

The Not So Short Introduction To Getting Into Medical School

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While preparing this document, I posted a message on the Student Doctor Network asking for reviewers. I got a lot of feedback. The people listed below helped with corrections, suggestions for new material and improvements on current topics. They put a big effort into getting this book into its current shape. Any mistakes that you find are my own. Anything that you find spelled correctly is because one of the following people sent me an email:

Sarah Abbott, Mark Anderson, Biodude, BrettBatchelor, C8H10N4O2Junkie, Baldeep Chera, David, Stephen Dreyer, Sally Hanson, Anthony Krueger, Russel Sequeira, Shahed, Michelle Wachuku, and Amanda Wiant

Preface

Welcome to the first step in becoming a doctor! No profession is more noble and time-honored than that of the physician. However, no program is also harder to get into. Applying to medical school is by far one of the most difficult, time-consuming, and expensive process among all graduate school admissions. This mini book will give you a jump on the competition. It details every step of the application cycle—and what you should do ahead of time to be prepared. Written entirely from personal experience, I can attest that the methods set forth in *The Not So Short Introduction* will make you stand out amongst your peers.

Unlike other books on applying to medical school, I pull no punches in stating that the admissions process is one of the most frustrating endeavors you will ever undertake. As you will see, medical schools put more weight on things that do not really demonstrate a person's aptitude for medicine. If you don't believe me, just wait until you start applying.

In writing this book, I strove to make it a practical guide for applicants who are lost in the admissions process. I hope that I clearly outlined the steps you need to take to become the best applicant, what to write on your personal statement, how to prepare for an interview, and even how to pay for that expensive medical education. Almost all of the outside resources mentioned are freely available on the Internet. Only Appendix A lists online services that cost money.

Some people who read the *Introduction* will say that I'm a cynic—that I've become so jaded with the admissions process that I try to reduce the whole system into a neat formula. I would say that those critics are correct. However, the fault belongs entirely to the admissions committees themselves. They are the ones who stipulate that handing out lollipops to veterans once a week and calling it “volunteering in a medical establishment” makes a better physician than spending one's undergraduate years pursuing extracurriculars

that are not directly related to medical activities. If you think that there is a trivial difference between the multitude of possible extracurriculars that one can pursue in college, think again. What you do during those four years is the biggest determining factor as to whether or not you will get accepted to medical school.

Assumptions

I assume that the majority of people who read this book are high school or traditional college students. While any pre-med can follow the advice given in this manual, please remember that the advice contained within it was written based on my own experiences—I went from college straight to graduate school and then applied to med school during the last year of my master’s program.

Second, the advice given in this book is meant for people who are applying to allopathic (M.D.-granting) universities. While I’m sure that much of the material covered in the *Introduction* can be applied to Osteopathic (D.O.-granting) schools, I am only familiar with the allopathic system. I have included any differences between the application processes that I can think of.

Here are the chapter summaries:

Chapter 1 starts off the book with a quick look at the competitive medical application climate. You need to understand what you’re up against. This chapter also provides a unique explanation for the increase in the number of applicants over the past five years.

Chapter 2 tells you everything you need to know to become the Applicant of the Year. This chapter gives an overview of what medical schools are looking for, and just how you can give them what they want. You will get an introduction to memorization, speed reading, talking to professors, and joining the Big Three extracurriculars. With a background in the essentials, you’ll be able to tackle even the most intimidating admissions committees.

Chapter 3 gives you the game plan for applying to the right school that matches your status. It introduces you to the Competitive Score and also explains how to find information about possible universities.

Chapter 4 explains the application process in gory detail: from filling out the primary application to interviewing. This chapter gives pointers on writing the personal statement, taking pictures for the secondary, and traveling to your interview location.

Chapter 5 deals with the aftermath of the application: what you should do if you are accepted, waitlisted or rejected. This chapter gives an overview of what your responsibilities are whether you receive a thin or thick envelope.

Chapter 6 provides a closing to the book by giving you information on paying for school. Before you can make lots of money as a physician, you will have to go into immense amounts of debt to finance your education. This final chapter shows you the steps to taking out a loan, getting a scholarship, or going the public service route.

Chapter 7 was compiled by a guest author to address some of the concerns commonly expressed by nontraditional applicants and students.

The first time you read this guide you should go through the chapters in the order that they are presented. Later, this book can be used as a reference as you continue your pre-med journey. If you should ever need help, visit the forums on The Student Doctor Network at <http://www.studentdoctor.net> and post a message. You will find that the users of SDN are very helpful.

If you have any suggestions regarding material that should be added or modified, feel free to write me. I would especially appreciate comments from current medical students to see if their experiences were similar to mine. Also, I am interested in feedback from college freshmen about which bits of this manual need to be expanded. Since this book is released under the Creative Commons License, feel free to write your own chapters or sections. I will welcome contributions from guest authors.

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Chapter 1

An Approach to Admissions

1.1 Getting in is Tough

Before you apply to medical school—before you even think about becoming a doctor—you need to understand how the admissions process works. First, know that getting accepted is hard. Real hard. Last year, only 42% of applicants to allopathic medical schools got accepted.¹ Further, while the number of people applying to medical school continues to increase every year, the number of spots has remained rather stagnant during this time. See Figure 1.1.

These graphs indicate that there is a widening gap between the number of people who want to become physicians and the number of people who can realize that dream. In other words, getting into medical school is getting harder every year.

I pulled some data from the American Association of Medical Colleges (AAMC) and the *U.S. News & World Report's* annual rankings and summarize them in Table 1.1.² These numbers should be rather eye-opening.

The first column shows that the average applicant is applying with a 27, three points higher than the national average for test takers. Given that the national average for the MCAT is a 24, we can see that some people have already dropped out of the med school race just for being average. Now look at the second column. Of people accepted to all medical schools in the

¹<http://www.aamc.org/data/facts/2007/2007mcatgpa.htm>

²The most recent listing of the rankings I have is the 2007 edition. I don't foresee any major changes occurring in the near future to the numbers that I've listed.

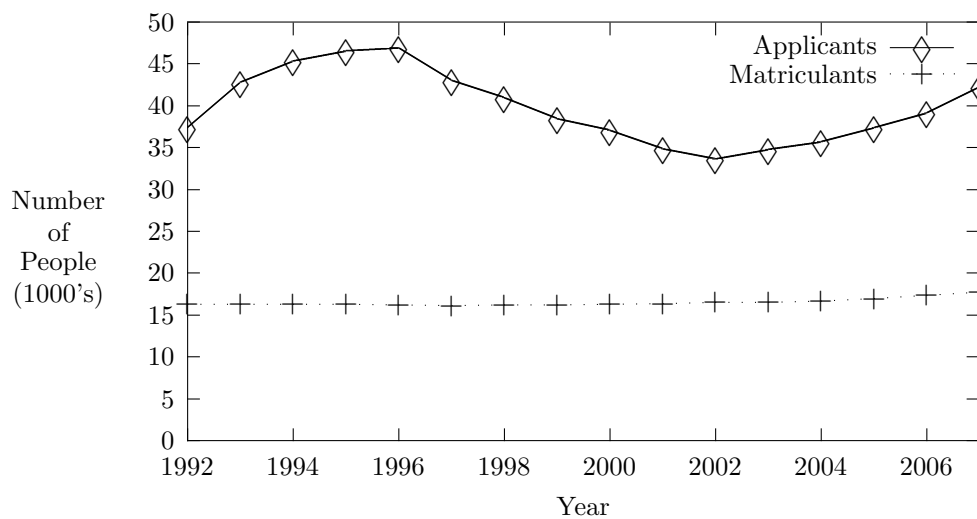


Figure 1.1: Number of applicants vs matriculants to allopathic medical schools from 1992 to 2007. This data was taken from the AAMC website.

Table 1.1: Comparison of the average medical school applicants and matriculants for 2007. The third column provides the average student data for the top 10 universities as according to *U.S. News & World Report*

	Applicants	Matriculants	Top 10 matriculant
MCAT, verbal	9.0 ± 2.3	9.9 ± 1.8	
MCAT, physical	9.2 ± 2.3	10.3 ± 1.9	
MCAT, biological	9.6 ± 2.2	10.6 ± 1.7	
MCAT, writing	O	P	
MCAT, total	27.8 ± 3.9	30.8 ± 3.1	34.4
GPA, science	3.39 ± 0.45	3.57	
GPA, non-science	3.62 ± 0.32	3.71	
GPA, overall	3.49	3.64	3.77

country, their average scores were an additional 3 points higher than the people applying. Now look at the last column. Of applicants matriculating to top 10 programs, their average MCAT was almost 4 points higher than all medical students combined. You'll also notice that the GPA gets higher as one progresses from applicant to accepted to accepted at a top 10 program.

The story doesn't stop there. In addition to having strong numbers, you'll need to show admissions committees that you have "soft" skills, too. As far as I can tell, the most common extracurricular activities that admissions committees are looking for are research, volunteering, and clinical experience. You can't fake your way through these. Signing up for a week-long summer trip through the Andes to tame the savages isn't going to impress anyone, especially if your parents paid for you to have a sheltered trip.

In short, you've got to do a serious evaluation of your competitiveness of getting into medical school. The good news is that Chapter 2 provides you with all of the information you need to build your resumé. But the story doesn't end there. You also need to make sure that you have a valid reason for becoming a doctor.

1.2 Are You Going Into Medicine for the Right Reason?

I want you to look at Figure 1.2. It shows the changes in the American gross domestic product over time.³ You can instantly spot the tech boom and stock market bubble of the late 90's. You can also see the recession of 2001 and the slow economic growth thereafter. Various reasons are thrown out for the decline and subsequent rise in applicants over the past decade. Some theorists point to malpractice insurance or even T.V. shows. While there might be some validity to these claims, I have a different idea: economics. Instead of claiming that pre-meds are following malpractice trends, I maintain that people are following the money.

Whatever the trend in the U.S. economy, there is a 3-year delay in the actions of the applicants. Compare the information from the Bureau of Economic Analysis website to the top graph in Figure 1.1. When the economy is strong—as it was during the latter half of the 90's—entering college students realized that they could make a quick buck in computer science. Instead

³Information taken from <http://www.bea.gov/national/xls/gdpchg.xls>

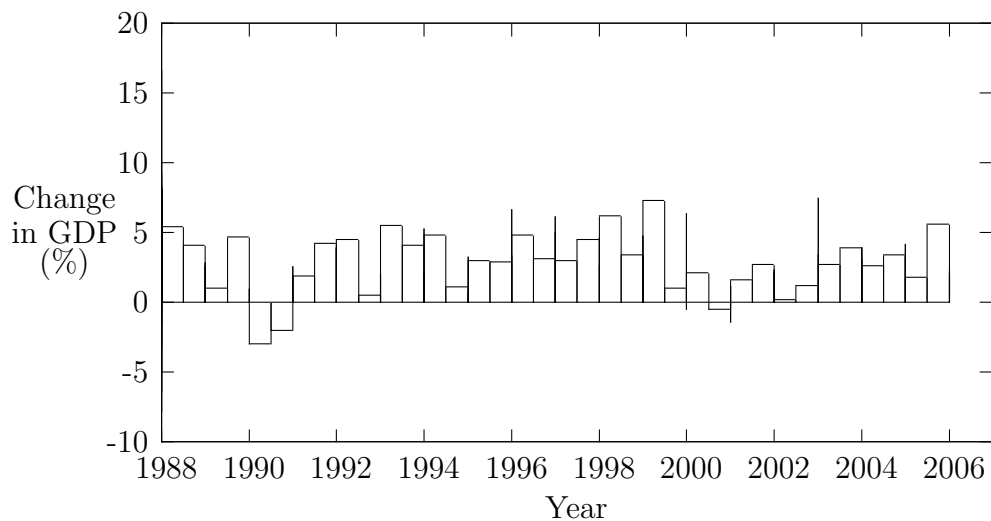


Figure 1.2: Change in the gross domestic product for the United States from 1988 to 2006.

of killing themselves with pre-med courses, followed by rigorous training in medical school, followed by more training in residency, people realized that they could quickly achieve similar earnings by learning how to write code. All of the people who would have originally pursued medicine to get rich bailed out and chased after the tech boom. After the market bottomed out, the next round of college students realized that the safety of the Internet bubble was gone and that they could go into medicine for a stable, predictable income.

As of this writing, the the nation is headed towards an another recession. My prediction is that in the coming years, the number of applicants to medical school will continue to increase until it reaches a plateau around 2009 or 2010. At that time, if the U.S. economy starts growing, the cycle will be repeated as college students once again realize that jobs in business and engineering yield high incomes without sacrificing 10 years to achieve the same result.

I then ask you: are you going into medicine for the right reasons? Or are you looking to make a quick buck? Unfortunately, this book cannot answer that question for you. Given that there is an increasing amount of dissatisfaction amongst physicians with the current medical climate, I urge

you to carefully consider the reason why you want to be a doctor. If you decide that you want to pursue this route, then turn the page and let's get started.

Chapter 2

Becoming The Best Applicant

To get into the medical school of your choice, you will naturally have to be the best applicant when compared to everyone else. Given that only a third to a half of all applicants get accepted each year, you are going to have to prove yourself against the rest of the pre-meds. This chapter will tell you what you need to do before applying to become the top candidate. The sections that follow are ranked in their order of importance.

1. GPA (tie)
1. MCAT (tie)
3. Letters of Recommendation
4. Research (tie)
4. Volunteering (tie)
4. Clinical Experience (tie)
7. Leadership
8. Other Extracurriculars

You should strive to complete the higher listed items before moving on to the lower areas.

2.1 GPA (Tied for 1st)

Your GPA is the single best indicator to medical schools as how good of a student you are. Sure, people will always bemoan the problems of using grades as a factor for acceptance—that students who work full-time cannot study as much as students on loans, that a GPA does not say anything

about someone's personality, etc... However, admissions committees typically have thousands of applicants each year. The quickest way to separate the candidates is to look at the numbers. Further, the *U.S. News and World Report's* annual ranking of medical schools is based upon objective measurements such as GPA and MCAT, meaning that medical schools are going to use these numbers in determining who gets accepted. Therefore, you must do all that you can to increase your grades. Use the following bits of advice to boost your scores.

2.1.1 Memorization

Learning vast amounts of material that can be regurgitated on an exam is vitally important for most of the pre-med core classes. Sure, you may never see those organic chemistry reactions again, but for the four times each semester that you have your exams, you'll be required to pump out facts about the various ways that an acid can initiate the polymerization of various plastics. Medical school is even worse for requiring students to memorize verbatim lots of information that they'll never use again. Simply put, the key to success in most classes is to memorize everything you can.¹

I'm sure that when you were younger, you were required to memorize Shakespearian monologues or the capitals of U.S. states. You probably read over each sentence again and again until you could perfect Romeo's speeches. The good news is that you have already seen how much material you can memorize. The bad news is that you've been doing it all wrong. The correct way to go about memorizing is by reading the words *backwards*. Here's a demonstration. Look at this number:

75713650058

Cover up everything with a sheet of paper except the last digit, 8. Now

¹Memorization is important in organic chemistry and biology because so much of the material is fact-based. The techniques described in this section are worthless for physics classes. Physics is a unique subject where the student only has to memorize a minimum amount of equations; the rest of the course is based upon understanding and applying concepts.

slowly say, “eight,” aloud three times. Next, slide the paper over one digit and slowly say, “five-eight,” three times. Again, slide the paper over to reveal 058 and say, “zero-five-eight.” Continue the exercise all the way until the first number. Don’t try to get ahead of yourself by jumping two to three numbers at a time. Just continue working one number after another until you’ve finished. Once you’re done, test your new memorization skills by covering up everything once again and try saying the number aloud.

Are you impressed yet? Go ahead and try memorizing other random things just to get a feel for the backwards memorization technique. Practice on song lyrics and speeches. Just cover up everything but the last word and then work your way back to the beginning. For longer pieces of text, you may want to try memorizing only one paragraph at a time. Once you get the hang of it, you’ll be able to retain large volumes of material in a short amount of time. You can impress your friends by showing them that you can memorize the serial numbers on dollar bills within seconds of staring at the paper. This technique is not only useful for learning long numbers and speeches, but can easily be applied to biochemistry as well.

Most of the body’s functions are part of larger chemical cycles. Instead of starting with the first enzyme and working your way around the wheel, you should begin with the last step of the cycle, memorize that one chemical perfectly, move back one space and then memorize those two in sequence, and then back another space and so on. The key is to make sure that you have a particular piece fully committed to memory before trying the next item. For the number example above, don’t move to 50058 if you cannot say, “0058,” without effort. If you want to learn the theory behind this memorization trick, read Karen Pryor’s *Don’t Shoot the Dog!*² or you could go as far as taking behavioral and cognitive psychology courses.

As a final, cautionary note, **stay away from flash cards**. They are a waste of time to produce. Yes, some people do learn from them, but keep in mind that the time spent writing flash cards could be better spent working on memorizing the material. By the time your friends are done writing their cards, you’ll be finished studying if you follow the method I described here.³

²Available from Bantam Publishing, ISBN: 0553380397

³If you don’t like the backwards memorization technique that I described here, the book *Learn to Remember* by Dominic O’Brien (ISBN: 0811827151) details methods that use your imagination to create either sequential movies or static pictures of associations to help you remember things.

2.1.2 Speed Reading

Another useful tool for learning is speed reading. You'll need to wade through a lot of material very quickly whenever you read for pre-med classes. Like most people reading this manual, you're probably reading every single word in succession. Nicholas Schaffzin's *Reading Smart*⁴ is what I used to break this habit. There are plenty of other books on speed reading, but they all teach the same principle. Instead of looking at words as individuals, you should divide each line into three parts, glance at the sections, and then use your peripheral vision to pick up everything.

As an example, Figure 2.1 contains an excerpt from Herman Melville's *Moby Dick*. Read the paragraph as you would normally. Now move to Figure 2.2 and read the section again—this time by glancing at the bullets. At first this technique seems pretty odd. You'll need some time to adjust to the new style of reading. The more you practice, however, the better you'll get at speed reading. My own pace has doubled ever since I adapted to this method. Again, I only give a summarized explanation of how speed reading works. I strongly suggest that you pick up a book on the subject and learn from it.

2.1.3 Immediate Review

Whenever you get out of class, *immediately* go somewhere quiet and review everything that the professor covered for the day. You should re-derive all of the equations, rework the ways the molecules attach, rewrite the important definitions that were written on the board, etc... Neurobiologists have discovered that if you repeat the work done in class within one hour of seeing the material, the information will become part of your permanent memory! While I'm sure that after you get done with class, the last thing on your mind is more studying, but trust me when I say that the thirty minutes you spend reworking the lecture now will save you hours later.

One final note: medical schools would rather see a steady increase in GPA over semesters (i.e., 3.2, 3.4, 3.6, ...) than a steady decline (i.e., 3.6, 3.4, 3.2, ...). The former scenario shows that you are serious about your studies. The latter demonstrates that either the upper-division courses are too difficult for

⁴Available from Princeton Review, ISBN: 0679753613

Call me Ishmael. Some years ago—never mind how long precisely—having little or no money in my purse, and nothing particular to interest me on shore, I thought I would sail about a little and see the watery part of the world. It is a way I have of driving off the spleen and regulating the circulation. Whenever I find myself growing grim about the mouth; whenever it is a damp, drizzly November in my soul; whenever I find myself involuntarily pausing before coffin warehouses, and bringing up the rear of every funeral I meet; and especially whenever my hypos get such an upper hand of me, that it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people’s hats off—then, I account it high time to get to sea as soon as I can.

Figure 2.1: Read this section as you normally would

Call me Ishmael. • Some years ago—never • mind how long precisely—having • little or no money in my • purse, and nothing particular to interest • me on shore, I thought • I would sail about a little and see the • watery part of the world. • It is a way I have of driving • off the spleen and regulating • the circulation. Whenever I find • myself growing grim about • the mouth; whenever it is a damp, • drizzly November in my soul; • whenever I find myself involuntarily • pausing before coffin • warehouses, and bringing up the rear • of every funeral I meet; • and especially whenever my hypos • get such an upper hand of me, • that it requires a strong moral • principle to prevent me • from deliberately stepping into the • street, and methodically • knocking people’s hats off—then, I • account it high time to get to sea • as soon as I can.

Figure 2.2: Now read it again using only the bullets

you, or that you are getting too involved with your extracurriculars as time goes on.

2.1.4 What to Pick as a Major

A common source of anxiety for many entering freshmen is picking the right major. While the vast majority of pre-meds are in chemistry- or biology-related fields, bear in mind that your major really does not matter. Most people go into these areas because the pre-med requirements make up the required courses for microbiology and biochemistry. Also, applicants try to impress admissions committees with difficult or medically-oriented majors such as biotechnology or health professions. The Association of American Medical Colleges (AAMC) publishes statistics every year about the majors with the highest acceptance rates and highest MCAT scores.⁵ As of this writing, while most medical students did chemistry and biology as their undergraduate majors, the fields with the highest acceptance rates were biomedical engineering, physics, philosophy, and music. Some of the lowest acceptance rates are found amongst the biologists, nurses, and health professionals.⁶ The take home message is that your major really does not matter. Pick something that you enjoy. In my case, I did a double major in physics and religion and then went on to graduate school in materials science. I've met nuclear engineers, psychologists, and business majors who are pursuing a medical education. Any unique background will give you a different perspective to practicing as a physician. In the case of the business major, just keep in mind that many doctors do work in private practice—they're business owners!

A word of warning is in store for the liberal arts majors. Please realize that rejections do occur. If you should end up with a stack of thin envelopes at the end of the application season, you will have to move to your backup plan (see Section 5.3). If your major is not marketable, you will have a hard time finding a job during the 1–2 years that you take off to re-apply. While I encourage you to major in whatever interests you, just keep in mind that you must have a backup plan should you not get accepted to medical school.

⁵Available at www.aamc.org/data/facts

⁶Medical schools are reluctant to accept nurses because they see the move as contributing to the nursing shortage.

Double Majors

I have already mentioned that your major is unimportant. You can well imagine that a double major would be a colossal waste of time if you pursued two degrees only for the sake of impressing an admissions committee. At my *alma mater*, for instance, the difference between a biochemistry major and a microbiology major is about three classes. From a medical school's point of view, there will be no difference in the educational background between these two fields. Therefore, if you are going to double major or add a minor, you must first be genuinely interested in both areas. Second, you should pick two fields that are polar opposites such as chemistry and business or mathematics and philosophy. Third, you must be able to justify your decision in such a way that both majors seem relevant (i.e., that the chemistry degree will help you understand medicine as a science, while business will help you understand medicine as a practice.)

2.1.5 Required Courses

The following classes make up the pre-med core courses. They are required by all medical schools:

- English Writing I & II (one year)
- General Biology I & II (one year, plus any associated labs)
- General Chemistry I & II (one year, plus any associated labs)
- General Physics I & II (one year, plus any associated labs)
- Organic Chemistry I & II (one year, plus any associated labs)

Many schools also require a semester each of biochemistry, calculus, and statistics. In addition, I recommend that you take the following classes to prepare for the MCAT and to get a introduction to what you might see in medical school:

- Analytical Chemistry
- Anatomy
- Genetics
- Physiology
- Optics & Modern Physics (if not a part of your general physics class)

Other than what is listed here, you are free to take whatever you want to in college. Again you'll notice that major is irrelevant for getting accepted to medical school so long as you take the courses above. However, with a list this heavy in biology and chemistry classes, you can see why so many pre-meds go into those respective fields.

A note of caution about these classes: I'm sure that many of you have taken Advanced Placement classes in high school. While AP credits are great for getting gen-ed requirements out of the way for college, some medical schools do not accept AP classes as a legitimate fulfillment of the pre-med core courses. In other words, you might be required to take these classes a second time, even if you aced them the first go around. In rare instances, some universities will not even recognize courses that you've taken at community colleges. Be sure to carefully check the admissions requirements at your preferred schools to make sure that your classes meet their stipulations.

2.2 MCAT (Tied for 1st)

The Medical College Admissions Test is a vitally important exam that just might be the single biggest determining factor as to whether or not you get a second look from an admissions committee. It is offered by the Association of American Medical Colleges, the same organization that controls the application process. To register for the exam, you must use the AAMC's website. Current registration cost is \$210; and you should register as early as possible—about three months before your exam date.⁷ The information presented in this section should be considered up-to-date as of January 2008.⁸

2.2.1 Format of the MCAT

The MCAT is offered up to 22 times a year as a computer-based test. There are four sections—physical sciences, verbal reasoning, writing, and biological sciences—meaning that you should take classes to prepare you for each section *before* sitting for the exam. I know that my advice sounds intuitive, but every year there are people who try to teach themselves organic chemistry and then take the test.

⁷Fee reductions are granted for individuals with extreme financial hardships.

⁸Information taken from AAMC website, www.aamc.org/students/mcat/start.htm

The MCAT is given as morning and afternoon exams and follows the following time table:

<i>Section</i>	<i>Number of Questions</i>	<i>Time (min)</i>
Tutorial (optional)	—	10
Non-Disclosure Agreement	—	5
Physical Sciences	52	70
Break	—	10
Verbal Reasoning	40	60
Break	—	10
Writing Sample	2	60
Break	—	10
Biological Sciences	52	70
Survey (Optional)	—	10
Total time	—	5 hours, 20 min.

All of the questions are multiple choice and resemble the SAT/ACT that you dreaded taking so much in high school. All of the multiple choice sections are graded on a scale from 1–15. The writing sample is graded subjectively on a scale from J–T. Therefore, the highest grade possible is 45T. Although I won't present a breakdown of the scores here, the AAMC's website does provide information about percentiles for each score. You will find that the best resource for preparing for the exam—especially when you first start studying—is the Association's site.⁹

Break Down of the Topics

The Physical Sciences section tests your knowledge of general chemistry and physics, including analytical methods, mechanics, electricity and magnetism, optics, atomic structure, acid-base reactions, and reduction-oxidation chemistry. This portion consists of a series of reading sections—much like you would see in a scientific journal article—followed by 10 or so questions about the information in the passage. Most of the questions are passage-based. Only rarely will you see stand-alone questions such as, “A ball is dropped from the top of a 20 meter high building. What is the ball's velocity when it hits the ground below?”

⁹A free online practice test is available online at www.e-mcat.com.

No calculators are permitted in the exam room. The testing center will provide scratch paper or a dry erase board for you to work out your problems. Don't worry, though. The math required to solve the problems is very easy. Many of the answers come out to whole numbers. In the falling ball example above, the question might further tell you to assume that gravity is 10 m/s^2 .¹⁰

The Verbal Reasoning section is comprised of reading passages and accompanying questions about author's intent such as, "Which opinion would the author support?" This part of the MCAT closely resembles the reading sections of the SAT. It does *not* contain any questions that involve vocabulary, nor does it have any stand-alone questions. This section is based on reading skills only, and not on specific knowledge about a particular topic.

The Writing Sample consists of two 30-minute essay questions. Each question consists of a quotation followed by the same three point outline. You might be given, "*If the facts don't fit the theory, change the facts,*" by *Albert Einstein* along with the questions, "What does the statement mean, name an example when the statement is incorrect, what would be the deciding factor as to whether or not the statement is valid?" You'll then have 30 minutes to come up with a response that answers the questions in a logical manner with relevant examples. Your paper will be graded by two reviewers who will give you a numerical score that is later converted to a letter. You can only work on one essay at a time. When the first half hour is over, the first essay will be collected and you can only work on the second one. You also cannot begin working on the second essay early if you happen to finish the first one before time is called. Further, the essay must be written in English.

The quotations in this section do not test your knowledge of physics, biology, or chemistry. They are usually political or ethical statements that force you to form an opinion and defend it. The reviewers are not interested in which side you choose, just that you can write a coherent essay about a specific belief. Again, the AAMC's website gives a break down of the significance of the scores.

Finally, the Biological Sciences Section is set up like the Physical Sciences. You will be given a series of passages about experiments along with the results. You will then have to answer a series of questions about which chemical was used, what enzyme is regulated, which evolutionary process could lead to the discovery, etc. . . This section tests organic chemistry, spectroscopy, ecology, and very basic anatomy, physiology and genetics. This

¹⁰In case you haven't solved this problem yet, the answer is 20 m/s .

sections will also give you a few stand-alone questions such as, “What is the result of the following SN1 reaction?”

2.2.2 Studying for the MCAT

First and foremost, you will not do well on the MCAT if you dread it as some kind of punishment. Instead, approach the test as a game and you’ll be fine. Study while trying to find shortcuts and mnemonic devices. Smile as you read the passages. Tell yourself that you love the topic of the particular essay. How well you do on the test is as much of a product of studying as it is a mental attitude. Keep telling yourself, “It’s just a game, it’s just a game, it’s just a game . . .”

Many people have found a variety of successful ways to prepare for the MCAT. Each method has its pros and cons. I suggest buying an MCAT book three months before the exam date and reviewing all of the material contained within it. There are plenty of books available on amazon.com. I won’t make an endorsement as to which I consider the best; you’ll have to read the user reviews to find out for yourself. I will say that you should get your hands on as many practice exams as possible. The AAMC sells actual MCATS that were used in the past as excellent examples of material that could be seen on your test. Kaplan and The Princeton Review also offer free practice tests on their websites as a way to entice visitors to use their services. By far, the best way to prepare for the MCAT is to take practice exams. No matter what other method you use, knowing the format of the questions to be asked is critical to doing well.

I would also recommend staying away from your textbooks. They contain too much information to absorb and have way more material than is really on the exam. Stick with the prep books; they usually tell you everything you need to know.

As far as short courses such as Kaplan and The Princeton Review go, many people say that these classes are useful for forcing participants to study and learn the material. However, at \$1800 and above, they will not make you any better prepared than a dedicated student who can work on his own. The choice is up to you.

To get ready for the science passages, start reading journals such as *Na-*

*ture*¹¹ and *Science*¹² and ask yourself questions about the methods and results of each article. According to one Kaplan instructor, “You would do better to know the basics as thoroughly as possible rather than taking more advanced science courses. (My personal belief is that TAing a science class is among the best ways of helping prepare yourself for the MCAT.)” For the verbal passages, read dense newspapers and magazines such as *The Economist*¹³ and ask yourself, “Why did the author write this piece? What is his background? What famous figures in history would he agree with? What conclusions can I draw from this article?”

For the writing section, you should start keeping a daily journal or diary. Seriously, keep a daily diary in which you write for 30 minutes every day about your thoughts and feelings on any topic. You’ll notice your writing abilities and speed increasing as times goes on. As the exam date approaches, go to a website that specializes in quotations and statements of meaning¹⁴ and write practice essays that follow the outline given on page 15. Stay away from inspirational statements as they are not good sources for controversy and argumentation.

If you need any more help in preparing for the exam, see the Student Doctor Network’s section on the MCAT at forums.studentdoctor.net.

A good *free* online resource for studying for the MCAT is Dr. Alfa Diallo’s MCAT Pearls, available at www.mcatpearls.com. This website has tons of information for getting ready for the exam.

2.3 Letters of Recommendation (3rd)

After admissions committees have had a chance to review your scores, they will then look to your letters of recommendation to get a feel for you as a person. While the vast majority of letters are positive, writers give clear indications as to how well they know an applicant. Therefore, you are required to get to know your professors outside of class so that they will be able to comment on your strengths. Go to their office hours every week. I don’t care if you are acing the class and have no difficulties with the subject. You should

¹¹Available at www.nature.com

¹²Available at www.sciencemag.org

¹³Some free content available at www.economist.com

¹⁴For example, www.quotationspage.com

go to office hours so often that your teachers begin waiting for your arrival. You should also get a chance to know them. Ask them about research, family, opportunities on campus. You'll be amazed at what a valuable resource your profs are. However, I cannot stress this point enough, *do not suck up to your professors*. They have been around long enough and have written far too many rec letters to be fooled by someone who just wants to score points. You should be genuinely interested in that person. If you don't care for a particular teacher, move on to someone else.

Medical schools typically require 3-5 letters. At minimum, one will be required from a science professor and one will be required from someone who knows you outside of the classroom—usually an adviser or a coach. Because each school has its own nuances of how many letters it wants, you should get one letter from a physical science teacher, one from a biological science teacher, one from another science professor, one from a research adviser, one from an activity adviser—sports, volunteering, hospital work—and one from a friend. There is a growing trend among medical schools to request rec letters from peers. Make sure you pick someone who not only knows you well, but is a good writer and can make you look good in words.

Since I recommend applying to medical school during the summer, you should ask your letter writers for their recommendations at the end of the spring semester. They will need enough time to begin work on writing those stellar essays—so ask early. You should make writing a letter as easy as possible for your reviewers. First, schedule an appointment to come in and talk with your teachers about getting a letter—some of them will want to interview you. Second, bring a folder with your resumé, *vita*, unofficial transcripts, personal statement,¹⁵ picture (in case the class was a while ago), waiver (see below), and stamped envelope. Put your name on the outside of the folder along with the words “Letter of Recommendation” so that if your prof loses the folder, it will be easy to find later.

Then the waiting begins. You'll need to check in with your writers about once a month to make sure that they actually finish the letter. Don't be surprised if at least one person loses the folder and you have to generate another. Also, you should send a thank-you note when he/she is done. Finally, and most importantly, please tell your reviewer where you were accepted to, rejected from, or if you decide to withdraw from applying altogether. Keep in mind that your writers has a vested interest in seeing you succeed. They

¹⁵See page 36 for information about writing a personal statement.

deserve to know what happened.

Some undergraduate schools offer a letter writing committee, where you are interviewed by a panel and then a group letter is put together. Usually, this panel letter serves in lieu of multiple letters that would otherwise be written by individual writers. Other schools may have a pre-med adviser that takes care of the letter. Some will even have a collection service where all of the writers submit their letters to a single repository. Ask around to find out which method your school uses.

As an added bonus, some professors will ask you to write the letter of recommendation. They then sign and mail it off. If you are told to write your own letter, make sure that everything is true and known to the professor. Otherwise, your writer may use your actions to show that you are delusional or dishonest. Also, according to the Education and Family Privacy Act of 1974, you are legally allowed to read anything that a school has in your application folder, including your letters of recommendation. The law does grant a provision that allows students to waive their right to access. In other words, you'll be given a form that says something to the effect of, "I waive my right to read this letter." Given that most writers are going to be uncomfortable with your reading their essays, I suggest that you waive your right. Your professors will be able to write more honest opinions about you.

2.4 Research (Tied for 4th)

This section kicks off the explanation of the three most important extracurriculars that you can pursue while in college. Although your scores will grab the attention of an admissions committee, you'll fall flat if you cannot show schools that you are interested in medicine outside of the classroom. In every interview I've ever had, I was always asked, "Tell me about your research. Tell me about your volunteering. How do you know you want to become a doctor? Do you have any experience in health care?" You should follow the advice presented in these sections to the letter to gain the approval of medical schools. I start off the discussion of extracurriculars with a statement about research.

Given that the progress of medicine relies on science, all doctors are expected to have scientific leanings. Further, the majority of admission committee members are made up of professors, who themselves are usually researchers. Therefore, you should get involved with a lab to see how the in-

formation from your organic chemistry and genetics classes is actually used. You do not necessarily have to do something medically related. You can study botany, astronomy, oceanography, you name it. Whatever interests you, give it a try. Just get into a lab and try to become an integrated team member.

Finding a project is a lot easier than you might imagine. Professors post announcements on their websites or outside of their offices to alert potential research assistants of available positions. You can also try talking to your teachers to see if they are willing to have you join their lab. If all else fails, get online and start reading professors' websites both within your major and in other fields that interest you. I'm sure that you can get on board with a project somewhere.

As an added benefit, you may receive research/individual work credits that can be applied to your degree. These credits will usually boost your GPA. And if that's not enough, professors will occasionally pay their undergrads. Simply put, there is no reason why you should not get involved with a lab for at least 10 hours a week.

The National Science Foundation funds a program every summer called Research Experience for Undergraduates (REU).¹⁶ The basic idea involves your spending ten weeks at a national lab or another university. All expenses are paid and you will receive a stipend worth nearly \$3000. In return you work more than 40 hours each week in a lab on a set project. There are REU's in a variety of fields—nano electronics, mineral science, toxicology, you name it. Although I never did an REU while in college, I was a mentor during graduate school. The students really enjoyed the program, the research they did, and meeting people from around the country.

2.5 Volunteering (Tied for 4th)

Doctors hold many titles—researcher, teacher, philosopher—but the most important title is that of humanitarian. Physicians are expected to dedicate their whole lives to working with others, especially the marginalized of society—namely, the poor, the sick, and the elderly. If you want to get accepted to medical school, you must show that you care about others. The only tried and true method of serving others is to take up volunteering.

¹⁶See www.nsf.gov/home/crssprgm/reu/start.htm for details.

Just like research, you do not have to volunteer in a medical field. You could work with Habitat for Humanity, the Boy Scouts, or any other group that has interests similar to yours. There are many organizations that are looking for counselors, skilled laborers, or anyone who is willing to work; they're usually willing to train you.

You are not expected to save the world or commit to a thousand hours each semester. Simply find something you enjoy doing and spend one afternoon a week doing it. Many pre-meds volunteer in hospitals thinking that they will gain some kind of clinical work experience. I can't speak for all hospitals, but most of them do not support their volunteers very well. If you were to join some of the hospitals in my area, your job would consist of handing out lollipops, filing paper work, and pushing wheel chairs. These hospitals would not even teach you CPR, much less let you touch a patient unless it's a discharged person going home. If you want to gain clinical experience, you will have to get a medical or nursing license of some kind.

If you are still stuck on where to volunteer, the United Way generally has a directory of your area's organizations and can point you in the right direction.

2.6 Clinical Experience (Tied for 4th)

Finally, the last thing that will show medical schools that you are interested in becoming a doctor is if you gain some kind of experience working with patients. Again, most pre-meds are duped into thinking that volunteering in a hospital will give them insight into the difficulties of becoming a physician. An easier way to get this kind of knowledge is to shadow a doctor regularly. Many primary care physicians are willing to pass the torch by allowing undergraduates to follow them around the office as they conduct physicals and consultations. You're on your own to find a doctor to shadow. A good place to look, however, would be to ask your own physician for advice.

If you want to gain real, genuine clinical experience, you're going to have to bite the bullet and become licensed. Either become a certified nursing assistant, medical assistant, or an EMT and get direct full-time hands-on experience. The upshot is that you'll be paid for your time. The bad news is that you cannot count working as a CNA or EMT as volunteering. You would have to join a second organization to fulfill the volunteering requirements. Also, given that every state has different requirements with respect

to licensing, you are again on your own to find the laws regarding training, testing, and employment. With the advent of the Internet, however, finding the necessary information is much easier.

Whatever you do, make sure that you have proof that you really want to be a doctor. The information presented in these last few sections is the best demonstration of your desire to practice medicine. You may find other ways of putting a personal side on your application. If so, all the better to making you stand out.

2.7 Leadership (7th)

In addition to being scientists and humanitarians, doctors are expected to be community leaders. Though not absolutely required, many medical schools would like to see you take some kind of leadership role. You don't necessarily have to be president of a fraternity or become a senator of your student government, but you are expected to take some kind of role in organizing and planning events. Given that you're about to be given a lot of power as a physician, schools have an obligation to find out if you know how to use that power. Find something that you have a passion for doing and convince others that you are ready for putting together social functions and meetings. You can still be a leader by working behind the scenes.

2.8 Other Extracurriculars (8th)

At the very bottom of the list of "Becoming the Best Applicant" are the miscellaneous extracurriculars that do not fit in anywhere else. Most jobs, sports, and campus organizations do not matter one bit to medical schools unless you played a major role and made quite an impact through the group. Unless you worked a summer internship for a Defense contractor or were a teacher, your employment history is not important. Unless you were an Olympian or NCAA champion, your membership on a sports team is not important. Unless you spent a year-long journey through Africa as a missionary, your membership in a religious organization is not important. And by far, the biggest waste of time as an undergraduate comes from social fraternities and other self-interest groups—especially, as mentioned above, if you did not take on a substantial leadership role. Remember, everything you do needs

to benefit a future doctor, not a future socialite.

Honor Societies

Many students are under the delusion that membership into an honor society will increase their likelihood of acceptance. Groups such as Golden Key and *Alpha Lamda Delta* typically require that students have a 3.5 GPA and pay \$25 in initiation fees. These societies are usually viewed as resumé-padding organizations. Your name on the Dean's List every semester is an easy enough indication that your grades are good. I suggest that you save your money and try to invest in more worth while endeavors. There are, however, some honors that you can receive that will make you stand out. Graduating *magna cum laude* or *summa cum laude* usually requires that students complete a research project and write a thesis. Departmental and university-furnished awards are generally based upon the recommendation of your professors and carry some weight that shows what your teachers think of you. Finally, *Phi Beta Kappa* is a prestigious organization in which membership is limited to students with amazing grades and leadership skills. It is the only honor society that I would recommend joining.

If you disagree with me and feel that you absolutely have to join an honor society, at least pick a reputable one. Many of the phony organizations have low standards of admissions and require large initiation fees. I can't list their names here for fear of libel, but I'm sure that you know the ones. Legitimate organizations will belong to either the Association of College Honor Societies¹⁷ or the Professional Fraternity Association.¹⁸ Be sure to check with these groups before filling out an application.

Now that you are the Best Applicant, it's time to apply to medical school.

¹⁷Available at www.achsnatl.org

¹⁸Available at www.profraternity.org

Chapter 3

When/Where to Apply

Now that you have become the Best Applicant, you should use that clout to get into the best medical schools. First, you need to see how you compare to the competition—to find out where you fit in, numbers wise—then you need to examine your personality and learning style and decide which schools fit you as a person—where would you be happy? What follows is an explanation of how I decided where to apply.

3.1 AAMC and Medical School Admission Requirements

The Association of American Medical Colleges represents all 129 accredited medical schools in the United States, as well as 17 Canadian medical schools. To apply any universities outside of the state of Texas¹, you must go through AAMC. You will quickly notice that the Association’s website is the best resource for information about applying.

Each year, the AAMC publishes a book entitled *Medical School Admissions Requirements* that, according to the Association, “provides the most up-to-date information on entrance requirements, selection factors, curriculum features, current first year expenses, financial aid information, application and acceptance procedures, and applicant statistics.” It is *the* guide

¹Applying to a school in the University of Texas system requires registration through The Texas Medical & Dental Schools Application Service, available at www.utsystem.edu/tmdsas.

to use. Starting with a potential list of all 146 schools, you can easily narrow down your options to about 30–40 with this book. It also contains a mini profile of each school so that applicants can get a feel for the school’s personality—i.e., are you willing to attend a conservative Seventh Day Adventist school? Do you care if you live in a urban area with no parking? When you’re eager to get just one acceptance to a medical school, these questions may not seem important now, but just recall that you will have to spend four years wherever you decide to go. Also, the geographic location of your school is often a factor in where you go to residency and where you finally practice medicine.

3.2 Your Competitive Score

The first step to applying is to see how your MCAT and GPA stacks up to the competition. This handy formula, called the Competitive Score, gives a clear indication of rank.

$$\text{Competitive Score} = (\text{GPA} \cdot 10) + (\text{MCAT Composite})$$

Let’s say that I have an undergraduate GPA of 3.5 and an MCAT of 30. My Competitive Score would therefore be 65. Notice that the highest possible Score is 85 (4.0 GPA and 45 MCAT).

This formula, while crude, is a good indication of what the schools are looking for when they initially glance at your application. As mentioned in Chapter 2, the rankings published by *The U.S. News and World Report* make up the most prestigious list of the medical schools’ stature. Given that GPA and MCAT are the only sections of the rankings that students influence, admissions committees are eager to fill their classes with students with high Competitive Scores. While I cannot reproduce the *U.S. News* list here out of respect for copyright concerns, some free content is available online at www.usnews.com/usnews/rankguide/rghome.htm. With 129 medical schools,² let’s say that there are 5 tiers, each with 25 schools. *U.S. News* freely lists the universities that make up the first two tiers. Using your Competitive Score, this table gives you an idea of where you can apply.

²*U.S. News* only ranks American medical schools.

<i>Competitive Score</i>	<i>Eligible Tier</i>
70–85	1
65–70	2
60–65	3, 4
55–60	5

This table gives a rough idea of where you would be considered competitive. There are certainly many people who get accepted to higher tiers every year, just as there are people who get rejected from lower tiers. However, I've found that this list is by far the quickest indicator of how I compared with everyone else. You will also notice from this table that *if your Competitive Score is below 55, you should not apply*. You must take a year or two off and seriously consider if you want to attend medical school. You should do whatever you can to get your scores up, either by attending graduate school, taking courses as a post-baccalaureate, or retaking the MCAT.

3.3 Websites

Once you get a feel for the “hard” portion of the application (the numbers), you should then focus on the soft portion. The Internet is the greatest resource for examining a school's personality. You should take your list of 30–40 schools that you generated above and visit all of their websites. Read everything that the dean and admissions committees posted. The college's history and value statements should give you a clear indication as to whether or not you'll be a good match.

Further, check to see the training structure that is available. The two most popular are traditional (didactic) and problem-based learning (PBL):

Traditional/Didactic training resembles the stuff that you are used to from college. You sit in a lecture hall with 100 other students while a professor teaches from the front. The advantages to this approach are that the professor gives you all of the information that you need and that students are already familiar with this style.

Problem-Based Learning is a relatively new trend in teaching. Instead of lectures, students are given case studies from which they have to figure out all of the necessary information to solve the problem. For example,

you might have to look up information about metabolic pathways to understand a particular disease. PBL schools emphasize small work groups and individualized study. Business schools use a similar teaching style.

The differences between these two approaches may not be important to you. However, some students are very particular about which system they want to learn under. Each school's website will tell you what to expect.

Student Doctor Network Another valuable website to use is the Student Doctor Network, available at www.studentdoctor.net. It is an independent site that runs off of donations and user-written responses. It contains a section entitled "Interview Feedback" where students who have been lucky enough to make it to the interview stage can post reports as to what they felt about visiting the campus. You should take your list of remaining schools and compare them with the feedback on Student Doctor Network.

3.4 Where to Apply

By now you've narrowed your list down to about 10–15 schools that you feel would be worth attending. You should apply to all of these schools as well as every medical college in your state. Seriously, apply to all of the schools in your state. Given that most universities give preference to in-state residents and that only 1/3 to 1/2 of all applicants get accepted, your best chance for admission is to apply to every school in your home state. Further, given that the AAMC reports that students apply to an average of 11 universities, you should be no different. As a rule of thumb, I recommend that you apply to at least 4 schools from your eligible tier, a minimum of 2 schools from a lower tier, and no more than 2 schools from the next highest tier. Naturally, applying to and getting rejected from a school that is out of your league is understandable. However, every year applicants with competitive scores of 75 and above are surprised to be rejected from a Tier 5 university. Please note that these lower tier schools generally do not want to be made into a backup choice. They are interested in interviewing and accepting students who match well with their current classes.

The Ivy League Do you think that you have what it takes to apply to the Ivy League? To get into a Tier 1 school, you've not only have to have a high Competitive Score, but you'll also need to follow all of Chapter 2 exactly. Further, given that the Tier 1 universities are research power houses, you will be forced to demonstrate that you can go above and beyond the norm of typical undergraduate research assistants—i.e., you will have to publish an academic paper or attend a number of conferences to get your name out.

Further, graduates of the Ivy League are expected to continue the research tradition well into their careers. If you want to become a family practice physician who never sees the inside of a lab again, I would recommend staying away from the top tier.

Finally, and most importantly, does the ranking of your university really matter? While university administrators and even students and alumni look to the ranking systems is boasting the quality of their education, think about every doctor you've ever encountered. Have you ever asked them where they went to school? In the rankings, is there really a big difference between the college that is listed as 25th and the one that is 35th? Everyone who graduates from an American university is eligible for the same residencies and same licensure. In summary, if you go to medical school anywhere in the country, you will still be a doctor no matter what happens over that four year period.

Just for sake of educating of my readers, let me explain what *U.S. News & World Report* uses in its algorithm.

1. Peer assessment by deans and residency program directors.
2. Money received in the form of research grants from the National Institutes of Health.
3. Mean MCAT, GPA, and acceptance rate.
4. Student:faculty ratio.

The peer assessment is largely based upon the title of the university and fame, rather than direct contact between the deans and the faculty and students at other universities. An administrator at a Northeastern university would be hard-pressed to discuss the merits and pitfalls of the program in the Midwest that he's never seen before. Therefore, it's a wonder why so much weight is put upon a popularity contest.

Looking at the money issue, we can immediately see problems with using NIH grants as the sole indicator of a university's ability to perform research.

There are numerous organizations besides NIH that provide grant money for medical research, including the Environmental Protection Agency, the National Science Foundation, the military, and others. In addition, private donations are not included. A university could receive a donation of well over \$100 million from a philanthropist, yet that money will never play a role in the school's ranking.

Further, the amount of money that a particular university pulls in for funding does not tell the applicant if the research that is conducted at that program is even interesting or in-line with one's professional goals. For example, a school can pull in over \$30 million in funding for genetics research, but if the student isn't interested in genetics, that funding is meaningless.

While the MCAT and GPA are useful for applicants to determine where their scores are a fit, these numbers are the only part of the ranking system which is controlled by the students who attend the university. The acceptance rate is problematic for two reasons: out-of-state students rarely apply to expensive private schools, and popular universities such as the Ivy League will receive more applications than state schools, perpetuating the very numbers that push them higher in the rankings.

Finally, the student:faculty ratio is by far the most worthless piece of data in the *U.S. News & World Report* ranking system because it sets up a false sense of what the class size will be in medical school. For the first two years, most students will sit in a large auditorium with 100 other people and only one lecturer. So whether this student:faculty ratio is 8 or 16 is meaningless because you will always sit in an auditorium with only one teacher and 100 classmates.

You'll notice immediately that the rankings do not include any information such as student evaluations of teachers, clinical experience, tuition costs, or even the average board scores. I would argue that these factors are the most important determinants of where an applicant should go to medical school.

3.5 When to Apply

You become a pre-med the moment you decide to become a doctor. That title will stick with you until the day you start medical school. While most people realize that they want to be physicians before graduating high school, there are always non-traditional applicants who decide later in life that they

want to become doctors. So long as you complete the requirements from Chapter 2, you are just as eligible as anyone else. While there is a bit of age discrimination that occurs in the admissions process, few schools can turn away a fully qualified applicant on the basis of age alone. If you a non-traditional applicant, see Chapter 7 for information that is written specifically for you.

Below is a timeline of the application process. I assume that you have taken all of the pre-med classes by the end of your junior year of college. While you can complete the prerequisites anytime before matriculating, the MCAT will be a lot easier if you have completed the required classes (see page 12 for a list).

<i>Semester</i>	<i>Action</i>
Junior Year, Spring	Register for and take MCAT Line up letters of recommendation
Summer after Junior year	Apply through AMCAS Begin filing secondary applications
Senior Year, Fall	Finish secondaries Begin interviewing
Senior Year, Spring	Finish interviewing Gain acceptance to medical school

Though covered in more detail in Chapter 4, you'll see that there are primary (AMCAS) and secondary applications. Once you receive a secondary, you should commit to completing it in under two weeks. The AAMC will make the primary application available online around May 1st. You must complete it before October 15. However, I recommend that you finish it as soon as possible. It is a long application, but the faster you get it done, the better of a shot you have to getting accepted since schools will have fewer applications to consider at the beginning of the admissions cycle.

Since the AAMC controls the application process, all universities have to play by certain rules. For example, they cannot accept someone before October 15. Likewise, you have to play by certain rules, too. If you get accepted to multiple medical schools, you are allowed to hold as many acceptances as you would like until May 15. After that date you must give up all of your spots and commit to only one school—let's call it College A. You will be permitted to hold on to waitlists after this date, however. If your top

choice, College B, decides to accept you off of the waitlist during summer before matriculation, you can relinquish your acceptance to College A—the school to which you were committed—and pick up the new acceptance to University B. In doing so, you'll free up a waitlist spot for someone else who might want to attend School A.

Chapter 4

The Application Process

The application process is broken into three parts: the primary, the secondary, and the interview. The information presented in this chapter is geared towards students applying to allopathic medical programs (M.D.-granting schools). The differences for applying to osteopathic (D.O.-granting) schools are mentioned briefly.

4.1 The Primary Application (AMCAS, AACOMAS, and TMDAS)

To cut down on duplicating essay questions and sending transcripts to every university to which you apply, all of the country's allopathic medical schools came together to form the Association of American Medical Colleges. This organization controls every part of the application process, from administering the MCAT, collecting personal statements and transcripts, disseminating your application to medical schools, and regulating acceptances and waitlists. The primary application—also called the American Medical College Application Service (AMCAS)—is offered through the AAMC's website.¹ The registration fee for the primary application is \$160. You will be charged an additional \$30 for every school you decide to send your application to. As you can see, applying to medical school is going to be very expensive.

On or around May 1 the AAMC will make the primary application available online. It will contain a variety of questions about your ethnicity, par-

¹See www.aamc.org/students/amcas

ents' occupations, where you have attended college, any institutional actions taken against you, any felony convictions, if you consider yourself disadvantaged or have faced any hardships, and what languages you speak.

Next, you will have to enter (by hand) every class you have ever taken in college. This part of the application is the most tedious because AMCAS' webpage is horribly slow about responding to changes you enter. You will list every course and grade you have ever received. You will also be required to mail your official transcripts to AAMC for verification once you are finished. AMCAS will then take your grades and compute a GPA for you. Don't be alarmed if this GPA is different than your university's. AMCAS tries to level the playing field between applicants so that one quirky college with a unique grading style does not promote or penalize its students. Along with the overall GPA, you will be given a science and non-science GPA, based on your science and humanities/social studies courses, respectively. The science GPA is considered more important to admissions committees for the reason that humanities courses are often easier, giving liberal arts majors an unfair advantage over science and engineering students.

You should complete the grades section as quickly as possible. Since AMCAS must receive your transcripts and verify your scores, some time will pass before you can complete your application. Therefore, finish the coursework section first and mail your transcripts immediately.

After you finish entering the grades, you'll then be asked to enter up to 15 extracurriculars, publications, awards, and employment experiences you have encountered since entering college. Each entry will need to contain information about the number of hours every week that you spent on the project, as well as a short, 1,325 character (about 150 words) description of the activity and its impact on you. Appendix B contains a workbook to help you keep your activities organized.

The following message was posted by a member of an admissions committee to The Student Doctor Network regarding the activities section:

We want both brevity and meaningful information. Brevity because we have to read too many applications and wish to be fair to all. Meaningful information because we can't interview everyone who is "academically qualified" and so the depth and extent of extra-curricular activities are very important—as has been said before, the more we can find out, the better equipped we are to make decisions.

This is the sort of abbreviated "map" I give to the applicants who ask

me how to tackle that section:

- Think carefully about which kind of experiences were really meaningful to you—don't try to fill out space. We are very good at recognizing bs.
- High school activities are important only to underline continuity during college at increased levels of participation, leadership or responsibility (e.g., you've played a musical instrument, participated in the high school orchestra and are now in the college orchestra, etc.)
- Don't repeat what's obvious from answers to things like experience type, title description, contact name & title or organization name (e.g., don't repeat in the description that you worked on research with Dr. So and So—that information is above the description of your experience).
- If the organization in which you participated is not well known, give a brief description followed by the role you played there, specially if it involved any type of responsibility.
- If you made Dean's list (or any type of honor like that) for more than one semester, use the description area to list the other semesters.
- If you received any scholarship, fellowship or other honor that is not nationally recognizable, describe it briefly. Don't waste paper on scholarships that are awarded to half the population at the school.
- If you were just a member of an organization, let us know how many meetings/week you attended and why you joined.
- If you list a publication, make sure it's been accepted for publication and cite it properly. If the paper is just being "prepared for submission" or "submitted," include this fact as part of the research description in the part where you listed the research activity.
- If listing a research experience that extends through the academic year as well as summer, use the description area to let us know the time invested during each of those periods (e.g., full time during the summer, 10 hrs/week in the fall/spring blah blah blah)
- Remember that each experience you list is "up for grabs" if you are invited to interview—you might be asked anything about it and it can make you or break you.

This is just a short list I made after being frustrated reading thousands of applications that didn't give me the information I wanted or asking a question during an interview about an experience I found interesting on the application and learning that the participation had been so minimal or superficial as to make the experience worthless.

Finally, and what some people would consider most importantly, you will write your personal statement. It will be your one and only chance to show an admissions committee who you really are. AMCAS puts a limit of 5,300 characters (about 900 words) on the essay. In this short amount of space you will be required to show why you want to become a doctor and why a medical school should admit you.

The deadline for the AMCAS' submission is Oct 15. I **strongly** recommend that you get your application in earlier than this date.

AACOMAS

Osteopathic schools are linked through the American Association of Colleges of Osteopathic Medicine (AACOM).² Like the AAMC, it offers a centralized application service—this time called AACOM's Application Service (AACOMAS). Students file one electronic application and then AACOMAS verifies and distributes the information to each of the colleges designated by the applicant. The service costs \$155 to register and to submit your application to the first school, with \$25–\$35 extra charged per additional school.³

The procedure for filling out the AACOMAS closely resembles the AMCAS process that I described above. The only difference is that the personal statement is limited to 3000 characters (including spaces). The AACOM recommends that applicants mention any summer study programs—such as a Health Careers Opportunity Program—that they might have participated in.

TMDAS

The University of Texas system, although consisting mostly of allopathic colleges, uses a different application service from AMCAS called the Texas Medical & Dental Schools Application Service (TMDAS).⁴ If you want to apply to a public medical school in Texas, you must use the TMDAS. The procedure for applying is similar to that of the AMCAS.

²Available at <https://aacomas.aacom.org>

³the AACOMAS uses a tiered charging system that gets cheaper with the more universities you designate.

⁴Available at www.utsystem.edu/tmdsas

4.1.1 The Personal Statement

With so much riding on the personal statement, you should be very careful in writing and editing it. You should show it to your friends and teachers for review. You should try rewriting again and again until you have perfected it.

There are plenty of books available on amazon.com that will give you full details on writing a personal statement. Like the MCAT books, you are on your own to purchase one.⁵ Here are a few of my suggestions about outlining the essay:

1. Begin with a brief story of how you got attracted to medicine
2. Give a short overview of your view of the medical profession
3. Tell the audience what you have done to prepare for medical school
4. Tell what are you hoping to get out of becoming a doctor
5. Close with a paragraph that relates all of your accomplishments to your first story

Some other things to keep in mind:

- Use verbs, not descriptions of feeling—e.g., “I love working with others,” versus, “I visited a homeless shelter every day for a month to get a feel for the difficulties that the poor face every day in accessing life’s basic necessities such as healthcare, food, and clothing.”
- Your sentences with the most impact should be very short.
- Don’t say, “I want to help people.” The phrase is trite and overused. It’s immature—If you write it, admissions committees will assume that you have not fully thought out why you want to become a physician. Become a social worker if you only want to help people.
- Show some maturity about what doctors do. Don’t write, “I plan to run from one hospital room to another saving lives.”
- Be honest in why you like medicine. Now is not the time to bemoan the fact that many Americans are uninsured and that your only solution is to become a socialist and give free healthcare to everyone.
- Don’t apologize for low grades or lack of experience. The personal statement is for you to build yourself up. Believe me, you will have plenty of opportunities to explain your low grades later.

⁵You can read some suggestions from Essay Edge at <http://www.essayedge.com/medical/essayadvice/>.

- Stay away from controversial topics such as religion or abortion. You don't want to say that you're a fundamentalist Christian only to have your reader be a staunch atheist. You put him in a bad position by forcing him to make a decision on your personal religious beliefs, rather than your ability to become a doctor.

Example Personal Statement

The best way to learn how to write a personal statement is by example. Several of the books for sale online have real essays written by past medical students. Below is my own personal statement:

I was a junior in a Memphis, Tennessee, high school when I started developing chest pains. Thinking the cause to be heartburn, I went to a physician's office in the nearby city of Bartlett. When I told the doctor I had severe heartburn, he immediately responded with a high-priced prescription to Prilosec.

Weeks went by and still the pain lingered. More doctors, more expensive drugs, still no results. Eventually I went to MIDTOWN Memphis, certainly not the poorest district of town, but not the nicest, either. When I told Dr. Michael I was suffering from chest pain, he did something no one else had tried—he started asking questions. He asked me about school and about my family life. After a while he informed me that my problems were not due to acid reflux disease, but anxiety. He stepped out for a few minutes only to return with a paper bag—not for breathing, but one filled with numerous sample packets of the drug Buspar. He said, “I don't want you to pay for something unless we know it works.” After this meeting I realized I wanted to be just like him. I had always entertained the idea of becoming a doctor, but like most childhood attractions, my interest with medicine came and went as the years passed. However, I now want nothing more than to be a physician; and my short life and experiences prepared me for the challenges ahead.

I arrived at college wanting to major in physics because its equations describe an order to the world. Though the subject does a great job of answering “how?” it cannot give us “why?” Therefore, during my junior year I decided to take on a double major in religion to gain a deeper understanding of people and their faith as an important component of their lives. The two fields strikingly resemble modern health care: while pharmaceutical medicines can provide a mild push in the right direction, a patient's positive attitude is a

full leap towards recovery. My religious studies have made me realize that people need a personal touch as a component of the healing process.

To get a sense of that touch, I have volunteered at my county's crisis center as a suicide counselor for the past year. During training I learned that the most important part of therapy is listening to my client, rather than supplying advice or giving orders. I now know that I simply need to confirm a patient's fears and redirect the energy to more productive actions. I have received no greater feeling than when talking to a client who has called 1-800-SUICIDE and having him/her realize that his/her life is worth living one more day. In a way, I've been giving emotional CPR on a weekly basis.

While I have high hopes for a positive impact as a physician, I do not live in a fantasy world. I know of the potential disappointments and set backs which lie ahead and I've experienced a few of them already. Two of my patients died in the same day when I worked in the Intensive Care Unit at Shands Hospital; I had a frequent caller of the Crisis Center incarcerated under The Baker Act because I knew he was serious about killing himself when my words failed; and I have had my fair share of Alzheimer's patients yell at me for no reason other than their irrational, yet very real fear. I also realize there are many changes that lie ahead in the way treatment is given. Socialized healthcare, HMO's, and malpractice litigation have caused many doctors to leave the profession and even make potential physicians question ever joining. Despite these challenges transformations, I am still eager to practice medicine.

To see first hand how the system functions, I worked nearly a thousand hours as a certified nursing assistant over the course of two summers. I learned how to run an I.V., draw blood, and insert tubes into every opening of the body. Though I've worked in nearly every department in the hospital, my favorite place has been the Emergency Room. The teamwork and fast-paced action have convinced me to practice emergency medicine. Although I am convinced that I should work in the human side of health care, I have also enjoyed research.

Medicine is a unique profession in which the practitioner is both a scientist and humanitarian. In the same way, I have tried to lead a balanced life among both fields. My current research involves looking at glass and air composites called aerogels. By doping these highly porous solids with growth media, I'm hoping that others can better grow cell cultures. I work on a research team which combines my unique background in physics and biological sciences to examine the potentially dangerous effects of nanotech-

nology. Already my work with aerogels has earned some recognition: I won my school's Engineering Fair by making a fluorescent aerogel fountain and was featured on the College of Engineering highlight video. My research will hopefully continue after graduation. This exciting field will produce results which can promote industrial advancement and enhance the quality of the environment.

Whether in the classroom, the lab, or the clinical setting, I have had many extraordinary experiences over the past five years. I hope that these skills will make me a better medical student and hopefully even better doctor. I think that Dr. Michael would be proud.

List of Commonly Misspelled Words

As much as I would like to think that the future doctors of America are great communicators, I've come to realize that people still make careless mistakes when spelling common words. Below is a list of the most frequently misspelled words that I often come across in personal statements, essays, and emails. Don't think that your word processor's spell checker is going to catch every mistake that you make. You still need to check your own work to make sure that you correctly used the words "their," "there," and "they're."

accept	To take ownership. Contrast with "except."
affect	A verb: to cause or bring about. Contrast with "effect."
a lot	Two words.
definite	There is no letter 'a' in definite.
effect	A noun that denotes a result. Contrast with "affect."
except	An exclusion. Contrast with "accept."
fulfill	Start with one 'l,' end with two.
independent	There is no 'a' in this word, either.
its	Ownership. Example: the dog is wagging its tail.
it's	Contraction of "it is."
principal	Foremost importance, such as principal investigator.
principle	Noun: a rule.
relevant	Now we have an 'a.'
their	Plural possessive. Example: I visited my parents at their house.
there	Reference to an object or place. Also may lead a sentence.
they're	Contraction of "they are."

Last Notes on Typing the Personal Statement

Like most people, you will probably want to type your personal statement in a text processing program like Microsoft Word so that you can save, edit, and spell-check your response. Unfortunately, since AMCAS is a web form, many of Word's auto formatted characters such as the quotation marks will be messed up when you put them in the web form. To correct the special symbols problem, use the Times New Roman font and then click on the "Tools" button at the top of the program page. Next, select "AutoCorrect ..." and then choose the "AutoFormat As You Type" tab. Go down to the section entitled "Replace as you type" and unselect everything. Click "Ok" and your formatting problem is gone. Now you can type your essay in Word and then copy and paste everything directly into AMCAS.

Another solution is to save your work as a plain text file (.txt). Select the encoding as "MS-DOS" and then check the box marked "Allow character substitution."

Keep in mind that AMCAS uses a *character count*, not a word count. I know that you were taught in school in always double space after every sentence, but for the sake of the personal statement, you should use only one space between sentences. In doing so, you'll save enough room to add more words.

Finally, students applying for MD/PhD programs will have to write additional essays called research statements. These essays deal with your motivation of becoming a medical scientist. Writing such responses is beyond the scope of this book. You will have to check with your pre-med and research advisors on how to write these statements.

4.2 Secondary Application

After a medical school has had a chance to read your primary application, the admissions committee may decide to send you a secondary application. While the AMCAS is a general form used by everyone, the secondaries are specific to each university. This portion of the application cycle involves two parts: submitting your letters of recommendation as requested by the schools, and writing additional essays.

Section 2.3 tells how to go about getting the recommendation letters. If your school does not have a pre-med office that takes care of assembling the

letters, you can try a service such as InterFolio.⁶ For a fee, this company will collect your reviewers' letters and then send copies to all of the medical schools that you designate. I have no experience with InterFolio and therefore cannot comment on its efficacy.

The second half of the application, the essays, can be quite time-consuming. Every school will ask unique questions with little redundancy between universities. Most colleges ask, "Tell us something unique about you," "Why do you want to come here?" or "Where do you see yourself in ten years?" When I applied to medical school, some of the more interesting questions I received were

- Describe your most memorable travel experience (375 character limit)
- For both mother and father, give the following: a) Where they were raised, b) 4-5 traits that would describe him/her to a stranger, c) Traits you get from him/her, d) Your rapport with him/her, e) His/her hobbies or interests
- Outside of the classroom, (i.e., encounters with academic dishonesty, etc.) describe a difficult moral or ethical situation that you have encountered and how you dealt with it. What personal strengths, values, and beliefs helped you deal with or meet this challenge? (1000 character limit)
- The scientific and popular news media have heralded several "life-extending" and "life-altering" technologies—among which are embryonic stem-cell research, cloning, genetic intervention, and organ transplantation. While such technologies represent remarkable developments and applications of our emerging scientific understanding, these technologies raise critical issues with respect to the ethics, morality and economics of these technologies. Identify some of the critical issues evoked by such technologies and address what potential moral, theological, and ethical questions might arise from the decisions made regarding developing and using these technologies in the care of patients. (1000 character limit)
- Autobiography: Write a brief autobiography. As completely and precisely as possible, give a picture of yourself, your family, and events you consider important to you. In doing so, identify the values that are of greatest importance to you. If you have completed your undergraduate

⁶Available at www.interfolio.com

education, please comment on what you have done or have been doing since graduation. (2000 word limit)

- Hand-write an essay on any topic.

Just as there are numerous essay topics, there are just as many ways that medical schools require you to submit the secondary. Some require you to type your answers into an editable PDF and then print and mail the result. Others use on-line forms that are more cumbersome than the AMCAS webpage. Still others want hand-written responses like the old days of college applications. The good news is that occasionally two schools will ask the same question such as, “What medical specialty do you see yourself practicing and why?” Only then can you use the same essay for two universities. Be careful, though. Every year Yale receives responses with, “I love Columbia because. . .” You should proofread your secondaries with the same zeal that you did with your personal statement.

As far as actually writing your essays, use the same tips given earlier. Just think of the secondaries as miniature personal statements. Medical schools still consider these applications to be just as important as the primary.

While the AAMC charges \$30 per school for the primary, each university will assess its own fee for the secondary. Some schools are free, while others may run as high as \$100 just so someone will read your 200 word response to “Why do you want to attend here?” As you can see, the application process is very expensive. Applying to ten universities may cost as much as \$1000 in fees alone.⁷

Finally, while the sheer number of essays that you will need to write can be burdensome, you should plan to complete each secondary within two weeks of receiving it. Like the primary, the earlier you submit it to the schools, the better your chance is at getting accepted.

4.2.1 Pictures

Secondary applications typically request a picture to go along with your essays. I really don’t know why the picture is required. One school claimed that the photo was used for security reasons—to make sure that the person interviewing was the same person who filed the secondary and is the same

⁷Some schools will waive their application fee if the AAMC grants you a fee waiver for the MCAT or AMCAS.

person who took the MCAT. Most schools want a 2" x 2" passport-style picture.

In the old days of applying, people had to go to a drug store and shell out \$30 for passport pictures. Thanks to digital cameras, however, you can take care of the photo request all from your home computer. Here are some tips to get a good portrait:

- Avoid trying to come off cute or medical-looking (i.e., no scrubs and no Glamour Shots' feather boas).
- If you want to get a hair cut, do so at least one week before taking your pictures so that you can settle into your new hair style.
- Choose a white background with good lighting—a wall in your house will work, as will a foam poster board.
- Make sure that any lights are positioned in front or nearly in front of you. Backlight, caused by standing with your back to a lamp or the sun, will cause a lens flare.
- Use a camera with a zoom lens. Have your photographer stand 5–10 feet and zoom in to take your picture. In doing so, you will minimize the size of your nose.
- Edit the results in your favorite picture editing software and crop the photograph to the required size.
- Print your picture on high quality glossy paper and mail it off.

4.3 Interviews

The last step in the admissions process is the interview. An invitation to interview is very exciting because so few people get to this stage. At most schools, 1/3 of interviewees get accepted. While this final part is important, do not be deluded into thinking that the interview is the be all and end all. In fact, many schools already have their minds made up whether to accept you or waitlist you. As one interviewer said, "We just want to make sure you speak in complete sentences and don't drool." If anything, the interview only helps people who are borderline and can do a phenomenal enough job to get onto the acceptance list.

All medical schools require a site visit for the interview.⁸ Visiting the

⁸Mayo does a phone interview. If you pass this stage, then you must do a site visit and a second interview.

campus is beneficial so that you can see exactly what to look forward to over the next four years. While the reviews posted on the Student Doctor Network give an idea of what to expect, the best way to get a feel for the university is by taking a tour and seeing first hand what is available.

4.3.1 Before You Go

Preparing for the interview generally takes more work than the interview itself. First, sign up for a frequent flyer program. You will have to do a lot of travelling over the next few months. You might as well get some rewards for all of the money that you are about to spend on plane tickets and hotels.

Second, read the feedback postings on the Student Doctor Network.⁹ At this website, applicants who have already visited the school give their impressions of the campus, how to travel there, and example questions that they were asked during the interview. Third, set up a mock interview with your school's pre-medical advising office—the best way to prepare is by sitting through practice sessions. Fourth, read over your AMCAS application and your secondary essays. Since interviews are typically held many months after you submit your application, you may be asked a question about something that you do not remember very well. For example, someone may ask, “What was it like on the ship?” if you indicated that your best travel experience was taking a cruise during Spring Break.

Usually students are left on their own to make travel arrangements to get to campus. While the Student Doctor Network is helpful for making hotel recommendations, your best option for flights is to check travelocity.com (or your favorite website), airtran.com, southwest.com, and jetblue.com.¹⁰ The majority of universities hold interviews early in the morning. Therefore, you will be required to fly in the day before and spend the night in the city—which is a good thing in itself. You should look around the city as well to make sure that you would be happy in that location for four years.

Some schools will also make hotel recommendations. If you call these places and say that you are interviewing with the medical college, you may receive a discount. Although the majority of applicants stay in hotel rooms, many schools offer lodging with current medical students. In addition to a free sleep over, these host students are a great resource for learning more

⁹Available at www.studentdoctor.net/interview

¹⁰Southwest Airlines, Airtran, and Jet Blue do not list their flights on the travel websites.

about the school. In addition, a few will even take you out to see the city and meet with other current students. Many also offer advice on the interview that you are about to undergo.

4.3.2 The Interview Day

Since every school has a different setup, I cannot tell you what to expect everywhere. Some universities have one interview scheduled with a faculty member, others give additional interviews with current 4th-year students. Sometimes the interviewer sits on the admissions committee and wields a lot of power. Other times the interviewer is a volunteer who writes another letter of recommendation. At some schools, you will be interviewed with a group of other students; or you may even face a panel of interviewers. Whatever happens, when you meet your interviewers, you should shake hands with your thumb pointed towards the ceiling, shaking firmly but not bone-crushingly hard. You should sit straight up in your chair with your hands on your lap and feet flat on the floor, make eye contact the whole time, and match the mood and speaking rate of your interviewer. If he/she is serious, you should be serious, too. If he/she is funny, feel free to tell jokes.

Some schools are open-file, meaning that the interviewer has access to your application and, in some cases, even your letters of recommendation. Open-file interviews typically focus on clarifying questions about your AMCAS. Closed-file interviews—where the interviewer knows nothing but your name—can be frustrating because many of the questions are already answered in the AMCAS and secondary; the day gets lost on information that can be checked before your arrival. During a closed-file interview, students usually repeat the material that they have already supplied to the university.

The timing of interviews is also not standard: some are 30 minutes long—barely enough time to scratch the surface—while others are a full hour, giving the interviewer ample time to learn enough about you to make an informed decision about your personality.

Interview questions cover a wide range of topics. In the United States, companies cannot ask potential employees any questions that are not directly related to job function. For instance, no manager can ask about marital status, religious leanings, ethnicity, sexual orientation, ethical dilemmas, etc. . . . Medical schools, on the other hand, are not your future employers. They are not bound by labor laws regarding the appropriateness of certain questions. You might get some pretty intense questions. Women especially have had

to endure questions such as, “Do you plan to have children? Do you think that you can balance a family and running a medical practice at the same time?” If you are a minority, you might be asked about your feelings of affirmative action and racism. Despite the multitude of possible scenarios, I can guarantee that you will get the following questions:

- Why do you want to become a doctor?
- Why you want to attend medical school here?
- Why don’t you become a nurse/PA/paramedic instead?
- What will you do if you do not get accepted to medical school?
- What type of medicine do you envision yourself practicing?
- (In response to the previous question) Why don’t you want to (do research/practice primary care/etc. . .)
- Where do you see the field of medicine headed? What one thing would you want to change about the way medicine is currently practiced?

Make sure that you have firm answers readily available in a moment’s notice; and try not to come across as if you are delivering a memorized speech or say, “Because I want to help people.” If you simply want to help people, you should join a non-profit.

Some other typical questions involve hobbies, research, volunteering, ethical situations, mentors who have been inspirational, and “What would your friends say about you?”

To answer these and all other questions, you must evaluate why you want to go to medical school and what impact you think you can truly make on others. What have you done to prepare to become a doctor, and why must a particular university accept you over the other thousands of applicants? For the ethics and current events questions, start reading *The New York Times’* Health section¹¹ and *The American Journal of Bioethics*.¹² Both papers can be freely read online and give lots of information that any future (and current) physician should be aware of.

The interview is not just the school’s chance to evaluate you, it’s also your best shot at determining if you want to spend the next four years here. If you can, take a look at the match list to see what specialties are common amongst graduates. Look at the crime statistics. You might not think that those stats

¹¹Available at www.nytimes.com/pages/health. Also see www.cnn.com/health

¹²Available at www.bioethics.net. Also see *The Journal of the American Medical Association*, available at jama.ama-assn.org.

are important at first, but try insuring your car when living near and working at a hospital in the downtown area of a major metropolis. Talk to current students about their opinions of the university. Ask your interviewers about the advantages and disadvantages of attending this particular institute. Some starter questions are:

- How would you describe a typical entering class (backgrounds, ages)?
- How much flexibility is there in the coursework and in the timing of the courses?
- What kind of representation do students have on school committees?
- What kinds of clinical opportunities are available during the first two years?
- Can you describe the patient population that I will have exposure to?
- What do you wish you had known prior to coming to this school?
- Have any students left this university (transferred, dropped out)? And if so, for what reason?
- How can students evaluate the faculty? How responsive is the administration to student feedback?
- How prepared are students for away rotations? What do program directors at other hospitals say?

Attire

When you go to your interview you should be properly dressed. The two things to keep in mind are (1) the medical profession is one of the most conservative groups in existence. You should dress conservatively, no matter what your religious or political beliefs are. (2) You want to be remembered for what you say, not what you wear. You should feel like a penguin when you go to your interview in that everyone looks the same.

Men should wear a navy blue, brown, grey, or black suit. All clothes should be pressed. Your tie should be either a solid color or have stripes—no cartoon characters here. Please wear an undershirt under your dress shirt; no one wants to see your nipples. And make sure that the undershirt is plain white; any logos might show through a white dress shirt. Do not wear earrings, flashy jewelry, or heavy cologne—leave the Axe body spray at home! You should be clean-shaven or, if you have a beard, make sure that everything is neatly trimmed. Also, as much as you would hate to start dressing like your father, you're going to have to buy old man socks (black or brown dress socks) and avoid wearing white athletic socks with your suit.

For women, wear a business suit. While a skirt is preferred, a pants suit is fine. If you do wear a skirt, it should be long enough to hang down to (or extend past) your knees. Also avoid flashy jewelry, heavy makeup, or heavy perfume. You should wear panty hose, as uncomfortable as they are. And, realizing that you will have to do a lot of walking, wear comfortable pumps with a low heel; don't use open-toe or open-back shoes.

And for everyone, carry your things around in an attaché case or portfolio. As much as I love using backpacks, they really are not appropriate for interviews. Also, turn off your cell phones. As much as I would like to believe that this rule is a no-brainer, I have known several people whose phones started ringing during an interview. The situation is embarrassing and shows the interviewer that you are careless.

Tours

A campus tour is generally given by a current medical student. You won't see the main campus or undergraduate area, however. You will only see the medical school's classrooms, research labs, affiliated hospitals, gym and occasionally, the anatomy lab.

The good news is that although you have probably spent hundreds of dollars just to get to this stage of the application process, the interview day is free. Those secondary application fees go towards providing interviewees with free lunches and often free parking.¹³

Above all else, keep this last bit of advice in mind: From the moment you arrive in your host town, you should consider yourself on the interview. Everything from the hotel room, host stay, campus tour, dean's message—everything and every time—should be considered an interview. Be nice to the secretaries—they have the admissions committee's ears. I have heard stories of professors' dressing as janitors or secretaries and talking to applicants outside of their offices to see how the students react around others. The Student Doctor Network has plenty of stories of bizarre interview moments. One person said that a current medical student posed as an interviewee and joined the applicants for the day.

¹³I did get hit with \$8 in parking fees at one university.

Chapter 5

Dealing with Acceptances, Waitlists, and Rejections

Disappointments are far more common than happiness when applying to medical school. Given that only 1/3 to 1/2 of applicants get accepted each year, there is a very real chance that you will not get in. Therefore, before you ever even consider filling out the AMCAS, *you must formulate a backup plan.*

This chapter goes into detail about the aftermath of applying to medical school. At any point during the application process you might be rejected. If your GPA and MCAT does not measure up to the university's standards, you could get a thin envelope within a few weeks of submitting your primary—\$30 gone without even a second look. If you find yourself graduating without any prospects for acceptances in the fall, you are not alone. The goal of this chapter is to show you what happens next after an acceptance, waitlist, or rejection.

5.1 Acceptances

If you received a thick envelope and fall into this category, congratulations! If you received multiple acceptances, that's even more of a cause of celebration. Each school has a different way of responding. Some will call. Others will email. But all will send a letter eventually. Offers can be made from anywhere from two weeks after an interview to many months later. You will have to ask the admissions committee to see when you can expect to hear back from

them.

Once you receive an acceptance letter, you will have two weeks to respond in writing to request that a spot be held for you. While not all universities mention this two week window, if you do not reply in two weeks, your offer will be rescinded. I have heard several stories of students who wait more than the allotted time, only to lose their only shot at going to a particular school. In most cases, the decision was final. If the offer is rescinded because of a lack of timeliness on your behalf, few colleges will even allow you to petition the decision.

Generally, you will have to pay a deposit when you request that a spot be held for you. This amount can be anywhere from \$30 to up to \$500. In many cases, these deposits are non-refundable. Therefore, you should only hold a spot if you are genuinely interested in attending the school. If you were turned off during the campus tour and interview, don't hesitate to withdraw your application, especially if you have multiple acceptances. Keep in mind that for every spot you hold, you keep someone else from getting an acceptance. As a courtesy to others, relinquish the schools that you are no longer interested in.

As time progresses, you will then receive a package about immunizations and health records. At the very least, incoming medical students are required to be immunized against hepatitis, influenza (the flu), measles, mumps, rubella, chicken pox (varicella), tetanus, and polio.¹ I suggest that you get these details taken care of early—and with ample documentation—to prevent time lags and headaches down the road. You will also have to have a tuberculosis skin test to demonstrate that you have never contracted TB. If you fail this exam, you must then get a chest X-ray to show that your lungs are clear of the bacteria.

5.1.1 Multiple Acceptances

If you are one of the lucky few to gain multiple acceptances, take a moment to pat yourself on the back. You've worked hard to get to this point. You deserve the rewards for your efforts.

According to AAMC guidelines, you can only hold onto one acceptance after May 15. While you may still remain on as many waitlists as you want,

¹For chicken pox and measles, a positive titer indicating that you once had the disease in the past will serve in lieu of inoculations.

you must relinquish all of the other spots that you have. May 15 is an important date for deciding where to go to medical school. It's when you have to seriously evaluate which school would be your best fit for the next four years. Wherever you end up attending will make a major life impact on your future residencies, research, and medical practice—more so than your decision to attend a particular undergraduate college.

To withdraw your application simply send a letter to the admissions office saying, "I have decided to attend another university. Please withdraw my application." Schools are used to receiving withdrawal letters and will not be nearly as hurt as you were when you got your first rejection.

5.2 Waitlists

The majority of people who get to the interview stage are waitlisted if they are not offered an immediate acceptance. If you are interviewed in October and get a waitlist or hold letter three weeks later, relax. The school's decision to put you on hold at this point is not something to be worried about. The admissions committee simply wants to interview more candidates before making a decision.

If the waitlist letter comes in April or May, however, now you've got a problem. Usually a university has filled its incoming class and cannot accept any more students. Recall that schools have a maximum number of students that they can accept. While the waitlist will begin to open up after May 15, there are some steps that you can take to getting a thick envelope of your own.

First, make sure that your contact information is kept up to date through AMCAS. You should not email or call the schools to tell them that your phone number or email address has changed. Just log into AMCAS and modify the background information section to reflect any changes in contact information. I cannot stress how important an up-to-date email address and phone number is. Every year, for whatever reason, a student drops out of medical school on or shortly before the first day. Since colleges are eager to fill their classes to the limit, the dean of admissions will immediately call the next person in line on the waitlist. If the dean is unable to reach that person, the acceptance then goes to the second in line. Every year some people are kept out of a medical school that otherwise would have accepted them if only their contact information was correct.

Make sure that your contact information is kept up to date

Second, alert the schools of any changes in your application. Perhaps you were waitlisted in the fall because your grades were not so stellar. Thanks to your hard work, however, you got all A's in your classes for two straight semesters and managed to write a thesis to graduate with high honors. Admissions committees would love to know this information. It shows that you are seriously committed to working hard and studying even while others are experiencing senioritis.

Or maybe you began working in a research lab, became an EMT, published a paper, climbed Mt. Everest, whatever. . . Again, let the schools know what you've done since initially applying—almost a year has passed since then. Lots of things could happen. Further, by contacting the university regularly, you show the admissions committee that you are very interested in their program.

Finally, you can try a letter of intent. In it, you make an appeal to the admissions committee saying, in effect, “If you accept me, I will drop everything and immediately move to your location without hesitation. You have my promise.” Be careful with letters of intent. Make sure that you only write it if the school is your top choice and you really mean what you say. You also need to provide a compelling argument for bumping you up on the alternate list. Simply wanting to go to a higher ranked school will not do.

5.3 Rejections

I'll be the first to admit that getting a rejection is painful. Thin envelopes may start arriving on October 15 and will continue to pour in until April 15. Given that the last interview invites are offered in late February, you must go to your backup plan by the end of March if you have not yet received an acceptance. Waitlists don't count. Future interviews don't count. Waiting to hear back from other schools don't count. If, by March 30, you have not received an acceptance, you must begin working on Plan B.²

Common backup plans that take 1–2 years include graduate school, post-baccalaureate classes, lab work, clinical work, Peace Corps,³ Americorps,⁴

²You *do* have a backup plan, right?

³Available at www.peacecorps.gov

⁴Available at www.americorps.org

teaching for a year or two—either through a local high school or Teach for America⁵—and NIH research.⁶ Whatever your backup plan is, you must be sure that you are ready to go into that field. Ask yourself if you would really be happy with teaching in the inner city before committing to anything. As a caution, do *not* go to nursing school or train to become a physician’s assistant. The United States is already facing a critical shortage of nurses around the country. Please do not contribute to the problem by becoming an R.N. and then jumping ship in a moment’s notice to become an M.D.

5.3.1 Re-applying

Applying to medical school for a second time is often an embarrassing process. You will meet others who will constantly ask you, “What went wrong?” You will probably be wondering the same question yourself. The good news is that you will already be familiar with the application process. Recall that only 35–50% of applicants are accepted each year. If you decide to re-apply, you won’t be alone.

Look back at Chapter 2. Did you follow the directions to the letter like I said? If not, you should start working on correcting deficiencies. Also, call the dean of admissions of your top choices and ask what went wrong. Many deans or their associates are willing to sit down with you during the summer and honestly tell you what your weak points are. You should follow their advice carefully—they are the ones signing the acceptance letters after all.

The second bit of good news is that reapplicants generally have high acceptance rates. Because you will have to take a year off at minimum before re-applying, you will have a chance to beef up your resumé. Further, admissions committees generally look favorably upon applicants who have genuinely tried to improve their application. Your dedication shows that you are truly committed to becoming a doctor. There is no question about your desire to practice medicine.

If you go the graduate school route, you must pick something science-related. An M.A. in anthropology is not going to impress an admissions committee. At least a degree in biology shows universities that you can do research that is somewhat typical for academic physicians. If you want to take classes without the fear of meeting a research deadline, the non-thesis

⁵Available at www.teachforamerica.org

⁶Available at www.training.nih.gov

route is a viable option for most engineering and some science students. The non-thesis masters program is especially good for students who wish to work full time in something other than a university lab. While graduate courses are often easier than senior undergraduate classes—meaning that you will get higher grades—the AMCAS does not factor your graduate GPA with your overall work. The only way to boost a sub-par undergraduate GPA after graduating is to become a post-baccalaureate student.

5.3.2 Post-baccalaureate programs

Post-baccs are non-degree seeking students who go back to college for the sake of taking classes—usually to prepare for graduate school or to learn skills necessary for employment. They are in a sort of limbo—they are too old to be undergrads, yet are not graduate students—meaning that they get the worst of both worlds. They get no privileges that graduate students receive such as getting additional loan money to pay for classes. Some cannot even join campus organizations that are reserved for undergraduates. The post-bacc route is available for nothing more than taking classes. Many post-baccs will work full-time in addition to their studies. Use this option only if you need to boost your GPA, take extra pre-med classes such as biochemistry, or are advised to do so by someone on an admissions committee.

Almost all universities admit post-bacc students. Some even have programs that are tailored specifically for medical school rejects. Drexel, UPenn, Georgetown, and many others have curriculums that can help people to demonstrate their dedication to medicine and their aptitude for science. According to one of this book's reviewers, Drexel has many options: an evening post-bacc program for professionals; a graduate program that has a first year of anatomy and some other grad level courses and a second year of first year med school courses; there's a program where all you take is many first year med school classes; and then the last one is taking med school classes first year and then doing research plus some other optional classes the second year.

Chapter 6

Paying for Medical School

Congratulations once again on your acceptance to medical school! Now the only step left is to find a way to pay for it all. Believe it or not, the average medical student goes into about \$150,000 in debt to finance his education. If you are the average applicant, you will also have to take out massive loans to pay for everything. This chapter is devoted to getting all of the money matters taken care of. While \$150,000 sounds like a terrible sum of money, many thousands of students before you have found a way to pay for school and many thousands of students after you will also find ways to pay. Just follow the steps below and you will be fine.

One last thing: Given that you will likely make several hundreds of thousands of dollars as a physician years from now, re-paying your loans will be possible with just a few years of practicing medicine. However, the monthly cost of repaying your loans will not be cheap. If you were to take out \$150,000 in loans, just look at the monthly fees you'll have to look forward to in paying off your debt (assuming a 5% interest rate):¹

<i>monthly payment</i>	<i>years</i>	<i>total payment</i>	<i>interest paid</i>
\$1,590	10	\$190,918	\$40,918
\$1,186	15	\$213,514	\$63,514
\$989	20	\$237,584	\$87,584
\$876	25	\$263,064	\$113,064

¹These calculations were taken from www.finaid.org.

6.1 Credit Report

The first thing you need to do is to check your credit report. Not too long ago, people had to pay financial firms \$30 a pop to check their credit histories. Thanks to a 2004 ruling by the Federal Trade Commission, however, Americans are allowed to view their reports for free once a year. Go to www.annualcreditreport.com for more information. Or, if you prefer, you can contact the three credit reporting bureaus directly at www.equifax.com, www.transunion.com, and www.experian.com. Keep in mind, however, that these free reports do not include your FICO Score. The FICO is a number that tells lenders how reliable you are as a borrower. To get this number, you must use one of the for-pay services, usually ranging from \$20–\$40.²

While most college students have never given a thought about their credit histories, you should be aware that a bad credit rating could cause lenders to hit you with a higher interest rate. Also, you might be surprised about some of the information—albeit sometimes false—that can be found on a report. Some people are surprised to find out that they have mortgages they never knew of listed under their name! I have also seen stories of singles who are recorded as being married. Further, you might find evidence of identity theft if you are unlucky enough to be a victim of such a crime.

As a cautionary note about credit reports, you will see plenty of websites that offer “free” reports online. Usually these sites offer a free report only if you sign up for their \$80 program that monitors your financial history for identity theft. While you may or may not be interested in having someone constantly checking your report for fraud, be aware that these services are not free.

6.2 FAFSA

The next step is to file the Free Application for Federal Student Aid (the FAFSA). Although most college students have some experience in filing the FAFSA, some people were lucky enough to have their undergraduate education paid for by someone else (scholarships, wealthy parents, etc. . .). Most students will have to resort to loans for medical school. Even if you do not plan to take out any loans, many universities require that you file the FAFSA anyway. You might as well be prepared for what’s ahead.

²For more credit-based resources, see Appendix A.

First, have your most recent income tax statements and W2's ready. Since you can file the FAFSA only after January 1 of the year you matriculate, the financial information you have must be from the previous year. For example, if you start medical school in the fall of 2007, you should get your 1040, W2, and any other government, banking, or employer statements from 2006. Given the amount of prerequisite information, you can see that although the FAFSA is open after January 1, you might not be able to submit the application until March or later.

Second, get your parents' financial information, including social security numbers and current statements of investments. While you will be declared as independent from your parents from the government's perspective, most schools will want to have this information for their own scholarships.

Next, go to www.fafsa.ed.gov to complete the application. You will have to enter all sorts of information about yourself, your income, your parents' income, and the schools that you want this information sent to. You should have the FAFSA sent to every school to which you have been accepted or waitlisted. Even if you don't think that there is much of a chance of getting off the waitlist at College X, you should still indicate every institution that you could possibly attend in the fall.

You will then receive a Student Aid Report (also known as the SAR). This form will give you further instructions such as your expected family contribution and any corrections that might have to be made. The SAR will also be sent to the schools that you indicated in the final step of the FAFSA.

You eventually will be contacted by the universities about how much you will receive from the government's Stafford Loan program. The Stafford loans come with low interest rates that usually do not compound interest during your education. Unfortunately, these loans max out at \$40,500 a year. While this amount might be enough for in-state students, the tuition costs at private schools will force students to turn to private banking firms for supplements. In maintaining neutrality, I cannot list any of the institutions here. If you do a web search for "student loans," however, I am sure that you will get lots of possible resources.³

Once you select a bank, you will be asked to have a co-signer. Usually, this person is a parent who agrees that if you cannot re-pay the loan, he/she will pick up the tab. The advantage of using a co-signer is that the loan's

³I can point you to the AAMC's Medloans program. It gives much of the same information that is presented here. The web page is available at www.aamc.org/medloans.

interest rate will be lower. The disadvantage is that you put the co-signer in a precarious position—he will be required to pay if *you* are the one who fails to make the proper payments.

The bank will then send you a Master Promissory Note. Sign the Note and send it to your school for verification. Do **not** send the Master Promissory Note back to the lender. You will cause a lot of headaches for a number of people if you do so. Your school has to know how you are going to pay for the education that they are about to give—often before classes begin.

6.3 Military and the Public Health Route

Another way to pay for medical school is to enter into a government contract that says basically, “We, the federal government, agree to pay all expenses related to medical school and to give you a nice stipend if you agree to work for us as a military physician or serve as a primary care doctor on an Indian reservation.” The deal is quite nice for anyone considering joining the armed forces. There are several programs detailed below.

6.3.1 HPSP

The Health Professions Scholarship Program (HPSP) is a deal offered by the Army, Air Force, and Navy that pays for tuition, books, supplies, and fees under the condition that you serve in a branch of the military after residency. The payback is slightly more complicated than I present here, but the rule is that you give the armed forces one year of active service for every year that they pay. For example, if you take a four year scholarship, you will have to serve for four years on active duty, plus four years in the reserves. If your residency is longer than medical school, then you will have to serve additional time. For instance, if residency takes five years, you will be on active duty for five years.

The Student Doctor Network has a section devoted to extensive information on military medicine.⁴ Here is my summary: You have to pass a background check and a thorough physical exam to even be considered. You must fulfill height and weight requirements, be in some kind of physical shape, and not have had any major medical procedures performed in the past. If you have ever had surgery, counseling, or been hospitalized, be

⁴Available at forums.studentdoctor.net

prepared to see lots of doctors and explain to them why you deserve to be in the armed forces. When I applied to the HPSP, I failed my physical and had to spend six months taking supplemental exams before the Surgeon General of the Air Force finally signed off on my application. Be forewarned about the bureaucracy and slow movements of the military.

For the background check, you will have to list everywhere you have ever lived, give names and contact information of people that knew you there, list all of your past employers, and give details about your relatives—not such an easy task if you moved around a bit when you were a child.

If accepted to the program, you will spend the summer before starting medical school at Officer Training School's Commissioned Officer Training (also known as COT).⁵ This 4–6 week program involves getting into shape—you will do lots of running—learning the ins and outs of the military, and getting commissioned into the reserves as an O-1 (the lowest officer rank). You will receive active duty pay while training and then go on reservist salary with no benefits while in medical school. Currently, HPSP recipients receive about \$800 every two weeks plus active duty pay during training—totaling a little over \$21,500 annually.

During the summer between your first and second year, you will then shadow a military physician to see what life is like inside the service—provided that you do not have Officer Training School. During the fourth year, you perform externships at military hospitals. You will also enter a residency match program much like its civilian equivalent—the only differences being that you will receive your match results months before your civilian classmates do. You can petition to take a civilian residency instead of going through the military's graduate medical education. You will not incur any extra active duty payback if you take the civilian option. The downside is that you will not receive the benefits of being the military (see below).

While the military is pretty open to letting you practice almost any specialty that you want, you must realize that the needs of the military come first (e.g., if there are no spots available for plastic surgery, you might end up as a general practitioner). Further, the Navy and Air Force will sometimes defer sending its doctors to residency until after they have first completed a tour of duty as a General Medical Officer (GMO) or flight surgeon—basically a general practitioner.

⁵COT is for the Air Force. The Navy and Army have their own versions of training which go by different names.

As a resident, you will be promoted to an O-3 (a captain in the Army and Air Force, a lieutenant in the Navy) and receive full benefits plus an active duty salary—currently around \$65,000.⁶ The time spent in a military residency can be counted towards rank advancement and retirement. At no point during medical school will you be pulled out of the reserves and sent to war. Recall that financing a medical education is very expensive. The last thing that the government wants is to yank you out of school and then have to worry about getting you back in, thereby having to pay double during the whole process.

From one of this book's reviewers: Keep in mind that you are a soldier first and a physician second. Your primary purpose is to serve the needs of the military and government. As a military physician you are subject to a deployment which could put you in undesirable situations. However, you get to take care of the bravest men and women in the world and serve the local communities in which they operate.

If you are interested in this program, contact your nearest recruiter and ask to speak with someone who is knowledgeable about the Health Professions Scholarship Program. In some cases your home city will not have any recruiters that deal specifically with doctors. I had to communicate regularly with someone who lived 300 miles away.

If you want to see the details of the contract that you will have to sign, do a Google search for "AFITI 36-101." In this publication you will find all of the rules and procedures that you must follow as an HPSP student. If you want further information about the military, read one of the following books that is conducive to your preferred branch of service: *Air Force Officer's Guide*⁷, *Army Officer's Guide*⁸, or *The Naval Officer's Guide*⁹. The Stackpole Books publishing firm¹⁰ has lots of material on the military, if you are interested in further reading.

⁶The national average for a civilian resident is between \$35,000–\$40,000, depending on specialty and location.

⁷Available from Stackpole Books, ISBN: 0811734528

⁸Available from Stackpole Books, ISBN: 081173224X

⁹Available from Naval Institute Press, ISBN: 1557506450

¹⁰Available at www.stackpolebooks.com

6.3.2 USUHS

While the HPSP is good for people who interested in getting a taste of the armed services, the Uniformed Services University of the Health Sciences (USUHS) is meant for students who want to take the career military route. It is the military's medical school and—much like the academies—it is designed to produce the next generation of the military's leaders. Every graduate of USUHS incurs a seven-year commitment. The benefits and pay are greater—active duty all four years, annual salary of \$50,000, health insurance taken care of—but the pay back is also greater—seven years of service, wear a uniform to class every day, salute your professors.

To apply to USUHS (pronounced “U-shush”), simply select the school when you apply through AMCAS. You will have to go through the same application process for USUHS that you will encounter for the civilian schools—the secondary, the interview, the waitlists, and the valiant acceptance. Like the HPSP, you must also pass the background check and physical exam.

USUHS' environment is not very competitive in that students do not experience anxiety over each others' performance. Further, according to the AAMC, it has some of the happiest students of all universities. The admissions committee does a great job of screening students to find a perfect match. While all of the benefits sound great, again, you must know what you are getting into. Please ask current students and past graduates about their experiences.

6.3.3 Public Health

If the armed forces doesn't sound like the thing for you, you can try the public health sector. The National Health Service Corps offers a deal that is similar to the military's: full tuition and fees, plus a stipend. To receive the NHSC scholarship, you must agree to practice medicine in an underserved area after residency for a minimum of 40 hours a week. Also, you must specialize in a designated primary care field: internal medicine, pediatrics, family medicine, ob/gyn, or psychiatry.¹¹ Like the military, you will owe one year of service for each year that you use the scholarship. Further, you cannot subspecialize or do a fellowship before fulfilling your agreement with the NHSC. If you would like more information, visit

¹¹D.O.'s can specialize in rotating internships.

http://nhsc.bhpr.hrsa.gov/join_us/scholarships.asp and
http://nhsc.bhpr.hrsa.gov/join_us/students.asp (note the underscore).

Indian Health Services

The Indian Health Services offers a scholarship to card-carrying American Indians to become physicians on an Indian reservation. Visit www.ihs.gov for more information.

6.4 Scholarships

Rarely—and I do mean *rarely*—schools and private organizations will give scholarships. You will have to contact the financial aid department of your university to find out about institutional awards. As far as greater, nationwide scholarships, a few organizations will give funds based on merit, financial hardship, or the recipients' promise to pursue primary care medicine or to serve in medically underserved areas. By far the best resources are www.fastweb.com and www.brokescholar.com. FastWeb and Broke Scholar are searchable databases of many scholarships for a variety of purposes. Just enter information about your background and interests and you will be presented with a list of matching groups, usually worth only \$500–\$2,000 (I am unaware of anyone who provides a full ride to medical school other than the military and Indian Health Services). While other scholarship databases exist, due to my own inexperience I cannot recommend anyone other than these two. Also be on the look out for con artists. Some places will claim that if you give them a nominal fee—sometimes as high as \$500—they will give you a list of the best matching scholarships. The websites are total scams. They will only generate a list that is no better than the one that is freely provided by FastWeb.¹²

¹²FastWeb is able to operate for free by bombarding visitors with lots of advertisements. Be prepared to see credit card offers, Navy banners, and discounts for electronics.

Chapter 7

Nontraditional Applicants

This section was drafted by SDN user nontrad314. It is based on a preliminary FAQ at SDN composed by the nontraditional forum for the use of the nontraditional forum. All merits of this section are attributed to the nontraditional forum at SDN. All errors of this section are due to nontrad314. Feel free to contact nontrad314 with any concerns.

Nontraditional applicants are roughly defined as applicants who have pursued careers beyond the conventional model of the premed applicant. Typically older than average applicants, nontraditional backgrounds can include careers in law, health care, the military, education, research, industry (business, engineering, etc) and raising families.

As broad as this category of applicants is, there are common concerns of nontraditional applicants. This section addresses some of those concerns. It is assembled from a preliminary FAQ at SDN composed by nontraditional students for the use of nontraditional students.

7.1 Some Big Picture Concerns

At some level, a nontraditional's choice to pursue medicine is no different than other career enhancing choices that professionals make; including internal/lateral moves within fields or disciplines, pursuit of professional development credentials (such as certificates or graduate degrees), or moves from one discipline into another. However, the timelines associated to practicing as a professional in medicine are almost unique.

Approximately 1-2 full years of courses are required for the MCAT. Many suggest the MCAT should be taken 1-1.5 years before matriculating. Approximately 6-7 years are then required between the decision to pursue medicine and finishing medical school. Graduate medical education/residency training requires an additional 3-5 years or more. In short, about a decade is required to move completely from a career outside of medicine into a career as a practicing physician. This span of time can have significant effects on finances, family, personal health etc.

Nontraditionals considering a career in medicine, should then carefully self-appraise their motivation for their new career, and investigate the realities of their intended career to the greatest extent possible. In a formulaic approach to this problem, three stages are useful to consider:

Stage I: Self appraisal In this stage the applicant identifies career goals and intentions and the perceived fit with the profession of medicine. This can be accomplished in many ways, one of which is simply by sitting down in a chair with a blank piece of paper and writing down goals and intentions; then identifying how those fit with the profession of medicine. These goals (which will typically draw on the former career in various ways) will prove useful in terms of the application process discussed further below. Other forms of self appraisal are possible and nontraditionals should find what works best for them.

Stage II: Fact finding In this stage the applicant seeks to confirm or refute their intentions and understanding. Along these lines, it is advised that nontraditionals consult as completely as possible with admissions deans at SOMs, health professions counselors at universities, SOM students, and/or practicing physicians. Ideally, consult with all of these if possible. Volunteering at hospitals, shadowing physicians or investigating the pragmatics of medical practice is also highly advised. Volunteer services are typically available at almost all hospitals. Information concerning ranges of duties, shifts, duration, commitments, departments, degree of patient interaction etc . . . will be available from the volunteer services coordinator. In terms of shadowing, many nontraditionals know family members, former colleagues or friends that are practicing physicians. Shadow these individuals if possible. The Area Health Education Center (AHEC)/Health Education Training Center (HETC) in your area may also have information concerning shadow-

ing opportunities. Also, many area hospitals and clinics welcome shadows; although this is not universally true.

Stage III: Committing to the switch At some point, a nontraditional applicant will commit to the profession of medicine. Committing to a career in medicine can include some or all of structuring financial resources (savings, mortgages, debt etc), informing partners/colleagues/advisors/employers/family members, relocating across country or changing career tracks. For some, the final commitment will occur between accepting an offer from a medical school and the first day of class. For others the commitment will occur before they even apply to medical school. Nontraditionals will each approach and solve these concerns in ways that best suit their situation. Universally however, the prior careers of nontraditionals requires a transition of ties or obligations of the former career into the intended career in medicine. Due to medicine's timelines and financing and due to the significance of nontraditionals prior careers this final commitment should ideally happen only after careful consideration and investigation of costs, benefits, and risks.

Several other common "big picture concerns" of nontraditionals are given as follows:

AGE While the age of nontraditional applicants is a concern of both applicants and indirectly of admission committees, the age of an applicant is not in and of itself a selection factor. Schools universally do not select on the basis of age (on essentially legal grounds). As discussed in the MSAR, matriculant's ages at schools of Allopathy range up to 50+. However, as discussed above, pragmatic realities concerning finances, family, personal health etc...do vary with age and essentially cannot be avoided in most cases.

ALLOPATHY VS OSTEOPATHY Since the average age of students at Schools of Osteopathy are higher than the average age of students at schools of Allopathy, many nontraditional applicants wonder if they should consider Schools of Osteopathy. Simply put, all opportunities should be investigated to the extent possible; including both schools of Allopathy and Osteopathy. The trick is really to find what works best and to pursue that track. The decision is ultimately individual and no hard and fast rule is universally true.

RAISING FAMILIES Since nontraditional applicants are invariably older applicants there is a common concern about starting or raising a family while simultaneously studying medicine. The general consensus seems to be that what works well for one need not work well for another. Instead, people have been starting and raising families throughout medical education and are expected to continue doing so. Further discussions are widely available on SDN.

7.2 Nontraditionals taking Prereqs

Professionals considering medical school often face the problem of completing the Basic Course of Pre Med studies (BCPM). Several options are available: 1. Post bacc programs, 2. “Continuing education” courses at large Universities and typically offered as evening courses for professionals with “regular business hours,” and 3. Community or Junior college courses. Note that different schools have different criteria concerning the BCPM courses; including completion at accredited colleges and Universities. Unfortunately, some medical schools do not accept courses completed at a junior college. However, waivers on courses for certain individuals are sometimes possible. If in doubt, contact the school in question and confirm their position. In general contacting schools is always highly recommended.

7.3 Nontraditionals studying for the MCAT

The MCAT is a necessary standardized measure of applicants. Nontraditionals are expected to complete the exam as all applicants are expected to complete the exam. A particular concern for nontraditional applicants (shown in the 1997, 1998, 1999 Characteristics of Examinees and Summary Data at <http://www.aamc.org/students/mcat/examineedata/pubs.htm>) is a general decline in average MCAT score with age. Simply put, on average nontraditional applicants do not perform as well on the MCAT as younger applicants. Many explanations for this effect are possible, but it is highly recommended that nontraditionals do the best they can on their MCAT exam. Along those lines: A. Treat this exam seriously and give it as much attention as possible, B. Find the methods that works best for you (Kaplan, Princeton, exam prep courses, AAMC pretests etc), and C. Practice! Practice! Practice!

Two notes are worth considering about the MCAT for nontraditionals:

A. For multiple and disparate reasons, several nontraditionals choose to take their MCATs prior to completing the BCPM. In general, this is not advised. In fact, many nontraditionals strongly advise against this. The general rule of thumb is to only take the MCAT prior to the BCPM if you have an unavoidable reason.

B. For multiple and disparate reasons, several nontraditionals choose to retake their MCATs. Again this is not advised in general and evidence shows that retaking the MCAT on average produces lower scores. Admission committees do not universally combine multiple MCATs in standard ways; e.g., some committees will only take the most recent, other committees will average the scores, still others take the highest score on each section, etc. In general it is advised to retake the MCAT only if there is a good reason for doing so; e.g., illness or anomaly on the first exam, significantly different preparation (such as completion of the BCPM), etc.

7.4 Nontraditionals approaching the application process

For the most part, nontraditionals approaching the application process should proceed identically to traditional applicants. The AAMC web page contains a variety of resources along these lines for getting started. Also, the MSAR material (available at various libraries, premed advisors offices and directly from the AAMC) is “highly recommended for all prospective applicants.” The document includes various data concerning applicant pools and individual schools.

There are several points about the application process that are specific to the applications of nontraditional students. This are discussed as follows:

TRANSCRIPTS Since nontraditional applicants often have advanced degrees (JD, MBA, MS, MA, PhD etc) there is typically more than one transcript and sometimes 3-5 transcripts. The more transcripts an applicant has the greater the potential for error on the part of AMCAS. Transcripts can be lost etc and an application can be held for verification for months. Non-traditionals with many transcripts should be aware of this and should plan accordingly: Apply as early as possible.

Another concern for nontraditional applicants is the breakdown of AMCAS GPA for graduate and post-bacc course work. In short, while AMCAS reports transcripts by courses and lists all courses completed, AMCAS breaks down GPA computations by year for undergraduate courses only (Fresh, So, Jun, Sen). Post bacc and grad GPAs computations are not similarly broken down by year; e.g., the GPA for all post-bacc BCPM courses are computed and reported as one number, the GPA for all post-bacc non-science courses are computed and reported as one number, the GPA for all Grad BCPM courses are computed and reported as one number, the GPA for all grad non-science courses are computed and reported as one number. Hence, post-bacc and grad course GPA computations in AMCAS do not show trends. Note that admissions committees do generally favorably factor in graduate studies in their considerations, but committees do so on an idiosyncratic basis (different committees will take different positions on different candidates).

PERSONAL STATEMENTS Nontraditional applicants typically have unique experiences and backgrounds. Since admissions committees look for unique candidates in general, nontraditional applicants stand a good chance of attracting positive attention to their application. However, the motivation for the career switch of a nontraditional applicant is a factor unique to nontraditional students. Consequently, it can be of common interest to admission committees. Many nontraditional applicants are recommended to address this interest directly in their personal statement.

For candidates looking for advise on their personal statement, friends family and colleagues are advised in general and typically catch grammatical problems etc. Also, most medical schools have a diversity office charged with helping minority, female, and non-traditional applicants. Contacting your state schools and find out whether they offer PS advice or workshops through the diversity office is then advised. Alternately, SDN members read and critique PS each year and provide cogent feed back.

LETTERS OF RECOMMEDATION For traditional applicants, LORS typically are written by professors. For nontraditional the situation is a little different. Graduate or post-bacc nontraditional can proceed identically to traditional applicants in terms of LORs. For nontraditinal applicants who have been working full-time with no classes for several years, substitute employment letters are sufficient for some admission committees. However,

some schools may require refresher coursework and letters from those professors. Other potential sources of LORs for non-trads include volunteer coordinators, physicians whom you have shadowed, or researchers for whom you have volunteered. Again, when in doubt, contact the individual schools for more information about appropriate sources of LORs.

Coordinating LORs can also be problematic for nontraditional applicants who do not have access to pre-medical advisors. One option is to use an electronic LOR clearinghouse like Interfolio. Recommenders submit letters directly to Interfolio, and applicants then forward the letters electronically or by postal service to respective schools. Alternately, ask recommenders to send individual letters to each school where a secondary application is completed. If a large number of schools is considered, this may be problematic. Note that in general it is highly recommended to follow standards rules of professional etiquette in these matters; e.g., always provide your LOR writers with addressed, stamped envelopes etc.

PREMED ADVISORS Since nontraditional applicants typically do not have access to premed advisors they are often forced to pursue other sources for feedback. One route is to call all local state schools and schedule an appointment to meet with the admissions dean at one or more of them. In subsequent meetings, provide copies of all transcripts, MCAT scores, and a CV listing activities, employment history, and awards. The general purpose of this meeting is to identify places where your application is weak. Ask for identification of where improve your application can be approved and what your general chances are for admission. This process will generate relevant feedback while providing a contact at the school. Optimally, the meeting will determine a specific set of criteria detailing the credential of a successful applicant. Based on this feedback develop a plan to strengthen the weak aspects of your application.

Appendix A

Where to Go From Here

Now that you have finished reading this book, you should have an idea of what your next steps are. If you are still in need of information, you can try the following resources. Some of the material listed below is not free. This appendix is one of the few places where I will list resources that are not freely available through the Internet.

Books about applying

<i>Title</i>	<i>Author</i>	<i>ISBN</i>
<i>101 Tips on Getting into Medical School</i>	Jennifer Welch	1933237066
<i>Barron's Guide to Medical and Dental Schools</i>	Sol Wischnitzer	0764133721
<i>Best 168 Medical Schools</i>	Princeton Review	0375766294
<i>Becoming a Physician</i>	Marita Danek	0471121665
<i>Essays That Will Get You Into Medical School</i>	Dan Kaufman	0764120298
<i>Essays That Worked for Medical Schools</i>	Emily Baer	0345450442
<i>Getting In: How Not to Apply to Medical School</i>	Paul Jung	0761917578
<i>Getting Into Medical School</i>	Sanford Brown	0764134477
<i>Medical School Admission Requirements</i>	AAMC	1577540646
<i>Peterson's Game Plan for Getting into Medical School</i>	Cathy Jewell	0768903939
<i>U.S. News Ultimate Guide To Medical Schools</i>	U.S. News	1402211902
<i>Vault Insider Guide to Medical School Admissions</i>	Sujay Kansagra	1581314515

Books about medical school, residency, and practicing

<i>Title</i>	<i>Author</i>	<i>ISBN</i>
<i>E-Myth: Physician</i>	Michael Gerber	0066214696
<i>Kill as Few Patients as Possible</i>	Oscar London	089815197X
<i>Just Here Trying to Save a Few Lives</i>	Pamela Grim	0446524239
<i>How Doctors Think</i>	Jerome Groopman	0547053649
<i>Mount Misery</i>	Samuel Shem	0804115559
<i>On Call</i>	Emily Transue	0312324839
<i>On Doctoring</i>	Richard Reynolds	0743201531
<i>The House of God</i>	Samuel Shem	0385337388
<i>What I Learned in Medical School</i>	Kevin Takakuwa	0520239369
<i>What Patients Taught Me</i>	Audrey Young	1570613966

Journals and magazines

<i>Title</i>	<i>URL</i>
<i>American Journal of Bioethics</i>	www.bioethics.net
<i>New England Journal of Medicine</i>	www.nejm.org
<i>Journal of the American Medical Association</i>	www.jama.org
<i>U.S. News & World Report</i>	www.usnews.com

Websites

Credit

<i>Title</i>	<i>URL</i>
Credit Boards Forums	www.creditboards.com
EquiFax credit bureau	www.equifax.com
Experian credit bureau	www.experian.com
FICO Score	www.myfico.com
MSN Money	moneycentral.msn.com
Trans Union credit bureau	www.transunion.com

Scholarships and loans

<i>Title</i>	<i>URL</i>
Broke Scholarship Search	www.brokescholar.com
FastWeb Scholarship Search	www.fastweb.com
FAFSA	www.fafsa.ed.gov
Indian Health Services	www.ihs.gov
National Health Service Corps	nhsc.bhpr.hrsa.gov
National Student Loan Data System	nslds.ed.gov

Misc and forums

<i>Title</i>	<i>URL</i>
Admissions Advisers	www.admissionsadvisers.com
Essay Edge	www.essayedge.com
Kaplan (test review)	www.kaplan.com
MCAT Pearls	www.mcatpearls.com
MD Applicants	www.mdapplicants.com
Military publications	www.e-publishing.af.mil
National Institutes of Health Research	training.nih.gov
Princeton Review	www.review.com
Stats about applicants	www.aamc.org/data/facts
Student Doctor Network	www.studentdoctor.net

Appendix B

Workbook

When you apply to medical school, filling out the primary application will become difficult as you struggle to remember every activity that you ever participated in—especially if you are a non-traditional applicant and you volunteered years ago as a freshman in college. The following pages represent a workbook that you can begin filling out now. Whenever you join or leave an extracurricular organization, make an addition to the workbook to keep for your records. You can then reference these sheets as the time to apply approaches. Think of it as a mini-diary.

Volunteering

1. Activity Name Dates Hours per week Contact Person

Description:

2. Activity Name Dates Hours per week Contact Person

Description:

3. Activity Name Dates Hours per week Contact Person

Description:

Research

1. Activity Name Dates Hours per week Contact Person

Description:

2. Activity Name Dates Hours per week Contact Person

Description:

3. Activity Name Dates Hours per week Contact Person

Description:

Clinical experiences

1. Activity Name Dates Hours per week Contact Person

Description:

2. Activity Name Dates Hours per week Contact Person

Description:

3. Activity Name Dates Hours per week Contact Person

Description:

Examples of Leadership

Story:

Story:

Teaching Opportunities

1. School Name Dates Hours per week Contact Person

Description:

2. School Name Dates Hours per week Contact Person

Description:

Employment and Other Extracurriculars

1. Organization Dates Hours per week Contact Person

Description:

2. Organization Dates Hours per week Contact Person

Description:

3. Organization Dates Hours per week Contact Person

Description:

Awards and Honors

	<u>Award Name</u>	<u>Date Earned</u>	<u>Description and Significance</u>
1.			
2.			
3.			
4.			

Publications

- 1.
- 2.
- 3.

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