanation see "When Should I Take The MCAT?")

### | JUNE 1

AMCAS begins accepting submissions.



### | JUL-EARLY SEP

Assuming you submitted your AMCAS in early June, schools will begin sending their secondary applications through the late summer/early fall. (See section titled "Secondaries".)

### | MAR 30

Deadline by which schools are required to send all applicants a decision (accepted/rejected/waitlisted).

### | APR 30-AUG

Schools can offer spots to waitlisted students, usually up until the first day of class.

### | SEP-EARLY MAR

Interview season. Most schools have "rolling" admissions and deliver admissions decisions one to two months post-interview. Other schools are "non-rolling," which means they inform all interviewees of their status on the same day (usually sometime in early March). An applicant can be accepted, rejected, deferred, or waitlisted.

### | APR 30

Deadline by which accepted applicants must matriculate to just one medical school.

### | JUL-SEP

Medical schools begin orientation/classes.

# | CORE COMPETENCIES FOR ENTERING MEDICAL STUDENTS

Here are the AAMC's official "core competencies" that medical school admission officers will be looking for in your application. The AAMC has determined that these values, traits, skills, and abilities are most necessary for entering medical students and future successful physicians. It should be your goal to show admissions committees your aptitude in as many of these competencies as possible throughout the entirety of your application (personal statement, listed experiences, letters of recommendation, secondary essays, interview day, etc.).

## **Intrapersonal Competencies**

**Ethical Responsibility to Self and Others:** Behaves in an honest and ethical manner; cultivates personal and academic integrity; adheres to ethical principles and follows rules and procedures; resists peer pressure to engage in unethical behavior and encourages others to behave in honest and ethical ways; develops and demonstrates ethical and moral reasoning.

**Reliability and Dependability:** Consistently fulfills obligations in a timely and satisfactory manner; takes responsibility for personal actions and performance.

**Resilience and Adaptability:** Demonstrates tolerance of stressful or changing environments or situations and adapts effectively to them; is persistent, even under difficult situations; recovers from setbacks.

**Capacity for Improvement:** Sets goals for continuous improvement and for learning new concepts and skills; engages in reflective practice for improvement; solicits and responds appropriately to feedback.

## **Interpersonal Competencies**

**Service Orientation:** Demonstrates a desire to help others and sensitivity to others' needs; demonstrates a desire to alleviate others' distress; recognizes and acts on his/her responsibilities to society locally, nationally, and globally.

**Social Skills:** Demonstrates an awareness of others' needs, goals, feelings, and the ways that social and behavioral cues affect peoples' interactions and behaviors; adjusts behaviors appropriately in response to these cues; treats others with respect.

**Cultural Competence:** Demonstrates knowledge of socio-cultural factors that affect interactions and behaviors; shows an appreciation and respect for multiple dimensions of diversity; recognizes and acts on the obligation to inform one's own judgment; engages diverse perspectives as a resource for learning, citizenship, and work; recognizes and appropriately addresses bias in themselves and others; interacts effectively with people from diverse backgrounds.

**Teamwork:** Works collaboratively with others to achieve shared goals; shares information and knowledge with others and provides feedback; puts team goals ahead of individual goals.

**Oral Communication:** Effectively conveys information to others using spoken words and sentences; listens; recognizes potential communication barriers and adjusts approach or clarifies information as needed.

## Thinking and Reasoning Competencies

**Critical Thinking:** Uses logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

**Quantitative Reasoning:** Applies quantitative reasoning and appropriate mathematics to describe or explain phenomena in the natural world.

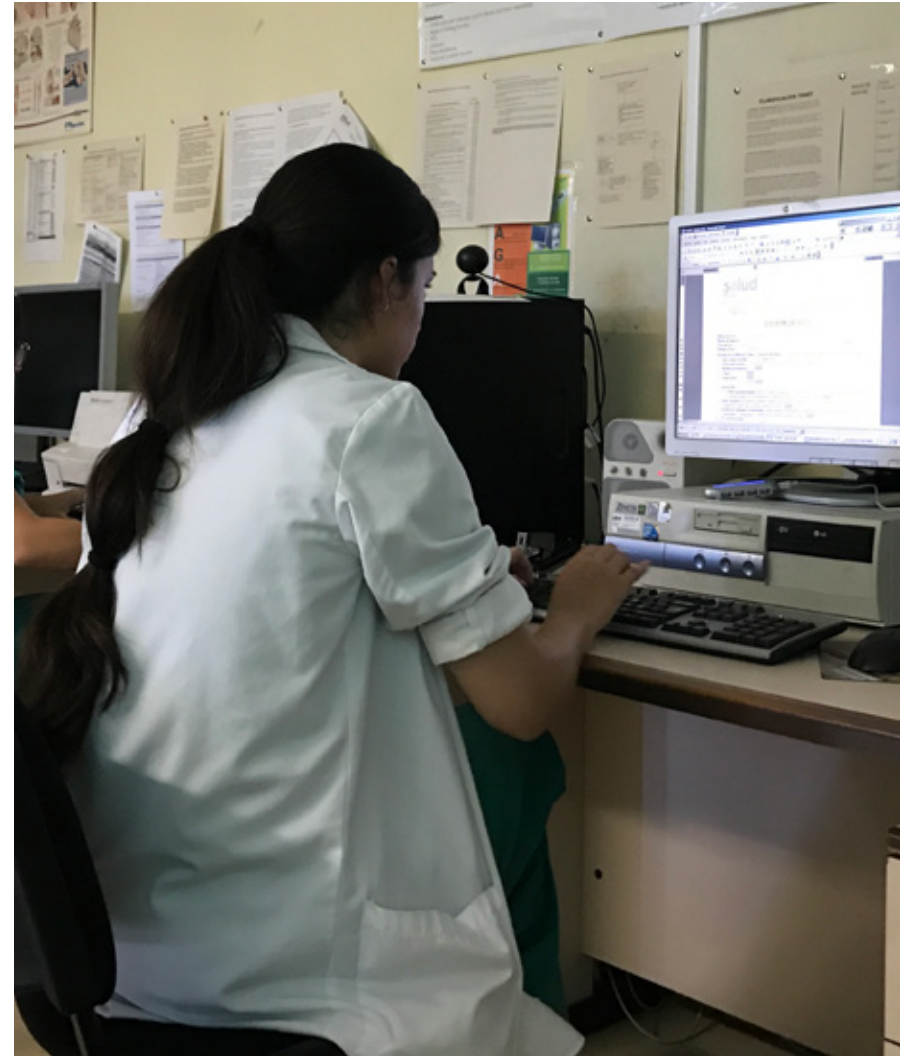
**Scientific Inquiry:** Applies knowledge of the scientific process to integrate and synthesize information, solve problems, and formulate research questions and hypotheses; is facile in the language of the sciences and uses it to participate in the discourse of science and explain how scientific knowledge is discovered and validated.

**Written Communication:** Effectively conveys information to others using written words and sentences.

## Science Competencies

**Living Systems:** Applies knowledge and skill in the natural sciences to solve problems related to molecular and macro systems including biomolecules, molecules, cells, and organs.

**Human Behavior:** Applies knowledge of the self, others, and social systems to solve problems related to the psychological, socio-cultural, and biological factors that influence health and wellbeing.



# | CREATING A SCHEDULE

## HEALTH/CLASSES/STUDYING/EXTRACURRICULARS/ETC.

One of the simultaneously terrifying and satisfying elements of college is managing your own time — there is no high school bell to signal the five-minute break before your next class. In college, you will need to decide your own courses, determine how much you can challenge yourself without exceeding limits, and juggle your academic and social lives. In this sense, college is a microcosm and good practice run for the “real world.”

As a pre-med, you may feel overwhelmed at the thought of managing a dynamic and busy schedule. Nevertheless, you can allay unnecessary stress by learning to prioritize. If you ever find yourself at a loss for how to prioritize the various elements of your undergraduate career, consider this list of priorities:

### **Personal health, both physical and mental**

First and foremost, the main priority you should have as a college student is your wellbeing. Although pre-meds are under a tremendous amount of stress, no part of your medical school application is more important than your health. You must be able to take care of yourself before being qualified to take care of others as a physician.

We encourage you to find a strong support network, whether or not your friends are also pre-meds (ideally some will not be). Maintaining a social life is a critical part of your health. The friendships you develop in college are oftentimes some of the closest relationships you will carry with you for the rest of your life.

Further, your pre-med experience will benefit immensely from having a strong group of friends who will celebrate the highs while helping you through the inevitable rough patches. In this way, the times you feel overwhelmed will not define your entire college experience.

### **Your grades and MCAT preparation**

These are the two pillars of your application. There is no getting around it; the medical school application process is, in large part, a numbers game. While a great GPA and MCAT score will not get you into medical school on their own, a poor showing in either category can hinder your chances. Stellar leadership activities and unique experiences, only in extremely rare situations, can make up for a lackluster GPA/MCAT score.

A note on studying in college: you will find that preparing for courses requires a more thorough and dedicated approach compared to high school. Few courses will assign daily homework, so you will need to ensure you are keeping up with the material on your own time. Spreading out your studying is also key, since cramming the night before a midterm is never a good idea. Even if you are lucky enough to cram for an exam and still do well on it, this type of habit is not sustainable for the types of exams you will be taking not only as a medical student, but also as a licensed physician. In other words, do not treat your college coursework as something you need to “get out of the way” before starting your medical education. Your pre-med curriculum is your training ground for developing a healthy, disciplined approach that will carry you through medical school and beyond.

**The extracurriculars you are most passionate about, whether they are clinically relevant or not**

Do not let medical school applications hinder your willingness to pursue outside interests you are truly passionate about. By saying “passionate,” however, we assume you are honoring the degree of commitment that this word entails. Your passion needs to be an activity that you could not imagine your college experience without.

Here are a few examples:

- A. Artistic or athletic endeavors
- B. Research
- C. Clinical volunteering/shadowing
- D. Non-clinical volunteering/community service



# | SATISFYING MEDICAL SCHOOL COURSE REQUIREMENTS

Ensure that you are completing requirements for the medical schools you are interested in by checking the most recent edition of the [Medical School Admissions Requirements](#) (MSAR), which is the official guide for requirements according to the [American Association of Medical Colleges](#) (AAMC).

## In general, what are pre-med course requirements\*?

<b>One year</b> of biology with lab	Most (but not all) medical schools require <b>one</b> or <b>two semesters</b> of math (college math, calculus, and/or statistics)
<b>One year</b> of general or inorganic chemistry with lab	
<b>One year</b> of organic chemistry with lab	Most (but not all) medical schools require more than <b>one year</b> of biology (some require/encourage genetics, anatomy, and/or physiology coursework)
<b>One year</b> of general physics with lab	
<b>One year</b> of English/writing-intensive courses	A few medical schools have additional requirements, such as Spanish
<b>One semester</b> of biochemistry	
<b>One semester</b> of psychology	
<b>One semester</b> of sociology (or a social science)	* To be certain you are satisfying all the requirements you need, you should check with (1) your school's pre-med advisors, (2) the MSAR, and (3) the websites

## How should I choose between a science versus a non-science major?

Sometimes freshmen and/or sophomores in college cannot decide between a science or non-science major. Do not major in a science simply because you feel most pre-meds choose it; but do not major in a non-science simply because you feel it will make you stand out. This is one of those decisions that should not be considered with only medical school in mind. Choose a major that you are passionate about and make sure you satisfy pre-med requirements along the way. If you cannot finish these requirements during college, post-baccalaureate programs allow you to finish these courses post-graduation. See section titled "Taking a Gap Year (or Years)."

## Can I take some courses pass/fail?

In general, you should be taking all of your courses with the letter-graded option if it is available to you. Traditional letter grading is mandatory for any pre-medical requirement. If you take too many courses pass/fail, you run the risk of seeming uninterested in your coursework.

One potential reason for using pass/fail is if you already have a heavy schedule and are fascinated by an additional course, but cannot take it during another semester. In this case, the pass/fail option may allow you to gain exposure to the material while not adding excessive strain to your workload. Nevertheless, you should always try to take as many of your science courses with the letter-graded option as possible.

### Can I satisfy the math requirement with AP Calculus?

This will differ depending on the medical schools you are applying to. If your AP test score is listed on your official undergraduate transcript (check with your pre-med advising office and/or registrar), most medical schools will count a four or five on the AP Calculus AB test as one semester of college math, and a four or five on the AP Calculus BC test as two semesters. However, keep in mind not all medical schools accept AP credits for calculus.

Regarding statistics, a handful of medical schools do not let AP statistics satisfy their college statistics requirement. If you have any doubt about taking calculus or statistics in college, generally the safest option is to make sure you cover your bases by taking one semester of calculus and one semester of statistics in college, regardless of your AP coursework.

Double check with your institution's pre-med advising office and/or registrar to see what your school's previous pre-meds have usually done.

### Can I study abroad as a pre-med?

Most medical schools in the US do not recognize/accept the credits you would earn from study abroad programs for pre-med requirements like physics, organic chemistry, etc. However, there may be some exceptions; check with your school's registrar and/or pre-med office to verify.

If you are pursuing a study abroad program for other interests (language immersion, cultural exploration, global/social research, etc.), that is a wonderful reason to study abroad! As long as you satisfy all of your pre-medical course requirements at your home institution (or a US institution from which your credits can be transferred), study abroad programs can offer unique experiences and insight valuable to a culturally-sensitive physician.

### Can I take summer school to satisfy pre-med requirements?

If you can fit all of your pre-med requirements into your regular school year schedule, there is no reason to take summer school courses purely to enhance your GPA. There are numerous non-classroom opportunities you could pursue during your summers instead (e.g., research, study abroad programs, internship).

A summer course could be a disadvantage in that many summer school science courses have incredibly tight schedules (normally one midterm per week). Here, you need to consider if the quality of your education/learning would be the same. It is important to thoroughly learn and absorb all of your pre-med coursework, and you need to be sure that an intense, accelerated pace is something you would be able to handle. Cramming and then regurgitating information on an exam may help you get by from semester to semester, but it is a recipe for disaster when you need to take the MCAT.

If you need to satisfy a particular pre-med requirement and do not have enough space during the school year (due to a double major, athletics or other demanding commitments), then summer school could be a great option. For some students, the ability to focus on a single subject without worrying about three or more concurrent classes can help them retain the information much better.

If you have any older friends at your school who have taken a particular summer science course already, ask them about their experience (if the professor was efficient/helpful, class structure) to determine if it would be a suitable option for you.

# | GPA

Your GPA is the “meat” of your application. Through your college coursework, medical schools can get a sense of how well you can handle a medical curriculum. Your cumulative GPA includes all college-level courses you have taken, including courses you took at a college while in high school. This does NOT include your grades from your high school AP classes, regardless of whether or not your AP test scores appear on your undergraduate transcript.

## What is BCPM, or the “science GPA?”

Your science GPA consists of your BCPM (Biology, Chemistry, Math, Physics) courses. You can either Google search a science GPA calculator or figure your science GPA out manually by calculating the average from your BCPM courses.

Medical schools will see both your science GPA and cumulative GPA in your application. The [AMCAS Course Classification Guide](#) is the AAMC’s official resource to help you decide which of your courses should or should not be included in your science GPA.

## How do I calculate my science GPA?

A = 4.0

A- = 3.7

B+ = 3.3

B = 3.0

B- = 2.7

C+ = 2.3

C = 2.0

C- = 1.7

D+ = 1.3

D = 1.0

D- = 0.7

The formula is:

$$\left[ \begin{array}{l} \# \text{ of BCPM credit} \\ \text{hours for which} \\ \text{you got an A} \end{array} \right] \times 4.0$$

+

$$\left[ \begin{array}{l} \# \text{ of BCPM credit} \\ \text{hours for which} \\ \text{you got an A-} \end{array} \right] \times 3.7$$

+

$$\left[ \begin{array}{l} \# \text{ of BCPM credit} \\ \text{hours for which} \\ \text{you got an B+} \end{array} \right] \times 3.3$$

+

...(etc.)

**ALL THIS DIVIDED BY**  
the total # of BCPM credit  
hours you have taken

## What is the average GPA of a medical school applicant?

The AAMC provides national averages of medical school applicants and matriculants (“matriculants” refers to individuals who were accepted into and began medical school). The most [data](#) is from 2017, but the AAMC will continue to update their page as newer information is released:

### Biological Sciences GPA

Applicants 3.55, Matriculants 3.71

### Overall GPA

Applicants 3.55, Matriculants 3.70

Depending on the competitiveness of the medical schools you are applying to, your target GPA will be slightly different. While it is hard to put an exact number on this, you can Google the average GPAs of admitted students at each institution you are applying to. This data is also listed in the [Medical School Admission Requirements](#) (MSAR).





# | MCAT

## What does the MCAT cover?

As of spring 2015, the “new” MCAT was introduced with the following four sections: [Chemical and Physical Foundations of Biological Systems](#), [Critical Analysis and Reasoning Skills](#), [Biological and Biochemical Foundations of Living Systems](#), and [Psychological, Social, and Biological Foundations of Behavior](#).

## How is the MCAT scored?

Scores in each section range from 118 to 132, with cumulative scores ranging from 472 to 528. Here are some examples of cumulative scores with their corresponding percentiles and our semi-arbitrary qualitative descriptor:

500 = 50th percentile “average”

509 = ~80th percentile “good-great”

516 = ~95th percentile “extraordinary”

[Here](#) are the Full Percentile Ranks for the MCAT Exam.

[Here](#) is some General MCAT Scoring Information.

## Can I choose which MCAT score medical schools see?

No. Medical schools see all your MCAT scores that are not voided.

If you sit for an exam, you do have the option to void your score immediately after taking it (so you will not know your score, but if you are sure you did poorly, you may want to void it). Medical schools would not see that score, nor would they be informed that you voided a score or even attended that exam.

## Does my MCAT expire?

Yes. For most medical schools the MCAT is only valid for three years, after which it will expire and you will need to retake it. For example, a 2017 score would only be valid if you matriculate to medical school no later than the fall of 2020. Keep this in mind as you decide how many gap years you may want to take before applying to medical school.

## When do I get my score back?

The turnaround time for receiving your MCAT score is about one month.

## When should I take the MCAT?

The best piece of MCAT advice we can give you: Do not take the MCAT exam until you have thoroughly studied the material and are ready for it. The following example refers to an applicant who is planning on (and is ready for) applying in the summer of 2018. Change the years as needed for your own situation.

- 1** If you are still in college, the ideal test date is the summer of the year before you apply. For instance, if you are applying in summer 2018 (to enroll in the fall of 2019), you can make summer 2017 your “MCAT summer.” This way, you can focus on the MCAT through summer 2017 (without distractions from other coursework) and take the MCAT in August before beginning school.
  - This gets the MCAT “out of the way” so you do not have to worry about it during the school year.
  - If you score below your target range, you still have the option to retake it by studying through the fall semester of 2017 and winter break of 2018 to retake in January or February of 2018.
- 2** If, however, you still need one more semester in the fall of 2017 to finish courses like biochemistry or physics, you may want to push the MCAT back until you finish that fall semester. This would make a good test date sometime in winter/early spring of the year in which you are applying — in this example, January or February of 2018.
  - This way, you still have enough time to find out your score and have the option to retake before applying. Do not retake the MCAT unless you are strongly confident in your ability to do better the second time around.

- For instance, if you took it in January 2018, you would get your score back by February 2018. If you were unhappy with your score, you could study from February to March 2018 to retake the MCAT in late March or April of 2018.
- 3** If you are not going to be finished with your MCAT-related coursework until the spring of the year in which you are applying (in this case May 2018), you would need to self-study the last part of your spring semester MCAT-related courses in order to take the MCAT by late April of the year in which you are applying (in this case April 2018).
    - Keep in mind an April test date will likely overlap with (or come immediately before) final exams.
    - You would receive your score by late-May 2018, meaning you could decide if you wanted to apply that cycle by the June 1, 2018 AMCAS open date.



## Why is it not recommended to take the MCAT after April of the year in which I am applying?

If you were to take the MCAT after April (say you signed up for an August 2018 MCAT test date when the AMCAS opened for submissions on June 2018), you would have two options, neither of which is ideal:

### 1 You can wait to get your score back before submitting your AMCAS application.

- This is disadvantageous because even if you find out you got a great score, you would be applying in September 2018 (due to the one-month turnaround time from your test date in August 2018), instead of early June 2018. Applying early in the cycle provides an essential advantage because many, if not most, medical schools use rolling admissions.
- If you receive a poor score, it may be best to wait until next year's cycle to apply, giving yourself some time to improve your MCAT score and overall competitiveness as an applicant

### 2 You can "apply blind" and submit your application anyway, even though you do not know what your MCAT score is.

- If you are lucky, you will find out a month later that you received a great score that you are happy with. You are still able to submit early and your score will be sent automatically to the AMCAS, which will then send your application on to medical schools.

- Otherwise, if you receive a poor score, you will have to make a difficult decision (again, between two unappealing options). These are the reasons why applying blind is highly discouraged:
  - If you choose to withdraw your application, medical schools will be able to see that you did so. This reflects poorly on your commitment to medicine, and they will likely ask you why you withdrew in a later application cycle.
  - If you choose to apply anyway with a lackluster score, you will be making a large financial investment with a relatively small chance of acceptance. You want to apply to medical school only once, and with the feeling that you are putting your best foot forward.

## When should I sign up for the MCAT?

Believe it or not, a fair number of students have to fly to their MCAT testing location every year because their local spots were already filled to capacity by the time they went to sign up!

Make sure you are aware of when the online signup portal opens for the test dates you are interested in and register soon after the portal opens. The portal can be accessed through the [MCAT registration button](#) on the AMCAS website. To provide a reference frame, the 2016 test dates were posted in September of 2016 (so if you are taking it in 2018, check the AMCAS website in the weeks leading up to September 2017).

## How do I create a study plan?

If you have ever found yourself looking at your grade for a test and going through each of your mistakes, telling yourself the reason you did poorly was that you kept making “stupid mistakes,” think again. Those mistakes happened for a reason, and that reason was NOT because you ate a bad breakfast or slept on the wrong side of the bed. Instead, it was much more likely that you were simply not as familiar with the material as you should have been. The same applies to the MCAT: repetition, practice, and dedication to understanding the basic concepts will pay off. There is no shortcut: cramming and cutting corners are the absolute worst way you can prepare. If you know you are a nervous test taker, you have even more reason to begin preparing earlier.

The MCAT will require the most systematic study plan you will ever implement for a test as a college student. This is why students are willing to pay \$1,500–4,000 for prep courses that organize everything according to a schedule that has worked for many previous students. If you decide to study independently, or are taking a course but still want to keep yourself on your toes, here is a suggested step-by-step guide for organizing your study plan:

- 1** Take a diagnostic practice MCAT test at the very beginning of your MCAT prep.
  - A. This will help you know how the content is presented and how the questions are phrased before you begin your content review.

## **2** Prepare for the content of the MCAT.

- A. Print out the AAMC’s [official lists](#) of concepts tested.
  - Based off of these lists, familiarize yourself with the MCAT topics you will be tested on.
- B. Recognize your weaknesses.
  - On your printout, highlight concepts you have not learned yet, have not reviewed for a while, or had trouble understanding in the past.
- C. Systematically review every concept, regardless of how well you think you know it.
  - Devote extra time to your weaknesses.
- D. For each section, make sure you familiarize yourself with required equations and formulas; “essential overview” summary sheets are available online for each section.
  - Commit key equations and formulas to memory (although some passages may give you the value of certain constants, you do not want to risk not knowing the value in case it is not provided). You cannot afford to waste time scrolling to the top of the page for a formula when trying to solve a complex problem!
- E. \*Note you are NOT allowed to bring a calculator to the exam. This should affect how you prepare for the sections that require you to use some basic math (namely for physics and chemistry questions). Thoroughly familiarize yourself with mental math and scratch paper approximations.

### 3 Prepare for the format of the MCAT.

- A. Once you feel confident in your fundamental understanding of the concepts you will be tested on, you need to familiarize yourself with the format of the MCAT.
- B. Regarding stand-alone questions:
- This question type is relatively straightforward to prepare for, since most of these questions are directly testing your knowledge. A few standalone questions will ask you to interpret a figure. In general, the approach to a stand-alone question does not require the same level of critical thinking as passage-based questions.
- C. Regarding passage-based questions:
- These passages are quite different from your SAT/ACT passages and will require much more involved critical thinking skills.
  - Verbal reasoning passages.
    1. These passages are chosen so that you do not need any background knowledge to succeed in this section.
    2. Start with individual passages and fine-tune your ability to detect tone, subtext, conclusions versus implications, etc. before building up to passage sets.
    3. This is where practice becomes essential!
  - All other passages (physics, organic and general chemistry, biology, psychology, sociology):
    1. You will need to exercise your scientific analytical skills in order to reading graphs and interpret data.
    2. Make sure your MCAT content knowledge is solid to avoid solely relying on your deduction skills with these passages.

### 4 Prepare for the timing of the MCAT.

- A. Once you build up your confidence and familiarity with the content and format of the MCAT, you should be taking regular full-length practice exams throughout the course of your studying. Do not wait until a month before test day to take your first practice exam!
- B. Use the AAMC “official” practice exams first, as they most closely resemble the actual MCAT exam. Test prep companies’ exams are good supplementary material (see examples on next page).

#### What is the most important purchase I should make for MCAT prep?

The MOST IMPORTANT purchase you can make for MCAT prep is the online set of [AAMC practice exams](#). These will allow you to simulate a full-length exam through the e-MCAT website.

These tests are composed of retired questions used on previous official AAMC MCAT exams and are administered in the same computer format you will have on test day. Use them because these practice exams are the closest thing you can find to what your actual test will be like!

As of summer 2016, three full-length practice exams are available for you to purchase from the AAMC. Additionally, we recommend purchasing the AAMC Question Packs and Section Banks. They are also invaluable! Note that some MCAT prep courses already include access to these exams and extra AAMC material with the course fee.

### What are some options for MCAT courses?

Here are some common MCAT prep courses\* (these companies provide either in-person or online formats):

[Khan Academy](#) (free!)  
[Kaplan](#)  
[The Princeton Review](#)

[The Berkeley Review](#)  
[Examkrackers](#)  
[Gold Standard](#)

More important than picking a course is your level of involvement and dedication to preparing for the material. Some companies' writing styles fit some students better than others, but books written by any company will cover a vast majority of the content you will need to know for the exam. Keep in mind some MCAT prep courses include the AAMC practice exams.

### What are some MCAT materials you found most helpful?

Verbal reasoning section:

[Testing Solution's 30 Day Guide to MCAT CARS Success](#)

Kaplan "cheat sheets" (succinctly-summarized pages of key concepts):  
[PDF version](#)

ExamKrackers:

[Examkrackers MCAT® 101 Passages: CARS](#)

[Examkrackers MCAT® 101 Passages: Biology 1: Molecules](#)

[1001 Questions in MCAT Organic Chemistry](#)

[1001 Questions in MCAT General Chemistry](#)

[1001 Questions in MCAT Physics](#)

### How early should I begin studying for the MCAT, and how many total hours should I devote to it?

Regarding MCAT-focused studying in which you are specifically studying for the content, format, and timing of the MCAT, you should aim for:

- At least eight weeks at 15-30 hours per week (a minimum of 120-240 hours).
- A more ideal timeline would be closer to 12 weeks at 20-25 hours per week (240-300 hours).

Keep in mind these timelines are estimates, since everyone studies at a different pace. You may need more or less time than the recommended amounts depending on your own study efficiency, recall of pre-med coursework, and natural test-taking ability. To provide a realistic perspective, preparing for the MCAT is the most intense prolonged study period a student has had.

### I have already taken the MCAT; should I retake it?

If you are unhappy with your MCAT score, you may want to retake the MCAT if you can satisfy the following criteria:

1. You have a clear idea of what you did wrong.
2. You have sufficient time to prepare.
3. You are confident you can get a significantly higher score because your new practice exam scores consistently show this.

Otherwise, you should know that receiving a lower or similar score on a retake reflects poorly on your application. If you cannot be sure that your second attempt will surpass your initial score, be especially wary of a retake.

If you have any other questions about the MCAT, see the [frequently asked questions page](#) on the AAMC website.

# | RESEARCH

## Is research required for medical school?

The short answer is no. However, it is the same type of “no” that answers a question like, “Is a high GPA required for medical school?” In other words, both research and a high GPA are technically not required, but they would certainly boost your application and there is a reason that the majority pre-med applicants have both.

The analogy falls short, however, in that research is more applicable to some pre-meds’ interests than others, specifically those considering a future career in academic medicine. If, for instance, your passion is global health and you already know you eventually want to work for [Doctors Without Borders](#), a medical school admissions officer may picture you pursuing global health research as an undergraduate instead of traditional hard science research. Further, it is important to realize that “basic” research in a lab environment with cell culturing, mice, pipetting, etc., is NOT the only kind of research out there! If you strongly feel that basic science research is not for you, do not be constrained to a traditional lab. Consider the many types of research available to you and do some exploration to find out what your school and area have to offer.

## Do I need to publish my research?

No you do not, and especially not in a widely-recognized scientific journal like Nature or Cell. If you are, in fact, able to publish as an undergrad or a recent postgrad, it is definitely a bonus to your application! This is so impressive because being able to publish in a widely recognized scientific journal is a feat that usually graduate students and postdocs are aiming for.

If you cannot publish, try to have at least something to show for your research, like a poster presentation, thesis, or written report. Another great idea is a presentation at some sort of conference, at least at the student-run, collegiate level. For instance, every January Harvard College hosts a National Collegiate Research Conference that you can read more about [here](#).

## What does it mean to do basic science, hard science, wet lab, and dry lab research?

**Basic science:** Basic science refers to the natural sciences, such as biology, chemistry, and physics.

**Hard science:** Hard science is essentially synonymous with basic science. “Hard science” refers to the natural sciences while “soft science” refers to the social sciences.

**Wet lab:** Conducting research in a “wet lab” means the lab setting involves chemicals, living organisms, and other biological/chemical matter.

**Dry lab:** In contrast, conducting research in a “dry lab” means most of the analyses are mathematical in nature and conducted on computers.

## Does being pre-med mean I have to do hard science research?

While most pre-meds will conduct hard science research (as a doctor you would presumably have a genuine interest in the natural sciences), this should not limit your undergraduate/postgraduate research to the natural sciences. Research encompasses all fields, from biology to Spanish philosophy and from psychology to oncology. Find a topic you are truly interested in exploring, and let research help you become an expert in it.



### **I am not getting results from my research; what should I do?**

Try not to get frustrated with the scientific research process when experiments do not go as hypothesized. The nature of science is 99% failed experiments and 1% success! Keep in mind your priority should be to enjoy the process by pushing and developing your critical thinking skills as a scientist.

If the reason for your inability to get results is because your lab lacks mentorship or resources for your experiments (whatever reason your lab is keeping you from getting results), you may want to consider switching labs. HOWEVER, remember that it is an absolute privilege for you as an undergraduate to be in the lab! These positions are primarily for graduate students, so you should not join a lab with the upfront expectation that you will be immediately given your own project. In the beginning, you likely need to master basic lab techniques, so you should be willing to learn — even if this means feeling like you are only helping a graduate student or postdoc with his or her project. Once you have proven you are a quick learner and can handle the scientific rigor of designing your own experiments, you may begin to expect to work on your own project if it is feasible within your lab.

### **What if I cannot find research opportunities at my institution?**

If you cannot find any professors at your school whose lab you can join, consider looking into summer research programs/scholarships at other colleges and institutions. There are quite a few across the country. Here are some ideas to get your search started:

1. [National Institutes of Health Summer Internship Program](#) (NIH SIP)
2. [Summer Medical and Dental Education Program](#) (SMDEP) (located at 12 sites across the nation)

### **How do I approach a lab?**

If you have never asked a principal investigator (P.I.) to join a lab before, here is a guide to get started:

1. Read the department webpage for an area of research you would be interested in (e.g., the neuroscience department at UCLA).
2. Skim each faculty member's biography and research interests.
3. Read up on those whose research is interesting to you; take a look at their publications on [PubMed](#). Check with your college's library if you can access PubMed articles for free through your student account; most academic institutions have an account with PubMed.
4. Write a cover letter (i.e., an email) to about five P.I.s. You will likely not receive responses from a good number of them, as most P.I.s are traveling/very busy. If you do not hear back within a week, email five more, and repeat this process until you have a P.I.s attention!
5. In your cover letter, keep things as succinct as possible:
  - Paragraph 1: Introduce yourself and give a short description of your interest in his/her work.
  - Paragraph 2: Outline your scientific qualifications (previous research experience or relevant science coursework).
  - Paragraph 3 (optional): Other qualifications/relevant interests to the lab.
  - Attach your résumé and offer to meet in person.
6. Once you meet with the P.I., talk about expectations and hours before committing to the position. Ensure that you are content with the anticipated workload and goals of your time in the lab before beginning to work there. Try to find a lab that interests you and would grant you some degree of input in the project design (i.e., a chance to eventually work on your own project).

# | CLINICAL EXPERIENCE

While you will not be expected to have saved a life, delivered a baby, or single-handedly developed the next heart transplant procedure as a pre-med, you should absolutely have some clinical exposure before applying to medical school.

Medical schools will want to see that you have stepped outside of the classroom and lab settings to see medicine firsthand. And although you should have some relevant clinical experiences, do not be tempted to simply stand around in a volunteer uniform and rack up your hours! Seek meaningful experiences in which you are either learning about the field of medicine through shadowing or making a real difference in your community through volunteering.

## **How should I record my activities/hours?**

Once it is time for you to actually apply, you will need to list your dates of involvement (MM/YY-MM/YY) and total hours in the AMCAS application. In addition to tracking your reflections, keep a numerical hour log as soon as you start any activity outside of coursework to avoid retrospective guesswork. Medical schools can and do check on whether your hours are accurate or not. As long as you are honest and keep careful records, you will not have any problems.

# CLINICAL SHADOWING

It is common (but dangerous) to lose sight of the main point of shadowing — namely, the depth of the experience — and to focus instead on accumulating hours just to impress medical schools. The “quality over quantity” cliché is relevant to many parts of your medical school application, especially here. Ultimately, what matters far more than the number of hours listed on your application is how you can speak about your shadowing experiences in essays and interviews. In this sense, shadowing will help you get into medical school because it is something you intrinsically have an interest for, not something you feel the need to “get out of the way” or “check off of a list.” If you can keep this idea in mind, you will avoid time-wasting, menial shadowing experiences and instead search for ones that are well worth your time.

You may be wondering how to determine if a shadowing experience is “meaningful.” In general, if you find yourself feeling bored, seeing the same procedure on repeat, and/or wondering if your time would be better spent shadowing in a different specialty or with a different physician, that is a good sign you should move on to another shadowing opportunity. On the other hand, do not feel as if everything will be laid out for you. It is your duty to pique the physician’s interest (without seeming overbearing) and to create an open environment in which you can maximize your learning. Only in rare circumstances are doctors unwilling to help — they would not have allowed you into their workplace if this were the case!

### What are some of the primary benefits of shadowing a physician?

1. Shadowing helps you develop a better sense of what a medical career looks like.
  - Can you stand the sight of blood? Could you handle the pressure of making life-altering decisions for others?
2. Shadowing allows you to determine if you are willing to make the large personal and financial investment necessary when entering medical school.
3. Shadowing provides insight and experience that you can talk about in your application/interviews.

For these reasons, shadowing is an essential part of your application that medical schools will expect you to have. Your clinical experiences often come up in the medical school application process (e.g., in your personal statement, secondary essays, and interviews) because medical schools are looking for applicants who are not only committed to medicine, but also well-informed in their decision. It is easy for people to say they “want to be a doctor when they grow up,” as they eagerly hope to wear that pristine white coat, but it is a much more genuine, realistic, and believable statement if you can recall specific examples from clinical environments to support your desire to become a doctor. Thus, shadowing experience is a strong, necessary piece of evidence that medical schools need so they can be convinced you understand what you are committing to.

### What advice do you have on clinical shadowing?

The fact that you have been accepted as an Atlantis Fellow means you already have a leg up on other applicants for shadowing experiences. It is important that you maximize this opportunity. One good start is by taking

regular notes, both clinically and otherwise. These anecdotes can help you not only in crafting your personal statement, but also during your medical school interviews (see below for more on maximizing your Atlantis shadowing experience).

If, in addition to your Atlantis experience, you feel you could gain from further exposure to a particular field, try all means possible (email, professors, etc.) to find more shadowing opportunities. In fact, many medical schools will require that you have at least some shadowing experience in the US. One strategy that works well for many pre-meds is asking a science professor who also sees patients as an MD. Try to see if you can follow him/her around the hospital/clinic where s/he works for an afternoon. Check out the post on the [Atlantis blog](#) for more detailed help on securing a shadowing opportunity.



## How do you approach a doctor with a request to shadow?

Do not make your first point of contact through an in-person visit. It seems very forward as a first impression and can create unnecessary pressure for the physician to respond immediately. An email is most appropriate in terms of giving the physician a respectable distance and time frame. In the email, you can suggest a phone call or in-person meeting at his or her discretion.

### Here is a template email:

Introduce yourself, saying you are a pre-med at \_\_\_\_\_  
College or University.

Explain you read or heard about his/her course/research/position and that you are very interested in learning more about his/her work by shadowing. Start by asking for just a morning or an afternoon; do not immediately ask for a long-term commitment like a semester. If you feel a strong connection, following up should not be a problem.

Include something along the lines of, "I can imagine you may have liability concerns with regard to undergraduate shadowing. If it helps, I can bring a copy of my up-to-date **immunizations** and a statement that I am aware of and adhere to **HIPAA guidelines**."

Reiterate your gratitude and that you are available by phone or an in-person meeting if s/he feels that more needs to be discussed before letting you shadow.

## How can I maximize my Atlantis shadowing experience (and other clinical opportunities)?

### 1 Pursue active learning (and ditch passive absorption).

- A. Two pre-med students can be exposed to the exact same shadowing or clinical experience (e.g., shadowing the same physician, seeing the same patients, doing the same procedures, all for the same number of hours), but end up with radically different takeaways. It all depends on what each student makes out of his/her time in the hospital. Be sure to actively look. Observe, and ask about the things going on around you. Of course, always maintain a professional demeanor and be constantly aware of the environment you are in (office, hallway, operating room, in a patient's vicinity, etc.). If you spend your entire day standing in the corner and scrolling through social media on your phone, it will show when you reflect on your shadowing experience later!
- B. Write down names of unfamiliar medical terminology/procedures/techniques you did not get a chance to ask your mentor about. Look these up later (Wikipedia should be enough to give you a sufficient understanding).
- C. If the situation and timing are appropriate, absolutely do try to ask your mentor questions/clarifications on the spot. This has two advantages:
  - Your mentor will see how actively engaged you are. This helps tremendously if you are considering asking this physician for a letter of recommendation (make sure you are only asking for a letter if this is truly a meaningful relationship! See "Letters of Recommendation" for more information on this topic).
  - You may be able to gain some insight regarding cultural differences in how, for instance, the Spanish and US healthcare systems use a particular medical procedure/technique in different ways or with different frequencies.

## 2 Make bullet points of memorable cases/patients.

- A. Write down a succinct summary of any particularly interesting/touching case that you encountered in the hospital. Perhaps you were impressed with a physician's ability to calm an upset/angry patient. Maybe you were touched by the way a nurse interacted with a patient's mother at his/her bedside. Keeping a running log of memorable phrases and details may help provide ideas for your medical school personal statement, secondary essays, and interviews.

3 Culturally and clinically, the Atlantis experience will be quite different from what you have grown accustomed to in the US — and that is great! Hopefully your Atlantis Fellowship will allow you to gain and assimilate a more comprehensive perspective on how medicine is practiced around the world. As you spend time in the hospital, compare and contrast:

### A. Patient-physician relationships

- Sample questions/observations:
  1. What was the most meaningful interaction your shadowing physician had with a patient?
  2. How much time is given to each patient?
  3. How connected and invested does the physician seem with each patient's story?

### B. Hospital resources/practices

- Sample questions/observations:
  1. Does your shadowing physician need to gain permission from a department head before s/he makes a treatment option? What about in the case of an expensive surgery?

2. Does a particular procedure or machine stand out from your shadowing experiences?

### C. Healthcare models

- Sample questions/observations:
  1. How was your shadowing Atlantis physician educated through high school, medical school, residency, fellowship, etc.?
  2. How many patients does the physician see each day?
  3. Is insurance private (perhaps through employment) or public through the government?
  4. Are there co-pays?
  5. What else differs from the US system?



## CLINICAL VOLUNTEERING

Although volunteering is an important part of the medical school application, it does not necessarily have to be in a hospital/clinical setting if you already have some other form of clinical exposure (such as work or shadowing). See section titled "Non-clinical Extracurriculars."

It is surprising how easily pre-meds can forget this: you are not yet qualified to deliver medical care! So before you sign up for that volunteering opportunity in which you will be responsible, for instance, for delivering a baby in a developing country, remember that you should only sign up to volunteer in environments for which you have received proper training. Medical schools take the "observation only" mandate very seriously. Be sure to abide by the following AAMC Guidelines:

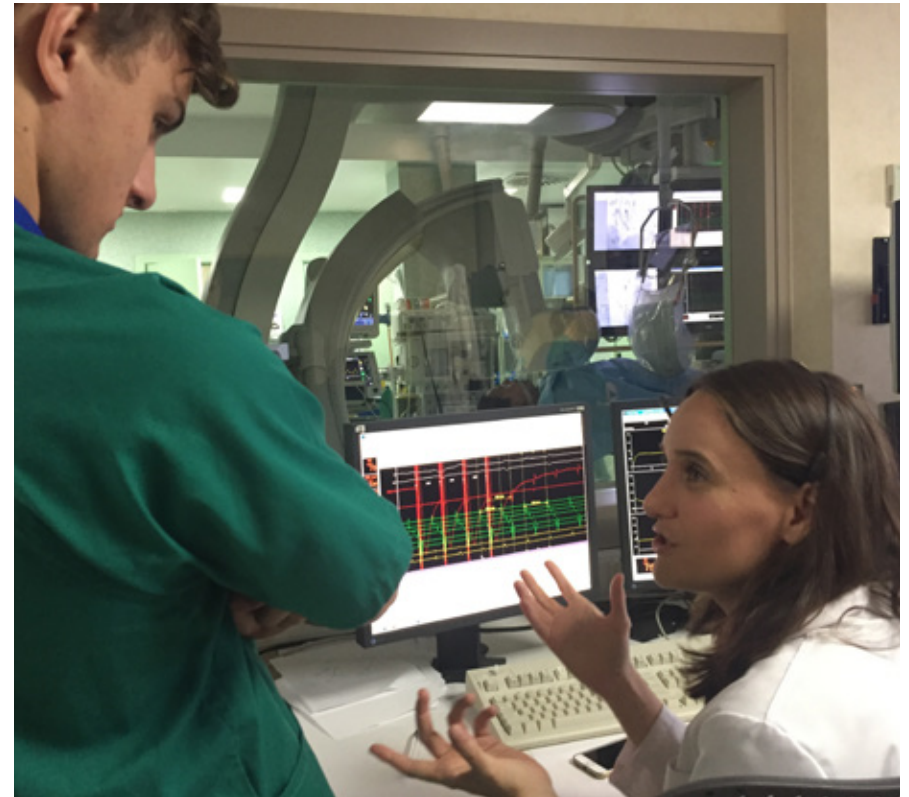
[Guidelines for Pre-medical and Medical Students Providing Patient Care During Clinical Experiences Abroad](#)

[Guidelines for Clinical Shadowing Experiences for Pre-Medical Students](#)

### **I can either volunteer in a big hospital or a small clinic... How do I decide?**

This is a common pre-med question. You may face a dilemma between volunteering at a big-name hospital or a small clinic. Most large hospitals will offer some sort of official volunteering program through which, in many cases, the volunteers are limited to less-involved tasks. In general, the larger the hospital, the greater the liability risk, therefore the more "red tape" and the less meaningful contribution you may feel you are making as a volunteer.

Having said that, volunteering in a small clinic may not necessarily provide the more meaningful experience if you are restricted to similar types of cases all the time. Decide for yourself which institution will allow you to see/help the most (with a responsible amount of liability) as well as which one will provide the best mentorship. Speaking to someone who has previously worked in either environment is a great idea!





# | NON-CLINICAL EXTRACURRICULARS

Do not let medical school be the only end goal of your undergraduate pursuits. If you are pursuing extracurriculars in college that interest you, that passion will be evident through your application. Medical schools, just like colleges, want a diverse student body — meaning they want their students to come from a wide range of socioeconomic/racial/ethnic backgrounds, to pursue their own hobbies outside of classes, and have unique experiences/exposures to areas of study that will overlap with medicine. These include (but are not limited to): the humanities, public health, law, athletics, and business. Most importantly, pursuing a passion outside of medicine is critical to maintaining a healthy and well-rounded work-life balance.

With that in mind, remember to avoid becoming a “jack of all trades, master of none.” Choose just a few pursuits that you can devote quality time to; do not spread yourself too thin just for the sake of fluffing up your résumé. As you will hear many times: always go for quality over quantity!

## How should I record my hours?

As with your clinical experiences (and any activities you are regularly involved in), keep a log of your hours of involvement. On the AMCAS you will need to list your dates of involvement (MM/YY-MM/YY) and total hours. Do not forget to jot down what you learned and include a qualitative description of the experience highlights because you may eventually use these materials for your personal statement, secondary essays, and interviews. Just like with clinical hours, keep your records straight and log your hours often, and you will not have any problems.

## What are some volunteer/community service ideas?

You may feel overwhelmed by the potential non-clinical volunteering activities you can do in college/postgrad. If you have not already heard of the following types of student groups (many of which are national), consider starting your own branch or launching a new on-campus club. Here are just a few volunteering opportunities that pre-meds pursue, organized by category:

- 1 Volunteering related to community service**
  - Addressing poverty
  - Addressing homelessness
  - Raising awareness of art/music/theater
  - Raising awareness of public advocacy groups
- 2 Volunteering related to cultural/ethnic/racial awareness:**
  - Teaching English to recent immigrants (Chinatown ESL Boston)
  - Ethnic clubs (Nigerian Students Association, Iranian Students Association, Korean Students Association)
- 3 Medically-relevant volunteering:**
  - [Kidney disease screening and awareness program](#) (KDSAP)
  - Women’s health
  - Mental health awareness ([Best Buddies](#))
- 4 Volunteering as an elementary/middle/junior/high school mentor**

Check if any of the above student groups/activities already exist on your campus. Attend student fairs and check your institution’s website for volunteering opportunities that would be interesting and meaningful to you.



# | TAKING A GAP YEAR(S)

It has become a misnomer to call the “traditional” applicant someone who goes directly (or “straight through”) from college to medical school. An increasing number of medical students are now beginning medical school after having taken at least one gap year. Do not, however, take a gap year simply to jump on this bandwagon.

Common reasons for taking a gap year include:

- You did not take the MCAT in time to know your score or need to retake the exam\*
- You did not finish your pre-med requirements in college
- You feel a part of your application needs strengthening (e.g., GPA or clinical experience)
- You have a once-in-a-lifetime opportunity (e.g., traveling fellowship or a unique job experience)
- You have personal/family matters to attend to
- You want some more “real world” experience before starting medical school.

\*Note that the MCAT is only valid for three years, after which it will expire and you will need to retake it. For example, a 2017 score would only be valid if you matriculate to medical school no later than the fall of 2020. In general, it is a better idea to take the MCAT closer to the years when you were a student and apply before the three years expire, as opposed to waiting for a few years after college to take it. It is often increasingly difficult for a postgraduate to reenter the intense student mentality required for MCAT prep after having been outside of the academic realm for an extended period.

## How do I balance interviews while applying in my gap year?

Whatever you decide on doing, you need to be upfront with your boss/ supervisor about needing to travel for interviews. One of your biggest nightmares could be trying to squeeze out days to travel for interviews with a supervisor who was not previously informed. You should also be direct with him/her about how long you are committing to the job; some positions require at least two years while others are fine with just one.

## What are some potential gap year ideas?

Domestic US gap year ideas:

### Post-Baccalaureate Programs

- Post-baccalaureate programs are generally used to boost a low or borderline medical school GPA or complete medical school prerequisites.
- If you have not yet satisfied the pre-medical course requirements by the time you have graduated, you will need to do so post-graduation. This may have happened for various reasons — perhaps you decided relatively late in college to study medicine, so you never took the required pre-med courses, or you performed poorly in several courses (generally this means a C+ or below) and need to retake them.
- See section titled “Satisfying Medical School Course Requirements” to confirm you have covered all your biology, organic chemistry, math requirements, etc. If you do decide to do a post-baccalaureate program, make sure to double check with both that program and your pre-medical advising office or registrar to ensure your credits will be recognized by medical schools.



## Research

- If you feel research (either basic science or clinical) is an area of your application that needs boosting, or would like more time in the field, consider devoting your gap year(s) to research. Common options include:
  - **Continuing at a previous lab.** The advantage to this option is it saves you the effort of a job search. If you happen to get along great with your lab, chances are that you are in the middle of working toward a publication, which is another great reason to stay. On the other hand, potential reasons to change a lab include: you want to be in a different location/city during your gap year(s), you do not have a good relationship with a particular mentor in the lab, you feel your current research is not going anywhere and the chances of growth and/or a publication are slim, or you want to try a different field of research (e.g., switch from basic science to clinical research, or from immunology to biochemistry research).
  - **Applying to a program like the NIH's IRTA (National Institutes of Health Intramural Research Training Award).** One advantage to this program is its credibility, as it is recognized nationwide. You will want to apply as early as possible to maximize your chances of being accepted into a lab.

So, how do you maximize your chances for the IRTA? **FIRST**, know your application will be entered into a database as soon as you complete it and that the P.I.s at the NIH will be perusing that database at various times during the year. The most popular hiring seasons are for positions that begin in the summer and fall, meaning some P.I.s will start looking as early as January and others through March/April. **SECOND**, send a cover letter to specific P.I.s whose work particularly interests you, mentioning that your application is already submitted. This alerts P.I.s to your specific application and increases the chances your application will be considered.

## Medical Scribe

- If you feel clinical experience is an area of your application that needs boosting, consider working as a medical scribe. As a scribe you would be placed in, for example, an emergency room setting and would be responsible for electronically entering physician notes. Since most of healthcare in the 21st century is computerized, data is more commonly stored in electronic databases as a part of an electronic health record (EHR). By working as a scribe, you would gain a familiarity with medical terminology specific to a field while interacting closely with physicians. [ScribeAmerica](#) is one of the nation's largest medical scribe programs. However, you should be aware that after some time, the job may begin to feel like busywork if you are seeing the same types of cases on repeat. If you are considering a job as a scribe, try asking around to see if any peers have previously held this position and if they have any particularly strong programs to recommend. Also consider that scribes do not have tremendous wages.

## Master's Degree (public health, business, nutrition, anatomy, law, etc.)

- Some pre-meds will decide to pursue a postgraduate academic interest through a Master's degree, either domestically or abroad. While you should consider this if public health, for instance, is truly a passion of yours, be mindful that many medical schools offer joint degrees as well. A Master's degree can also help you raise a low or borderline GPA that you would have wanted to raise through a post-baccalaureate program. Although raising your GPA is important for your competitiveness as an applicant, make sure raising your GPA is not your only reason for pursuing a Master's degree.

International\* gap year ideas:

## Traveling

- Once you are on the medical training treadmill (medical school, internship, residency, fellowship), it will become harder and harder to take time off. One unique way to take advantage of your gap year is to travel (with a purpose, of course). Ideally, couple it with some form of medically or professionally relevant activity (e.g., clinical volunteering, research or volunteering). If you have a responsible means of financing your travels, let it be an opportunity to "see the world" before medical school/residency starts.

## Fulbright Scholarship

- Widely recognized as one of the most prestigious postgraduate scholarships, the Fulbright would provide you with a funded opportunity to pursue research or teach English abroad. Look on their website for more details involving their numerous program locations and the application process.

\*Note on applying to medical schools while abroad: if you take one year off, for instance, you will be submitting your AMCAS the summer after graduation and traveling for interviews throughout the fall/winter/early spring. Unless you have the means (and energy) to fly internationally for every interview, try to maximize your efficiency by: (1) grouping your interviews into a manageable span of about a month so you only have to fly back to the US once (do this by explaining to medical schools that you are abroad; they are usually very accommodating in providing flexible interview date options in such scenarios); and (2) asking for Skype or phone interviews (though before you ask for this, you should know that few schools offer this method and that it may be more advantageous to interview in person as face-to-face interaction is generally more memorable).

# DUAL DEGREE PROGRAMS

## MD/PhD, MD/MBP, MD/MPH, MD/MPP, ETC.

If you have a clear idea of how you would like to apply your expertise as an MD to another field, such as basic science research (MD/PhD), business (MD/MBA), public health (MD/MPH), public policy (MD/MPP), law (MD/JD), etc., you may want to consider pursuing a dual degree. In general, if you are interested in earning one of these Master's degrees, you can apply once you are already in medical school (medical students pursuing a Master's typically take one or two years off between their second and third years).

If you are interested in pursuing an MD/PhD, the timeline will be the same as the MD only application. Unlike Master's dual degrees, the MD/PhD application process is much more demanding.

### What are the main differences between MD/PhD and MD-only programs?

1. Research is required for MD/PhD programs. The entire PhD degree (3-5 years) is completed between the "pre-clinical" and "clinical" years of medical school — this typically means between the second and third years of the traditional MD program.
2. Instead of the 3-6 required letters of recommendation for MD-only programs, MD-PhD programs ask for 4-6 letters, one of which should be from a research principal investigator (P.I.).
3. MD/PhD programs are fully funded and provide a living stipend. Do NOT pursue such a program solely for financial reasons! The research requirement will not go over well if you lack a genuine passion for it.





# | LETTERS OF RECOMMENDATION

In general, MD programs ask for 3-6 letters and MD/PhD programs ask for 4-6 letters (for the latter program, one of your letters must be from your P.I.). This should go without saying, but keep the letter writers to non-family members (immediate or extended), even if it is a deeply meaningful relationship with someone who works in medicine.

## Who should I ask to write me a letter of recommendation?

The most important questions you should consider when deciding who to ask:

- Who knows you well?
- With whom have you developed the strongest and most meaningful relationships over time?
- Who could best highlight your core qualities, specifically those outlined in the [AAMC's 15 Core Competencies for Entering Medical Students](#)?

Given the priorities outlined above, if you are deciding between two professors who know you equally well, you may want to “cover your bases” and show diversity in your academic and extracurricular endeavors.

## What is an example list of letter writers?

- P.I. from your research lab
- Basic science professor (in biology, organic chemistry, physics, etc.)
- Professor from a non-basic science or non-science course (English, psychology, etc.)

- Someone with an MD who can comment on the alignment of medicine to your skills, personality, abilities, etc.
- Coach, club overseer, faculty advisor, volunteering coordinator or group liaison, etc. (Someone not necessarily with a PhD/MD who oversaw you in a leadership, volunteering, or teamwork position over extended period.)

In general, aim for two basic science professors, one MD letter, and let the remaining two optional letters be from other individuals who can best write about you. Do not forget: three letters are perfectly adequate. As is the case for most portions of your medical school application (and as we have said before), it is crucial for you to understand the need to emphasize quality over quantity!

## When should I ask?

One of the biggest mistakes pre-meds make is asking for their letters from professors when they are applying for medical school instead of immediately after the course. For example, if you just finished taking physics in the fall of your junior year, interacted well with the professor and did well in the course, ask for a letter at the end of that term! You always have the option to update that professor later once it is time to apply to medical school. Do not wait until you are applying to medical school to ask; for even if your professor remembers you, s/he will likely have forgotten details about your interactions.

In general, letters from junior/senior year courses are better than those from freshman/sophomore courses since they are more recent in your college career, reflect higher level coursework, and usually come from smaller class sizes. If, however, you maintain contact with a freshman professor and s/he knows you well, there is no issue with asking them to write for you.

### What does it mean to “co-sign” a letter?

Pre-meds often find it difficult to establish a relationship with a science professor due to large class sizes. If you are finding it difficult to spend time with a science professor (even after visiting office hours and asking questions in class), co-signed letters provide a solution.

Large science classes are usually broken down into smaller sections, each taught by a Teaching Assistant (TA) — different schools use other terms like Teaching Fellow or Teaching Aid. TAs are usually graduate students, and because you meet much more often with them than your professor, you can likely develop a closer relationship with your TA. In this case, you can ask your TA to write, or at least outline, the majority of your letter, because s/he can provide the detailed anecdotes that make an exceptional letter possible.

You would then also ask your professor, through your TA, to co-sign the letter. The TA would forward his/her letter to your professor, who would then edit that content and add a paragraph or so on his/her direct interactions with you.

This scenario provides the best of both worlds: the detail from your TA and the big name backing from your professor’s PhD/MD/etc. The cosigned letter is not an excuse to avoid meeting with your professor. In fact, you should view it as a means of getting your foot in the door to meet with him/her a few times throughout the semester.

Another common example of co-signed letters is in the lab setting. Most undergraduates work more closely with a graduate student or postdoctoral fellow than with the P.I. In these cases, you may feel the P.I. cannot adequately describe your qualities and experiences in the lab. Thus, a solution is to have your direct mentor, who knows you well, to write a

detailed letter for you, and to ask your P.I. to co-sign the letter. This means s/he will either put his/her signature on the same letter that your direct mentor wrote, or even better, s/he will add a paragraph or more from his/her direct interactions with you.

### Is there anything I should provide my letter writer with?

For most letters, you should offer to provide your letter writer your résumé and ideally a copy of your personal statement for medical school. Most professors are so busy that you can even offer to provide a bulleted list of anecdotes that are specific to your interactions with them and their course. This makes it easier for them to recall moments that they can include in your letter. Just be careful of seeming too eager to provide this information, since they do not want to feel like you are trying to write your own letter. On the other hand, you should try to make the process as easy for them as possible. It is a tricky balance to find, just be aware that every individual will approach the request differently.

After your letter writer finishes the letter, make sure you thank them! They have donated their precious time to writing a letter for you and are doing so solely because they want to help — so be sure to write them a genuine thank you card.

## What are the different types of letters that the AMCAS accepts?

### Committee Letter

Many college institutions help their students organize their letters of recommendation into a committee letter (sometimes called a “composite letter”). This means that instead of having each of your letter writers individually send a letter to the AMCAS, your letter writers will send their letters to your pre-med committee/advisor, who will then compile all your letters into a cover letter. Your institution will then send that cover letter, usually bundled with a packet of your letters, directly to the AMCAS.

Check with your college to see if they provide committee letters — and if they do, try to meet with your actual committee letter writer (and ideally develop a close relationship with him/her throughout college) so he/she at least has a face to associate with the cover letter being written for you. These committee letter writers are often very helpful mentors/advisors.



### Letter Packet

Your institution’s career center may help you compile your packet of letters. The main difference between the committee letter and letter packet is that only the former includes a cover letter which represents your institution’s evaluation of you.

### Individual letter

As the name implies, in this situation each of your letter writers would directly send his/her letter to the AMCAS. The accepted formats are below:

- [AMCAS Letter Writer Application](#)
- Mail. Letters should be mailed to:  
AMCAS  
Attn: AMCAS Letters  
AAMC Medical School Application Services  
P.O. Box 18958  
Washington, DC 20036
- [Interfolio](#)
- [Virtual Evals](#)

### What is the deadline for letters of recommendation?

Deadlines for letters depends on the type of letter your institution will send:

- For committee letters and letter packets, check with your institution to see when they have their own internal deadline (it will be earlier than the AMCAS deadline). These types of letters will usually have deadlines around March/April of the year you are applying (note this is before you submit your primary AMCAS application).



- For individual letters, make sure you provide your letter writers at least eight weeks of time to write the letter so that they can brainstorm, write, and send their letter to AMCAS in time. Next, you should check the length of time that your letter service requires to process and deliver the letters. Additionally, you should keep in mind your letters will not be filed into your application the same day that they arrive to the AMCAS. Their staff there will sort through letters as they come in, so it may take a few days or a few weeks for your letter to formally be filed into your application. **The AMCAS begins accepting letters on June 1** (i.e., the AMCAS starts accepting letters on the same day the AMCAS opens for application submissions).

While most of the AMCAS cannot be altered once you have submitted your application, your letter entries in your AMCAS are an exception. In other words, you can still change the details regarding your letter writers even though you have already submitted your coursework, biographical information, activities, and personal statement. Also note that your letters will not prevent your AMCAS from being “verified” (see “AMCAS” section for more on verification).

If the AMCAS receives your letters “early” (i.e., while your application is still being verified), they will hold onto those letters until your application is verified and ready for sending. This is the ideal scenario. You want to avoid the opposite situation in which the AMCAS receives your letters “late” (i.e., after your application has already been verified) because your medical schools would receive your application without getting access to your complete assortment of letters. Most medical schools will not even look at your application until it is marked as complete, which means that all letters have been submitted.

### Am I allowed to read my letters?

No. The AAMC requires that you waive your right to see your letters. This is crucial because you need your letter writer to be completely honest with the medical schools. Hence, make sure you can be certain that your letter writers are genuinely interested in helping you get into medical school. Do not ask for them to send you a copy of the letter.



# | THE AMCAS APPLICATION

## What is the AMCAS?

The American Medical College Application Service (AMCAS), commonly referred to as the “primary application,” is the application portal that is used by the vast majority of US medical schools. It is loosely analogous to the Common App you used for applying to college.) This is your chance to make your “first impression,” since through your AMCAS you will upload your college coursework, activities, personal statement, and biographical information.

## Do all medical schools in the US use the AMCAS?

Almost all US Doctor of Medicine (MD) medical schools use the AMCAS. However, most schools in Texas use the [Texas Medical and Dental Schools Application Service](#) (TMDSAS) and Doctor of Osteopathic Medicine (DO) schools use the [American Association of Colleges of Osteopathic Medicine](#) (AACOM).

## When can I create an account with AMCAS?

The AMCAS opens on May 1st in the year of your application cycle. This means you can open an account and start filling in your application on that date (although you should have been working on your personal statement for a few months prior). For example, you would start your application in May of 2018 for medical school matriculation in the fall of 2019.

## When should I aim to submit my AMCAS?

The earliest your AMCAS can be submitted is on June 1st in the year of your application cycle. The earlier you submit, the better your chances of acceptance at schools that use a “rolling” admissions model.

## What does it mean for AMCAS to verify my application?

Once you submit your AMCAS, it does not go directly to medical schools; it takes anywhere from 1-4+ weeks for the AMCAS staff to go through the coursework you entered to verify that you have categorized your courses correctly according to your official transcript. This verification process is another reason why you should submit your AMCAS early; this helps you avoid the queue that grows through the late summer and early fall.

## Medical schools list deadlines as late as October or December. Why do I need to submit my AMCAS as early as June?

Most schools use a rolling admissions process, so applying early puts you at a significant advantage. The earlier you submit your AMCAS (the first and fundamental part of your application), the earlier you can receive (and return) your secondaries, the earlier you can receive interview invitations, and, ultimately, the earlier you can receive admissions decisions.

To put it another way, the earlier you submit your secondary applications, the more interview slots there will be remaining and the greater your chances will be of securing an interview. The earlier you interview, the more positions will be available for that medical school’s incoming class and the greater your chances will be of securing a seat!

## Where can I find the official guide to filling out the AMCAS?

You can find tools and tutorials, including the most recent version AMCAS applicant guide, on this [website](#).

## AMCAS: COLLEGE COURSEWORK

There are far too many colleges in the US for the AMCAS to track down exactly which courses satisfy the pre-med requirements, so it is up to you to categorize your coursework into the AMCAS. This section is one of the “busywork” aspects of the AMCAS, but it is crucial that you fill it out accurately and thoroughly.

For instance, if you incorrectly categorize your course “Public Health in the 21st century” as a Biology course instead of a Health Sciences course, or if you list your grade for a course as an A instead of an A- as it appears on your official transcript, the AMCAS may return your unverified application to you and ask you to make the relevant corrections. Generally, small mistakes are fine and they will make the changes for you, but any large number of incorrectly labeled or categorized courses could be a problem. Any delay prevents medical schools from seeing your file, which in turn prevents them from sending you a secondary, and in turn decreases the chance they will see your application while they still have secondary and/or interview slots available.

### Does the AMCAS require my official transcript?

Yes. Note that one crucial component of applying early means having your official transcripts sent to the AMCAS on time — unofficial transcripts are of no use. You should be in contact with your registrar to find out the best time to ask for your transcripts to be sent (usually in the spring right after classes have ended). If you will have graduated by the time you apply, make sure your registrar has your correct email address in case they need to contact you.

### I have a slump in my grades that was due to issues in my personal life/health; is there somewhere in the AMCAS where I can explain?

If there is a genuine reason for a slump in your grades, there is indeed a spot in the AMCAS primary where you can explain the situation. It is okay to open up here about personal events in your life; the admissions officers know being pre-med intersects with your daily and personal life and will keep your information strictly confidential.

Keep your explanation succinct, non-flowery, and straightforward. If you can tell your reader about what happened that semester/year in a direct way, your honesty will come across. Without writing an autobiography, give a realistic explanation for what occurred, what you learned from it, and how you showed improvement moving forward.

To emphasize: a succinct length is crucial here. Give enough information to communicate what happened, but know that any superfluous wordiness can make you sound like you are making excuses. Final advice: avoid playing the “victim” role or coming across as a “sob story.” Instead, take ownership of the situation and demonstrate what you learned from it in future semesters. See more on this topic in the section titled “Questions Asking You to Elaborate on your AMCAS.”

### What are the potential course categories?

Check the [AMCAS course classification guide](#). This should give you a sense of how you should be categorizing your coursework. Certain courses will be difficult for you to categorize, in which case you should ask your registrar, pre-med advising office, or professor to determine the correct category. For instance, a biotechnology course should be categorized under “biology” but a biomedical engineering course should be categorized under “engineering.”

## AMCAS: ACTIVITIES

In all portions of your medical school application, but especially here, it will pay great dividends to have kept a running list of all your college activities (volunteering, research, clubs, sports, leadership positions, awards, etc.). Include specifics on the most memorable aspects of each experience, as this will help significantly when it is time to frame your life story in your personal statement (and later on, in secondary essays and interviews).

### How many activities can I list?

The AMCAS has an activities section for you to list up to 15 of your activities. You will be given 700 characters (including spaces) per activity description. Do not feel obligated to fill out all 15 activities, especially if you are only doing so to fill up space!

Note that the activities section also includes categories ranging from “research” to “honors/awards/recognitions” and from “hobbies” to “athletics.” The dropdown menu for categorizing your activities also distinguishes between clinical work versus non-clinical work (or as another example, clinical volunteering versus non-clinical volunteering). “Employment” is included as well.

You will be asked to indicate up to three of your activities as ones that were “most meaningful” to you. For these, the 700 character description is increased to 1325 characters (including spaces) to explain why each of these activities was meaningful, what qualities/traits/skills you learned from each one, values you demonstrated, etc.

### What will the AMCAS ask for regarding my activities?

The AMCAS will ask you to list your dates of involvement (MM/YY-MM/YY) and total hours (this is why it is important for you to keep a running log as you are involved in these activities, to avoid retrospective guesswork). You will also be asked to provide a contact name, organization, phone number, and contact email for each activity you list.

### Can I list high school activities in my medical school application?

Try not to. In general, keep the activities to only those you have participated in since the beginning of your freshman year of college. Including high school activities may make it seem like you are trying to fluff up your application.

It is, however, acceptable to include an activity that you began as a high school student and then continued through college. In rare circumstances, extraordinary high school accomplishments can also be included, especially if they are relevant to your college and/or medical pursuits.

### How do I decide which activities are my three most meaningful?

When you are deciding which of your activities are most meaningful to you, it is a bit of the same strategy as choosing people who will write your letters of recommendation. Look for quality of the experience over quantity of hours accumulated. Where did you make the biggest impact and develop/demonstrate traits that are applicable to becoming a physician? (Again, check the [AAMC's 15 Core Competencies for Entering Medical Students](#) to make sure you are covering your bases to the best of your ability.) If you are still torn in your decision, consider choosing the three activities that will show a diversity in your interests — academically and otherwise.

## AMCAS: THE PERSONAL STATEMENT

You will get 5300 characters (including spaces) to answer the quintessential question, “Why do you want to be a doctor?” The actual prompt will go something along the lines of:

**Why do you want to study medicine?**

**What factors have motivated you toward a career in medicine?**

**Why are you particularly suited to this career?**

**How does the medical school personal statement compare to the college personal statement?**

The medical school personal statement is different from your college personal statement in that medical schools are looking more for a straightforward, direct answer to the prompt rather than a flowery, autobiographical essay. Altogether, you want to provide a well-written statement that flows well, highlights the main points of your unique story, and shows that your writing is at least at a college level.

**How can I write a personal statement that does not repeat what I wrote for my three most meaningful activities?**

This is a very typical dilemma. You should write your personal statement before your activity descriptions, so that your story in your personal statement is cohesive and seamless. Your most meaningful activities should only be included in your personal statement if they were an integral part of your decision to study medicine.

The most meaningful section in your activities can be used to emphasize other anecdotes that you did not have the space to address in your personal statement. It is more important that your personal statement is cohesive and representative, so put your most important anecdotes from these meaningful experiences in your personal statement first and use additional anecdotes in the activities section.

**Are there sample personal statements to get ideas from?**

Reading through others’ personal statements is a good way to get started. Ask pre-med or medical school friends who you know well if they would be willing to share their essays with you. Since there are so many possible approaches to writing this statement, reading samples can help you develop a wider perspective on how to frame, present, and craft your essay with each additional essay you read. If these resources are not available to you, Vanderbilt Medical School provides a helpful set of several [sample personal statements](#) on their website. While you are reading sample statements, remember to not get caught up in competing with those essays — compare yourself to only yourself to avoid feeling stressed from constant comparisons with other pre-meds.

Note that you may hear from other pre-med advisors that it is actually a bad idea to read other people’s personal statements, because it may skew your perception or influence your writing. This attitude certainly may have its advantages, so pursue this route if you feel comfortable and confident enough to write your own story without needing to view others’ statements.

## How do I collect writing materials through college?

First, it is never too early to start your personal statement. Once you actually sit down to write your statement, you will find it very helpful to draw from the notes you have (hopefully) been jotting down through college. Even a few phrases that describe an interesting case you saw in a class or hospital can vividly spark your memory.

An effective personal statement will include more anecdotes than self-laudatory description; in other words: show, do not tell. For instance, you risk sounding non-substantive if you write something like, "Working in a lab taught me how to be a team player" because that is simply telling the reader. In contrast, showing the reader exactly the same idea will come across as more genuine because it will demonstrate those qualities by example. For instance, you could replace the previous sentence with: "When our lab's PCR machine broke down, I organized a collaboration with our neighboring lab so that members of both labs could share their machine." If you have been collecting these types of notes through your college/postgrad experiences, you will have an excellent database of material to choose from.



## What are some general tips for the personal statement?

### 1 Avoid the “laundry list” essay.

This type of essay briefly recaps each of your experiences. This reads too much like an annotated résumé and lacks substance and emotion. Instead, combine your most impactful experiences, moments, or passions (no more than three; otherwise you risk spreading yourself too thin) into one powerful story.

### 2 Do not overuse the thesaurus.

Instead of sounding academic/intelligent, you will just confuse your reader and come across as a bad writer. Try to make sure every word fits with the tone and composition of your essay.

### 3 Cut down on wordiness.

This is one of the most time-consuming parts of editing. Once you are sure on the skeleton of your essay (i.e., your basic outline is set in stone), go through your essay to comb out unnecessary words. Ask yourself, “Is this word absolutely necessary to get the main point of this sentence across?” Then apply the same question to each of your sentences, and then to each of your paragraphs. You only have a finite amount of characters to put your lifelong career aspiration in one single essay; every character in your personal statement should earn its right to be included!

### 4 Use proper English. (You are a college student; write like one!)

Avoid repeating specific words/phrases. Avoid using contractions. Triple check for grammar and spelling mistakes.

### 5 Avoid convoluted sentence structures.

Rather than impressing the reader with your complicated train of thought, you will merely confuse them. Opt for succinct sentences that communicate one (or maybe two) main concepts at a time.

### 6 Start early (by January or February of the year you are applying).

Accept that your first draft will be rough, no matter what. It is important to get your rough drafts out of the way ASAP so you can move on to better versions of your statement.

### 7 Ask several friends/advisors/medical students to review your essay.

The more people you can get to read your essay, the better. Three types of people will likely provide the most helpful feedback:

- People who know you well. These individuals can help you decide how to structure the basic outline of your essay and tell you honestly how genuine your essay sounds. They will know if you are doing justice to your true life story. Ask people who will not hold back from providing you with constructive criticism.
- People who know the application process well. Your pre-med advisor(s) and friends who are already in medical school probably have seen a fair number of personal statements. They can give you pointers about what kinds of phrases are used (or not used) in the medical field.
- An English or writing seminar peer or professor who is unaffiliated with science or medicine. Their feedback can help ensure that your essay is well-written and flows for every type of reader.

# DECIDING WHICH AND HOW MANY SCHOOLS TO APPLY TO

The medical school application will be similar to college applications in that you should have three tiers: reach, target, and safety schools. However, note that the concept of “safety schools” does not necessarily apply to medical school admissions since the process is more difficult (and even more random) than college admissions.

In deciding which schools make up each of your three tiers, you will want to consider each school’s culture, grading system (pass/fail vs. normal letter grade), research opportunities, local community involvement, average GPA/MCAT scores, location, cost, in-state vs. out-of-state tuition, curriculum, and many other factors listed throughout this handout. The [MSAR](#) (available through the AAMC’s website) is a fantastic resource that congregates every medical school’s (MD and DO) fundamental information in one place.

You need to balance how many “reach” schools you want to apply to with your willingness to spend additional money. The more schools you apply to, the more expensive the application process will become (you need to pay \$38 for each school you want the AMCA sent to, \$80-120 for each secondary application, and interview travel expenses as well).

## Should I use the ranking systems online?

You will probably be tempted to go off of national rankings, namely the [US News and World Report](#), but there are many other factors to consider. In that sense, you may hear pre-meds referring to another ranking system called [Startclass](#). This ranking system allows you to filter medical schools by median GPA, location, tuition, etc.

There are many things to consider when picking a school. Some students heavily rely on family and/or a strong support group during school, so location is key. Other students focus on finances so minimizing loans becomes their top priority. At the end of the day, all medical students are taught the same content and prepare for the same standardized exams.

## On average, how many medical schools does a pre-med apply to?

In recent years, the average number of medical schools that students apply to has been around 20-25. This number has been increasing rapidly over the past couple of years; for instance, the average was just 14 schools per applicant in 2011. You can look at the AAMC’s most recent [table](#) of US medical school applications and matriculants sorted by school, state of legal residence, and sex for 2016-2017.

## Can I apply to medical school more than once?

Plan on applying to medical school just once (same attitude for taking the MCAT — just once). All letters, essays, classes, MCAT scores, etc. need to be in peak condition (in terms of quality) and presented in the best possible manner (through essays, interviews, etc.) the first time around. Telling yourself that you have the option to reapply can lull you into a false sense of complacency and thus not maximize preparation for your application cycle. We strongly recommend putting “all of your eggs” towards comprehensively preparing your application the first time around. If you do apply a second time, medical schools will see that you did not get into any schools in your initial attempt. For this reason, in addition to creating unnecessary expenses, reapplying can increase your risk of not being accepted unless there are significant changes within your application. All things considered, many students reapply every year, and many are accepted.



## | SECONDARIES

After the AMCAS staff verify your primary application, they will pass your application on to the medical schools you indicate. Some schools give out secondary applications (also called “secondary” or “supplemental application”) to all their applicants, while others have a screening process to decide who will receive a secondary.

The most important and time-consuming part of the secondary application will be the set of additional essays from each school. Some schools will also ask you to categorize your coursework according to their own system of pre-med requirements.

When writing secondaries, make sure you do some research by reading about each school on their website. You should look up the facilities and resources they offer, the type of community structure they have, their location, mission statement, curriculum, etc. After getting a sense of their program, try to include specific reasons in your essays as to why you would be a good fit for their school.

It is easy to fall into the trap of explicitly restating website info such as curriculum highlights or school promotional material in your essay. The admission committee knows everything about their own school; there is no need to advertise their highlights to them. Your goal in perusing a medical school’s website should be to find unique information that resonates with your background, develop a general sense for the mission and culture of the school, and see how you fit within these aspects. If at any point you find yourself writing things that apply to numerous schools, take it out of your essay.

Schools usually do not change their prompts from year to year, so it is a good idea to begin pre-writing your secondaries after your AMCAS submission (i.e., while you are waiting to be verified). This is especially true if you have a busy summer and are juggling your application with a job/research/etc.

### **What are some example secondary essay prompts?\***

1. Why are you applying to this school specifically?
2. How will you contribute to diversity on our campus?
3. Which area of medicine do you see yourself working in? (By “area of medicine,” they do not mean specialty but rather public health, health policy, academic medicine, primary care, etc.)
4. Tell us about a time you failed/felt challenged/had to deal with criticism?
5. Tell us something you are passionate about.
6. If you have taken time off between your undergraduate and medical education, please elaborate?

\*You can find previous secondary prompts for nearly every US medical school through the [prospectivedoctor.com](https://www.prospectivedoctor.com) online database.

# | THE INTERVIEW

## What are some helpful readings I can do before the interview?

### 1 Refresh (or read up on) medical ethics terminology.

- A. Take a medical ethics or bioethics course if you have room in your schedule.
- B. If you cannot fit such a course into your schedule, Wikipedia is a good place to start, if you type in "[medical ethics](#)."
- C. The University of Washington School of Medicine has some great information on [bioethics](#) as well.

### 2 Refresh (or read up on) the US healthcare system.

- A. Understanding how our medical system is structured in the United States can help prepare you for a medical interview of any type (MMI or traditional).
- B. Bonus points if you can compare the US healthcare infrastructure with that of other countries (this is where your Atlantis experience comes in handy).

### 3 Maintain up-to-date background knowledge on current events in medicine and politics.

- A. Staying aware of political events (US and worldwide) comes with being an informed citizen.
- B. Good health columns to follow include:
  - [Health section](#) of The New York Times
  - [Health section](#) of The Washington Post

### 4 Read a few books by well-recognized physician-writers.

- A. One well-known example is Dr. Atul Gawande, who writes an excellent column for the New Yorker.
  - One particular article you should read is his "[The Cost Conundrum](#)," which addresses the issue of healthcare costs in the US
  - [Being Mortal: Medicine and What Matters in the End](#)
  - [Better](#)
  - [Complications](#)
- B. [The Emperor of All Maladies](#) by Siddhartha Mukherjee
- C. [The Spirit Catches You and You Fall Down](#) by Anne Fadiman
- D. [Memoirs of a Debulked Woman](#) by Susan Gubar
- E. [The House of God](#) by Samuel Shem

### Should I send thank you notes after my interview?

Yes. Serving on an admission board is usually done on a volunteer basis, so you want to show your interviewers that you appreciate their time. For traditional interviews, you should send one letter per interviewer, either by postal mail (handwritten card) or email is fine. You do not need to send individual thank you letters to MMI interviewers. If you do not have your interviewer's contact information, send your letter to the admissions office and they will relay it to your interviewer(s).

For email, many students will write their letter in a MS Word document and save it as a PDF file before attaching it to an email. This helps with ensuring that formatting does not depend on the viewer's version of MS Word.

Regarding content, you want to be detailed but efficient; three paragraphs is a good limit. Thank each interviewer, recall specific commonalities that came up during your interview, briefly demonstrate your fit for their program (mention specifics you took away from meeting faculty and students), and reiterate interest in the program. More than anything, it should be a genuine thank you message to express appreciation for their time.

Note that some schools will ask you on interview day to not send in thank you cards, in which case you should be respectful and refrain from doing so.



## THE TRADITIONAL INTERVIEW

### What are blind/closed-file versus non-blind/open-file interviews?

Not all schools will inform you of this upon receiving an interview invite, but there are closed-file (blind) and open-file (non-blind) types of traditional interviews. This refers to whether or not your interviewer has read your AMCAS application.

It is helpful to know beforehand if your interview is blind or non-blind because in a blind interview you may feel like you are “repeating” the AMCAS application when, in reality, you are not repeating yourself at all since your interviewer has not seen your application. In a non-blind interview, you should try to emphasize what you have done since submitting your secondary application.

If it helps alleviate your stress, you can try emailing the school beforehand so you have an idea of the dynamic to expect. Or, you can always ask the admissions office on the morning of your interview when you show up to their office. At the very latest, you should check with your interviewer at the start of the interview.

### Who will my interviewer be and what should I expect?

Your interviewer will be either a faculty member or current (usually third or fourth year) medical student. Many schools will give you one faculty member and one medical student interviewer. Each traditional interview usually lasts 30-45 minutes. It is crucial you approach the student interview with as much professionalism as the faculty interview, no matter how relaxed/informal your student interviewer appears to be. The medical student and faculty member carry equal weight in assessing your candidacy.

No matter how your interviewers present themselves, do not feel intimidated! They are treating you the same way they treat all other applicants. Sometimes this means putting you in stressful situations to see how you respond, and other times this means developing a freeflowing and open conversation. Some interviewers prefer a more formal interview with a strictly segmented Q&A format without much, if any, dialogue in between. In this case, answer each question fully with a clear finish and do not feel pressured to merge questions together.

Finally, one of the best tips for interviewees is to be a good listener. You should not feel that any second your mouth is not moving is a second wasted. Your interviewer will likely have responses/anecdotes to your answers, so let the conversation develop without interrupting your interviewer. If anything they say interests you, keep a mental note and follow-up on the topic when the opportunity arises.

### How should I approach and practice for the interview?

With the traditional interview, try to aim for a conversation more than an interview, but do not stress if this does not happen. If your interviewer wants to spend 90% of the time talking about your opinion on how to lower healthcare costs, do not feel like you need to shift the conversation back to your AMCAS. Go with the flow. Interviewers are hugely diverse in how they assess candidates, so try your best to go off the vibe of your interviewer. They will guide the conversation in whatever direction they see fit.

Be sure to identify and correct whatever quirks you may have when practicing for your interview. In addition to thinking about the content of your answers, maintain good body language — make regular eye contact, maintain good posture, do not fidget, etc. Here are some good ways to practice for your interview:

- 1** Try a few mock interviews with friends, family members, advisers, medical students, physicians, or anyone else you can find.
  - A. Have them time each of your answers in addition to the overall time, so you know how many minutes you are dedicating to particular answers. Cut down on answers for which you feel you are rambling and brainstorm on expanding answers for which you feel you finished too early.
- 2** Hold a dress rehearsal at least once before your interview: dress up in your formal suit to make sure you will be physically comfortable.
  - A. E.g., Do those new dress shoes pinch your toes; does your skirt bunch up when you sit down?
  - B. Ideally, you should wear your interview outfit for every mock interview you do. This will help you become accustomed to wearing this type of clothing.

- 3** Record yourself responding to some of the most frequently asked questions (still wearing your interview outfit).

- A. Watch the video playback (awkward as it can be) and be on the lookout for bad body language, fidgeting, lacking eye contact, etc. Listen for verbal ticks and ensure you are fluctuating your tone enough like when talking to a friend (be aware of answers that make you sound like a robot).



## PRACTICE TRADITIONAL INTERVIEW QUESTIONS

**The first question many interviewers begin with is:  
“Tell me about yourself.”**

This question is more difficult to answer than you might think. While you do not want to sound rehearsed, you should prepare for this question by providing your interviewer with a brief outline. The ideal way to answer this question is to make it as easy as possible for your interviewer to follow up on any single thing you say and turn it into a natural, free-flowing conversation. You should keep your answer under about two minutes to avoid sounding rehearsed. You can try this template:

1. Start with where you were born/grew up.
2. Briefly describe what experiences initiated your interest in medicine.
3. Talk about one or two college activities (not necessarily medically-relevant) that you are most passionate about (e.g., research/volunteering/club/hobbies/experiences abroad).
4. Explain what you are currently doing while applying.

### Questions assessing your decision to pursue medicine

This is your chance to apply all that hard work on the AMCAS in a face-to-face, real interaction — so this is when you want to be as memorable as possible. Tell your story with the passion/gusto/energy that made you decide on a medical career in the first place!

There is a fine line between feeling prepared and sounding rehearsed — one tip is to break down your story into a skeleton outline made up of bullet points that you should memorize before the interview. Once you actually deliver your complete answer, leave some of the details up to the moment.

It is also okay if you feel you are repeating what you wrote in your personal statement — chances are if your interviewer is bothering to ask you this question, s/he has not read your application, has forgotten it amongst the large pile of other applications, or that medical school uses blind interviews (i.e. your interviewer has not been granted access to your application at all). Even if your interviewer has already seen your application, take the opportunity to deliver your story in person. Hearing you speak about your passion for medicine in person is much more powerful, personal, and memorable than reading about it.

1. What initially made you interested in medicine?
2. What experiences have most motivated you to pursue medicine?
3. Why do you want to become a physician?
4. How are you qualified for the challenges of a medical career?

## Questions about your personality/character traits

Generally, for the questions that ask you for a particular instance of a failure/challenging situation/etc., be prepared with some anecdotes drawn from your college/postgrad experiences. Sometimes you may find that an anecdote that happened before college will be appropriate, but in general keep your anecdotes to those that have happened since freshman year of college.

A question that asks you to talk about something negative (e.g., your weaknesses, your failures) has an unspoken subtext that is really asking you to elaborate on how you are working to improve said weakness, or what you learned from said failure.

Do not forget to be genuine with your weakness/failure — i.e. if you feel your weakness is that you are a perfectionist, do not make it sound like you are just repackaging how high achieving, determined, hard-working you are (all positive traits) into an apparent “weakness.”

This is merely a cheap stunt to reiterate to your interviewer how flawless you are. Choose something you truly want to improve on, without sounding like you have a serious character flaw. Like many aspects of this process, answering this question requires finding a delicate balance between two extremes.

In describing your strengths, do not be modest! Choose a facet of your character that you are proud of, and while you do not have to sound arrogant in your delivery, do not forget the interview is a chance to sell yourself. The best way to get this across while not sounding arrogant is to illustrate your strength with succinct anecdotes, not just big words pulled from the thesaurus. Remember to show, not tell.

1. Describe your strengths and weaknesses.
2. How would a friend describe you?
3. Describe a challenging situation, difficult decision, or obstacle you encountered, and how you dealt with it.
4. Tell me about a time when you got into a conflict with someone else. How was it resolved?
5. Tell me about a time when you had to compromise.
6. Tell me about a time when you made a mistake. What did you do and how did you correct it?
7. What was the most stressful situation you have ever faced? How did you handle it?
8. Tell me about a time when you collaborated on a successful project.
9. What has been your biggest failure, and how did you handle it?
10. How do you work under pressure? Give an example. What, in hindsight, were you most dissatisfied with about your performance? What did you learn from your experience?
11. What have you done that shows initiative? What did you gain from that experience? How were you most/least satisfied with that endeavor?
12. How do you respond to criticism? Describe a situation in which your work was criticized. What was your immediate reaction to the situation?
13. Describe a situation in which you felt like a fish out of water.

### Questions about your college experiences (coursework, research, extracurriculars, etc.)

This is probably one of the easiest types of questions to prepare for — choose a few college courses that you most enjoyed and prepare a set of experiences through these courses to elaborate on. For instance, select a few experiences in a science course or two that sparked your interest in the academic aspects of medicine. Also think about some challenging experiences outside of science that spurred academic growth.

Regarding research, have a fluid elevator pitch you can use in case your interviewer asks about your research. Keep two forms of your elevator pitch handy — one for a lay audience, in case your interviewer wants the simplest version, and one for a scientific audience, in the likelier case you will have a chance to impress your medical faculty/student interviewer with your work. On the other hand, do not feel pressured into forcing your interviewer into a conversation on your research if your interviewer does not seem too interested or is not asking many follow-up questions after your initial description.

Questions regarding your college extracurriculars are your chance to talk about your passions outside of medicine. Your outside interests may actually be the highlight of the interview — many of your faculty interviewers will be accustomed to asking the generic “why medicine” questions and will pounce on the opportunity for a more entertaining conversation. If they seem genuinely interested in your interests, do not feel you need to speak 100% about medically-relevant topics. This may be the conversation topic that separates you from the typical experiences that most pre-meds have.

1. How have you enjoyed your undergraduate experience? What would you change?
2. How did you choose your major?
3. What non-science courses did you like the most?
4. What was your most difficult college course, and why?
5. Was there a particular course in college that most interested you?
6. Tell me more about your research.
7. What extracurriculars were you involved in?
8. Tell me something you are passionate about.





## Questions assessing how informed/committed you are about your decision to apply to medical school

If money, status, lifestyle, etc. are your main reasons for applying to medical school, it will show in these questions. Make sure you emphasize that your decision is not only well-informed, but also well-thought-out and that you understand the sacrifices you are making with this career choice.

One particularly tricky question to answer is “If you could not be a physician, what career would you choose?” While you want to be genuine when answering this question, be wary of taking it to one of two extremes. Saying you have not even considered other fields can make you sound naïve or closed-minded. On the other hand, making it sound like you would easily go into another career can make you sound flippant in your medical school decision. Respond with the implication/tone that you have considered, perhaps even already worked in, other careers and are convinced medicine is the right fit for you. Some people would recommend that you avoid explicitly stating any profession besides a physician because implying you are aware of “other careers” is sufficient to show you are open-minded. However manner you choose to answer, be sure to end your response by emphasizing your conviction that medicine is for you.

1. If you already know, what field(s) of medicine are you most interested in and why?
2. Where do you see yourself in 10 years?
3. Which area of medicine do you imagine yourself working in? (E.g., academic medicine, public health, health policy/administration, or primary care)
4. If you could not be a physician, which career would you choose?
5. Why choose medicine over some other career in health?
6. How do you imagine the balance of research and clinical work in your future?
7. What do you think you will find most difficult about medical school?
8. Describe your ideal strategy for addressing [current event (may or may not be medically relevant)].



## Questions assessing your knowledge of the medical field

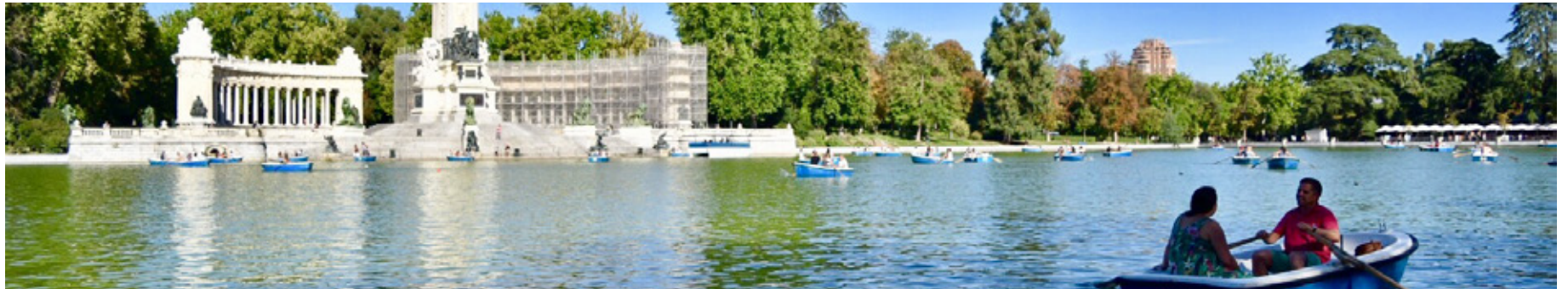
Ideally, you will have taken some college coursework on the intersection of medicine with business/economics/politics/ethics/etc.; if not, do some reading on the US healthcare system, public health, health policy, etc., so that you are at least familiar with the terminology. One tip for preparing for these types of questions is to do some reading on current events in medicine — the health/science column from the New York Times is a good place to start. You may be asked about non-medically-relevant current events too, so it does not hurt to keep informed on world and US news as well.

1. What is the biggest challenge that is facing the medical field today?
2. What are the negative aspects of being a doctor?
3. How could you change the healthcare system?
4. What do you think is the most important quality a physician should have?
5. How do you see the field of medicine changing in the next 10 years?  
How do you see yourself fitting in?
6. How can we address the high cost of healthcare in the US?

## School-specific questions

You should be able to draw from your previously-submitted secondary materials to prepare for this type of interview question. If you are truly passionate about an institution, you should read online about their facilities/resources, community structure, location/nearby city, mission statement, advising resources, curriculum, etc. Be prepared to speak (at length) about why this particular institution is appealing to you. However, be wary of regurgitating info from the school's website to your interviewer. If, at any point, you find yourself saying things that could apply to numerous schools, this is a sign you are wasting precious time in your answer and likely giving a response full of clichés. Note that doing research on the medical school applies to writing school-specific secondaries, too.

1. What makes you particularly interested in this school?
2. (If this institution is far from your hometown) How will you ensure you have a strong support network through medical school, in light of being so far away from home?



## Scenario-based questions

Here, the interviewer is not just checking if you have a strong moral compass, but also if you have a knowledge and an awareness of medical ethics. Common sense is not enough for you to deliver a stellar answer; your interviewer is also seeing if you know medical ethics terminology. Are you aware, for instance, of the difference between paternalism and patient autonomy? (If either of those terms are unfamiliar, start with a Wikipedia search on medical ethics terminology.)

In answering these questions, succinctly outline your action plan. It is crucial that you do not forget to explain your actions with your reasoning — this is where you need to incorporate the medical ethics. For questions that are clearly between two parties, show that you are considering pros and cons on both sides of the issue/conflict. For questions that are asking you to choose a side, do not sound wishy-washy in an attempt to seem you are considering both sides — make it clear you have considered both, but ultimately choose one side and be clear in your reasoning. At the end of the day, physicians need to make decisions and stick by them, no matter how difficult they are. Show that you have the ability to reason through these challenging cases and be confident in your choice.

1. Did you always know you wanted to go into medicine?
2. How did you decide on your specialty?
3. School-specific questions (“What do you believe are the strengths of this school?” “What is it like living/training in medicine in this city/town?”)



## THE MULTIPLE MINI INTERVIEW (MMI)

An increasing number of schools are adopting the multiple mini interview (MMI), which these schools believe is a more objective means of assessing communication skills.

### What is the MMI?

Imagine a row of eight rooms\* with closed doors. A sheet of paper with a prompt is taped to each door. You and seven other applicants will be asked to stand outside each door, facing away from the paper.

- 1** The prompter will announce over the intercom that it is time for all of you to turn around.
  - A. You will all be given about two minutes to read the prompt (each prompt is different) and prepare your thoughts. Most schools allow you to take notes on your response.
- 2** Once the two minutes are up, the prompter will announce over the intercom that you may enter the room.
  - A. You will each enter your respective room and present your thoughts to a “rater” (or actor; see below for types of prompts) for about eight minutes.

- 3** Once the eight minutes are up, the prompter will announce over the intercom that time is up and you need to leave the room. Some schools tell you it is okay to leave the room early if you are done presenting/discussing with the rater.
  - A. You will stand outside your room and wait for all applicants to exit their rooms.
- 4** The prompter will announce over the intercom that you may walk to the next station and stand with your back to the door. The cycle starts again until all eight applicants have finished all eight stations.

\*Depending on the school, there will be about 6-9 stations, each with its own prompt.

### Does the MMI differ amongst the schools that use it?

Some schools ask their raters to turn the response time into a discussion, while other schools simply ask their raters to grade your presentation (so they will not interact much with you). Some schools will emphasize that it is okay to finish early. For schools that do not mention finishing early, you should try to fill up the full time without babbling or fluffing your response. Some schools allow you to take notes for your response, while others do not permit any pen or paper. You can check with the medical school admissions staff the morning of your interview to see what kind of specific dynamic you should expect at that school’s MMI.

## What are the different types of MMI prompts?

**Some prompts will put you into a role-playing situation in which the rater is an actor.** For these prompts, you will be explicitly told in the prompt that the person on the other side of the door is an actor and that you should be acting during the session as well.

- E.g., This is a role-playing MMI station. You are a physician and the actor in the room is playing a patient's mother who wants to persuade you to keep the patient's prostate cancer diagnosis from him. How would you respond to this request from your patient's mother?

**Some prompts will ask you to present on a case/ethical dilemma.**

- E.g., Do you think recreational marijuana should be legalized (from an ethical, political, economic, and social perspective)?

**Some prompts will ask you to share your past experiences regarding failures, obstacles, conflicts, etc.**

- E.g., What is one time you saw a friend do something unethical and what did you do about it?

**Some prompts will pair you with another applicant to observe how you work with others.** A common one is with Legos. You will be sitting back-to-back with the other applicant. In front of you will be a random structure built from Legos that the other applicant cannot see. Your partner will have a pile of unassembled Legos in front of them. As you sit back-to-back, you will need to verbally describe the structure and your partner will need to try his/her best to recreate the object. Even though you cannot see each other, you can both communicate verbally.

- In such a scenario, the point is not to see which team gets the most accurate resemblance to the actual object; it is to see how well you can communicate in terms of giving directions, dealing with confusion, working through misunderstandings, etc. At the end of the session, you will be asked to discuss your interaction with each other, as in what you feel were the strengths and weaknesses of your communication together. Two raters (one for each of you) will be in the room with you, observing and taking notes of both the building session and discussion session.
- Do not worry about being paired with someone who is bad at giving directions (and thus keeps you from building the structure), or someone who is bad at building (and thus keeps you from seeming like you can give good instructions), because you will get a chance to rotate to the other chair with a new partner as the next station.

## Taking a side

Certain MMI questions ask you to take a side. For instance, a common MMI example is, "Should recreational marijuana be legalized?" Although you need to show you are aware of the various issues involved, it is a bad idea for you to try to seem like you are choosing a middle-ground compromise. Doctors have to make difficult decisions on a daily basis, and at the end of the day you need to give either a yes or no answer. For this marijuana example, you should say either yes or no, and then support your answer and stick to it.

This is why the two minutes for reading the prompt before you enter the room are so critical. You should not only outline the arguments for your side, but also anticipate the counterarguments and address them with appropriate rebuttals. Successful MMI responses address opposing views while supporting the chosen stance. This demonstrates that you can commit to a decision that is nonetheless well-informed.

## PRACTICE MMI QUESTIONS

(Meant to be practiced under timed settings.)

**For each station: read and consider the prompt for two minutes (note-taking allowed); speak for eight minutes**

1. You are the director of a financially struggling hospital. You have been unable to generate enough revenue to implement some very important initiatives at the hospital and are at risk of inevitable service cuts if more funding is not secured immediately. The only secure source of funds that is being offered is by a cigarette company. They are willing to provide your hospital with all the resources required in exchange for advertisement at your facility. What will you and should you do as the hospital director?
2. You are a specialist who has just received lab results with regard to one of your patients. The results indicate that your patient, a single mother of two young boys, has been diagnosed with a terminal cancer and that she will only have 4-6 months to live. There are not many treatment options aside from a few experimental procedures that are still under study. There are some alternative treatments available in Europe; however, they have not been validated by scientific studies in North America. What would you say to your patient once they are in the office? If an alternative treatment, without scientific evidence for its efficacy, existed for a terminal illness would you recommend it to a patient?
3. You are the father of a 12-year-old boy. Your son's friend, who is also your neighbor, is playing with your son in the backyard. As you approach them to ask them about lunch, you notice some severe bruises on the friend's arm and upper neck. You are worried about these obvious signs and decide to approach your neighbor (the young boy's father). How would you approach this situation? What would you say to the father of the young boy? What are some potential concerns that you may have?
4. You enter the cafeteria at work. You sit down to eat with a group of male colleagues who are having a conversation about a female colleague of yours. The comments they make are not very professional and can be deemed rude and offensive. You feel very uncomfortable. What do you do? What do you say to your male colleagues? If this became a regular occurrence, even after you speaking to your colleagues, what other steps would you take to resolve the situation?



6. Due to the shortage of physicians in rural communities, it has been suggested that medical programs preferentially admit students who are willing to commit to a two or three-year tenure in an under-served area upon graduation. Consider the broad implication of this policy for health and healthcare costs. For example, do you think the approach will be effective? At what expense?
7. Role-playing station: Your best friend, Jennifer, calls to tell you that she has been rejected for the third time from all medical schools that she had applied to during the previous application cycle. She invites you over to her house to have a chat about her future plans. Go inside the room and speak with Jennifer.
8. You are a research supervisor and you notice that one of your graduate students has been sleeping in the lounge area within the research facility. Because your student is a recent international student, she cannot afford to rent a place of her own with her student stipend. You are aware that the facilities safety policies prohibit overnight stays. How do you approach the student about this?
9. You are a PhD student and your supervisor, Professor Harry, has recently published the results of his publicly funded research project with the intention to commercialize his discovery. What are your views about university professors that use public funding to create for-profit solo ventures?



## | PRE/POST INTERVIEW UPDATES

If you feel a substantially important activity (for instance, a research publication, significant recognition, new job, etc.) can boost your chances of receiving an interview invite or acceptance offer, you may want to consider sending your top choice school(s) an update.

First, check if that school even accepts updates. Some schools will be direct and tell you they do not accept updates until a certain date, for instance. If they do not mention anything, keep your update short and to the point. Some schools have a special part of their online application tool for updates, while others just use email.

You do not want to inundate any particular school with mundane updates. An A in a course is not a significant enough achievement to merit an update. (Note that if you are applying straight through as a senior in college, most schools will want an updated academic transcript after the fall semester, so be sure to send that in some capacity.) If you do in fact have updates worth sharing, consider the timing of when those updates would be the most effective:

- In late fall/winter if you still have not received an interview invite.
- In early spring if you already interviewed and are waiting for the final decision.
- In late spring through summer if you are trying to get off a waitlist.





# | WHAT HAPPENS NEXT

## GETTING DEFERRED/WAITLISTED/REJECTED/ACCEPTED OR DEFERRING YOUR ACCEPTANCE

### What does it mean to be deferred, and is there anything I can do to maximize my chances of getting accepted?

In some cases, medical schools will want to compare you with a wider applicant pool before giving you a decision. This will most often occur with “rolling” schools that send out their decisions in batches. Regardless, any medical school in the US can only defer their decision until the March 30th deadline. By that date, you should be notified if you have been rejected, accepted, or waitlisted. If you have been deferred, there are two main things you can do to maximize your chances of acceptance:

- 1 If you have accomplished something significant since being deferred, send in an update letter (see section titled “Pre/post-interview updates”).
- 2 If this school is your absolute dream school, write a succinct but sincere letter of intent to the institution explaining that it is in fact your dream school. Be careful of sending this letter because you should keep your word and actually matriculate here if you are accepted. Do not write a “cookie cutter” letter that could be sent to any school; sincerity cannot be faked! Some things to consider when writing this letter are:
  - A. How does the school’s culture appeal to you?
  - B. How is the school’s location favorable to you (e.g., is family nearby)?
  - C. Are there any specific individuals at this school who have made a big impact on you?

### What does it mean to be waitlisted, and is there anything I can do to maximize my chances of getting accepted?

Unfortunately, there are only so many spaces at each medical school. Fortunately, out of common courtesy, most applicants who have been accepted to more than one school and know for sure where they want to attend will notify the remaining schools that they will not be attending that institution. This opens up spaces in the class for waitlisted students.

You may receive a waitlist decision for schools with rolling admissions at any point from a week to months after your interview. The last date you could possibly receive a waitlist decision is March 30th of your application cycle. One month later, on April 30th, applicants across the US who have received at least one offer will need to select one school to matriculate to. This means that in the interim between April 30th and the first day of medical school (usually sometime in August), waitlists are still actively moving around.

Here is a true story about a previous applicant: Jane drove cross-country from Los Angeles to Atlanta, planning to start medical school at Emory while remaining on the waitlist at UCLA. Just before she reached her highway exit in Georgia, she received an email from UCLA indicating that she had been offered a seat in the class. So Jane drove to the nearest gas station, filled up her tank, drove all the way back to Los Angeles, and started medical school in LA instead! This should give you a sense that waitlists still move around quite actively every summer.

In terms of maximizing your chances, your options are similar to what you would do if you had been deferred (update letter or letter of intent). Some medical schools specifically ask waitlisted applicants not to send in any updates, stating that these updates will not make any difference in a waitlist position. Other schools, however, expect to receive further correspondence after a waitlist decision. Otherwise, if the school provides no clarification and it is your dream, it cannot hurt to let them know how strongly you feel about their institution.

### If I am rejected, what happens next?

If you have received a rejection but are still waiting to hear back from other schools, keep your head up! Consider sending in an update or intent letter to your top choice if you are still waiting to hear back from them. A majority of the time, correspondence with a school ends after a rejection. That being said, a few schools do provide constructive feedback on why you were rejected if you request this information. If you are rejected from all the schools you applied to, you have two main options:

- 1** You can apply again in a future cycle.
  - A. Note that medical schools will know you have unsuccessfully applied once before. If you choose to reapply, you should be aware that unless there are significant changes in your application, you may get the same result in another application cycle.
  - B. Alternatively, if you pursue a new opportunity that addresses the weaknesses of your previous application, it may prove to medical schools how determined you are to become a physician. Many applicants reapply every year and are successful, so if medicine is truly your lifelong dream, keep your head up!

- 2** You can look into pursuing a different career — in healthcare or otherwise. See section titled “Alternatives to the MD degree.”

### If I am accepted, what happens next?

Congrats! Celebrate and do not forget to thank the people in your life who have helped you achieve this step. Here are a few things medical schools will ask you to do before starting school:

- 1** Submit your financial information, so schools may send you possible need-based financial aid packages.
  - A. Your financial aid to-do list will include the FAFSA and other school-specific forms, which you should submit sometime in late winter/early spring. Check with the school(s) that accepted you to make sure you have completed all their financial forms.
- 2** Before you matriculate to a school (unless it is a dream school for which you would pay any amount of money to attend), wait to receive financial aid offers before you commit anywhere.
  - A. Your decision may be swayed by how much funding you may receive.
- 3** Join the admitted student Facebook groups of school(s) you have been admitted to.
  - A. These are usually moderated by current medical students who are a great resource if you are trying to decide among schools.

- 4** If you can afford the transportation, visit as many Second Look Weekends (SLWs) as possible.
- A. Medical schools host these events during weekends in April to provide accepted students with a better picture of life at their institution.
  - B. Some medical schools will even cover your roundtrip transportation for you.
  - C. These events are especially helpful if you are deciding among multiple schools. And to be honest, since the schools are trying to recruit you, the weekends aim to impress/spoil you – so it is a great way to meet your peers in a much more relaxed setting than interview day!
- 5** When you are set in your decision, notify the other schools that accepted you that you are withdrawing your acceptance.
- A. This way they can offer spots to their waitlisted applicants.
  - B. Do this as soon as possible; put yourself in the shoes of a student hoping to get off of a waitlist.
- 6** Make sure you matriculate to just one school by April 30th.
- 7** Figure out your housing/rooming/car situation for next year.
- A. Some schools offer on-campus housing so make sure you apply on time.
  - B. Refer to that school’s admitted student Facebook group to help with such tasks.

- 8** If you were waitlisted at your dream school, you will still be able to change your matriculation after April 30th if you are offered an acceptance by that school.
- 9** The summer before medical school:
- A. Some medical schools will have a required reading list or suggest you brush up on certain coursework (usually biochemistry).
  - B. Otherwise...relax/read/write/work/unwind/travel/spend quality time with family and friends.
  - C. CELEBRATE!

#### What does it mean if I am “deferring my acceptance”?

If you have been accepted to a medical school and you know you want to attend but not until a year (or more) later, you may have the option to defer your acceptance. This means your medical school will hold a spot for you until you are ready to begin your medical education at that institution. This situation may apply to you if you are already committed to another position (work, study, or otherwise) for the upcoming year. Keep in mind schools tend to prefer that applicants do not defer their acceptance (it creates more work for all involved and can get disorganized if you never actually start your medical school education).

# | COSTS OF APPLYING TO MEDICAL SCHOOL

## Application costs for a typical medical school applicant

	ITEM	COST
MCAT & MCAT Prep	MCAT registration fee	\$300
	MCAT prep course (average priced course; note some of these courses include the AAMC practice exams below) (optional)	\$2,000
	AAMC official practice exams (3 available)	\$35 per exam
	Other practice materials (e.g., AAMC MCAT Section Bank, ExamCrackers books, etc.) (optional) See section titled "Acing the MCAT" for other practice materials	\$45+
Application Fees	AMCAS primary application submission fee (first school)	\$160
	Supplementary AMCAS submission fee for each additional school applied to	\$38 per school
	Secondary submission fee (varies with each school)	\$0-150 per school (most are ~\$100)
	Transcript fee (depends on your college/university registrar)	\$5-8 per transcript
	Letters of recommendation (depends on your school's letter system — individual or committee/letter packets)	\$0-6 per letter
Interviews	Interview transportation (flights, trains, buses around the US; cabs/Uber to and from airport, etc.)	\$1,000 (varies with # and location)
	Staying with medical student host	Free
	1-2 nights in a hotel (optional)	\$30-70 per night
	Interview day outfit (varies with partial additions vs purchasing entirely new)	\$0-400+
<b>TOTAL</b>	Total (assuming applying to ~20 schools around the US) • \$300 MCAT registration • \$38x19 (total of 20 schools applied to) • \$1,000 (interview transportation) • \$2,000 MCAT prep course • \$100x10 (assuming 10 schools offered you a secondary) • \$100 (interview day outfit) • \$35x3 AAMC practice exams • \$5x2 (sending in two official transcripts at \$5 each) • \$160 AMCAS primary	~\$5,400

## What are some cost-saving tips?

- 1** Check if you are eligible for the [AAMC's Fee Assistance Program \(FAP\)](#).
  - A. This will waive many fees involved in the application, including the MCAT, AMCAS, and school application fees. Transportation funding is also available in some instances.
- 2** Group your interviews by region so you only have to make long-distance flights once.
  - A. E.g., group your New England, California, or Texas school interviews into a manageable span within a few days/weeks of each other so you complete all of them in a single trip.
- 3** Instead of booking hotels, stay with student hosts.
  - A. Almost all medical schools will offer some sort of hosting program in which current medical students will host interviewees. It is a great way to get an authentic inside look into what life is like as a student at that particular institution.



# FINANCING YOUR MEDICAL EDUCATION

## How much does medical school cost?

Understandably, medical school debt is significant:

- A. The total annual expected cost of attendance (tuition, transportation, housing, books food, various fees, etc.) for most medical schools is usually somewhere between \$30,000 and \$90,000.
- B. The median cost of four years of medical school was \$278,455 for private schools and \$207,866 for public schools (according to the AAMC in 2013).
- C. The average debt per medical school graduate was \$170,000 (according to the AAMC in 2013).
  - Do not forget that depending on the type of loan, interest can accrue on this amount through internship, residency, etc.



## Are there any scholarships available?

Unfortunately, unlike many college institutions, far fewer medical schools offer merit-based aid.

Here are a few full-ride merit scholarships:

- [The David Geffen Medical Scholarship](#) at the David Geffen School of Medicine at UCLA
- [The Twenty-First Century Scholars Program](#) at the Perelman School of Medicine at UPenn

Need-based aid is more common than merit-based aid, though this is still not at the amounts given by undergraduate institutions. Your medical school need-based financial aid package will be calculated with pre-determined formulas that rely on information you submit through some of the following forms:

- FAFSA
- CSS Profile
- Tax returns, W2 forms, Parents/guardians' income information, etc.

The deadlines for these financial aid applications are usually in February of the year in which you would matriculate. Most medical schools include a financial aid information session during their interview day and/or second look weekends, so you should contact those schools specifically if you need more information on any special forms they require.

Most students will need to take out loans, a process which the financial aid offices at your accepted medical schools will help you navigate.

## Are there any government-sponsored programs that will cover my medical education?

### National Health Service Corps (NHSC)

- A. This is a US government-sponsored program that repays up to \$60,000 in loans for awardees who commit to working in “Health Professional Shortage Areas” for 2-4 years after graduation.

### Health Professions Scholarship Program (HPSP)

- A. This is a US military-sponsored version of the NHSC where the military decides where you will be based for 9 or more years after medical school (does not include residency; includes one year of pre-residency training, four years of active duty service and four years spent on reserves).

For more ideas on other potential scholarships/funding opportunities, you can read about potential scholarships for the medical schools you are interested in applying to, ask your pre-med advisors, and browse online.



## | A NOTE ON CHOOSING A MEDICAL SPECIALTY

If the reason you are applying to medical school is primarily driven by a personal story that has already sold you on a particular specialty, by all means share your conviction honestly through the personal statement and interviews.

Otherwise, contrary to popular belief, you do not need to apply to medical school with a clear idea of what specialty you want to pursue. While it is okay to lean toward a certain field or two, make sure you are aware that you do not yet have a truly comprehensive picture of any specialty. This is true regardless of how much shadowing and volunteering you have done. Medical schools know that whatever exposure to the field you have had as an undergraduate, or even postgraduate, pales in comparison to the type of work you will do as a medical student on your third-year rotations. In most cases, even medical students do not decide on a specialty until the end of their third year.

At least for now, do not worry about sounding convinced about a specialty for your medical school application. In fact, trying to seem so sure about a specialty could work against you in that you may seem naïve to commit so early without a proper breadth and depth of clinical experiences. Do keep an open mind through your shadowing/volunteering experiences, because the impressions you are getting of the various departments can lay a foundation for your decision down the road. What is most recommended is that you have a general overview of various specialties, and some specific, tangible reasons for why you are interested in them.

Bottom line: your specialty choice is liable to change as you proceed through medical school, but it can only help to be informed of what the various specialties are like.





## | DEALING WITH SETBACKS AND STAYING POSITIVE

It is very normal to encounter stressful periods on the road toward becoming a physician. Perhaps you will disappoint, at one time or another, your friends, family, teammates, club members, or professors. It is impossible to consistently fulfill all of your commitments. Other pre-meds may seem to have their lives perfectly together with résumés headed toward stellar outcomes. Similarly, you may feel frustrated from feeling like a “cookie cutter applicant.” Other pre-meds will also have volunteering, shadowing, research, etc., and you may feel that you need something entirely unique to stand out.

This is not to mention the non-pre-meds who will seem to be having tons of fun or at least relaxing while you are juggling coursework, volunteering, shadowing, club involvements, research, etc. After graduating from college, most students will enter the “real world” with an income and more free time compared to the typical medical student. Such factors may cause your medical school commitment to feel like an overbearing sacrifice.

Yet, although it may be easier said than done, try to embrace this attitude:

Everyone has their own priorities and approach to life. What is most important is that you are content with — and confident in — your own path. If you are able to do this, dealing with moments of uncertainty or doubt will become much more manageable.

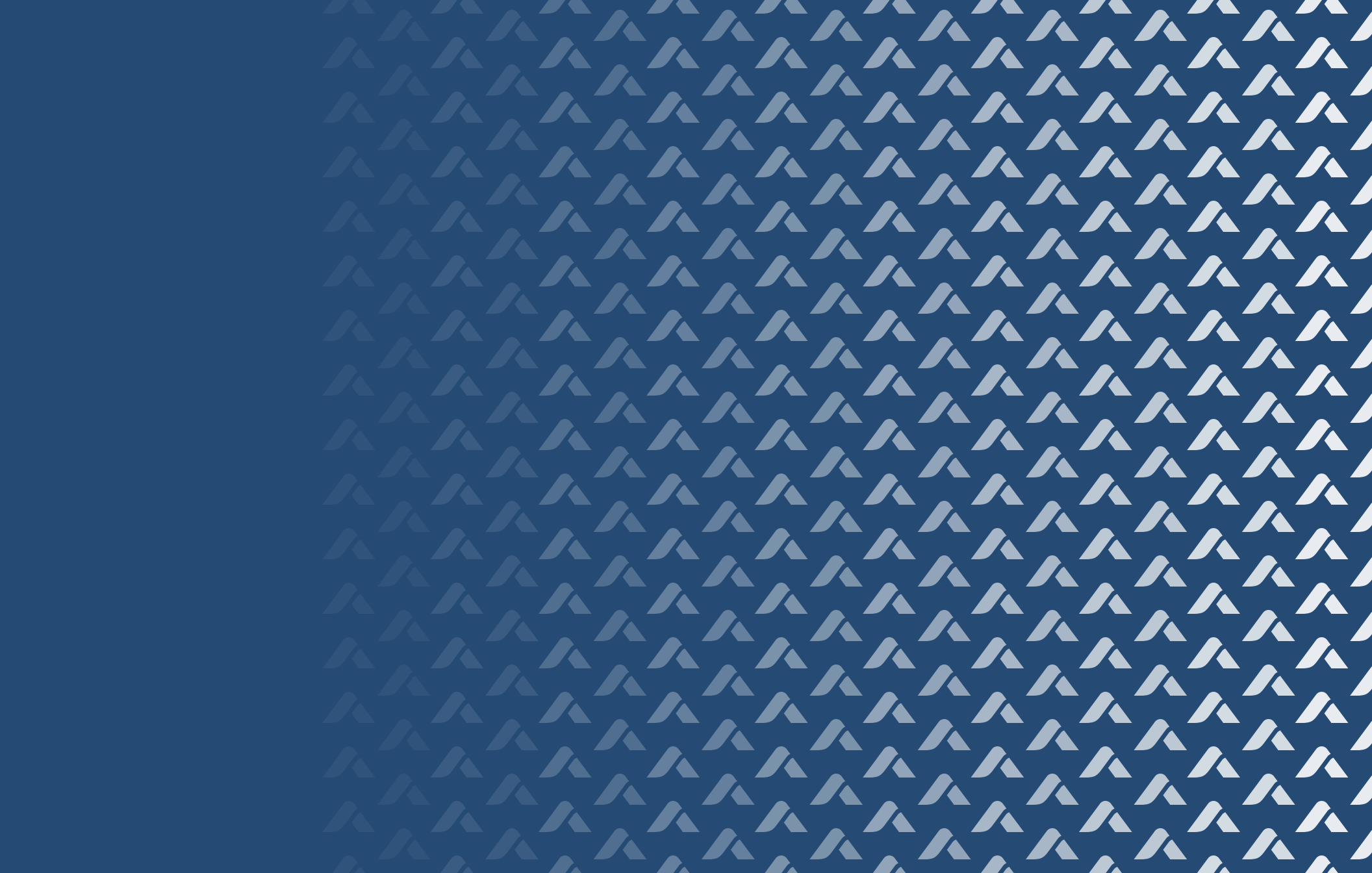
In the times you feel down, remember that dedicating your career to medicine is one of the most meaningful and impactful decisions you can make. What other profession allows you to apply a detailed science background to interpersonal relationships with genuine compassion? As a physician, you can make a real impact through your work, whether that means serving the community you grew up in, providing aid in a rural area where medical care is desperately needed, helping address the health problems of a bustling city, diminishing healthcare disparities through international cooperation, pushing the boundaries of medical knowledge through research, modifying healthcare at the policy level, ushering in a new medical procedure or technique, writing new rules on medical ethics... the list goes on and on.

Regardless of your ultimate path, working as a part of the medical community is one of the most rewarding, gratifying, and fulfilling contributions you can make to society.

So keep your head up! We hope this handout will help guide your medical pursuits, and we wish you the absolute best in your pre-med journey and beyond!

**Our very best wishes,  
Alice and George**







# ATLANTIS

## **Atlantis**

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