

## **The Step 1 Reference**

### **Disclaimer I:**

This is the most important part of the entire document. I am going to outline what I did here, but realize that this is by no means the only way to go about studying. There will be several plans out there, numerous strategies, and countless resources. To sift through all the nonsense and create an efficient plan of attack tailored to you, it is essential to identify your goals, understand how you study best, and not be afraid to be creative and try something new.

Regardless of the plan however, accept the fact that if you want to do something truly great, you will need to dream big, believe in yourself even when setbacks come, and work harder than you ever have in your life.

### **Disclaimer II:**

Three of us followed this plan. We all went 250+ with an average of 256. We are by no means the most intelligent people in our class, but we were amazingly disciplined.

### **Disclaimer III:**

Anyone who tells you that there is one and only one way to go about studying for this test is full of *you know what*. Anyone who tells you that your goal is unattainable, or that you are not capable of such a feat is completely full of *you know what*. This test is a chance to do something special. Shoot for the stars and surround yourself with people who believe in you.

### **Disclaimer IV:**

I wrote this to act as a reference. It's an honest account of a strategy that worked. My hope is that as questions arise before and throughout your study block, something in here will be able to help.

## First something on the test itself:

Step 1 is composed of 7 individual sections. Each section has 46 multiple-choice questions. You are given 1 hour to complete each section. On test day you have a total of 8 hours to complete all 7 sections. We'll talk much more about test day later.

While the MCAT required the need to master certain concepts (i.e. kinematics, redox reactions) and then apply those concepts to a new scenario (i.e. all the passages), Step 1 is much more straightforward. The test is largely dependent on *2-step reasoning*, comprised of Pattern recognition followed by Regurgitation.

### *Pattern recognition*

Often vignettes will begin with a patient presenting with a constellation of symptoms. You will rarely be given the exact disease/bug in question. For example:

- a) Mr. Jones comes in with fever, acute onset RLQ pain, and rebound tenderness. (appendicitis)
- b) Mrs. Smith is septic and culture reveals gram-positive cocci in clusters that are coagulase positive and methicillin resistant. (MRSA)

Both cases demonstrate a pattern that needs to be worked out before we can even get to the regurgitation.

### *Regurgitation*

This is the toughest part of the test. It demands memorization of an incredible amount of minute facts and obscure associations. For example, the follow up to the above scenarios could sound something like this:

- a) Release of what interleukin is most responsible for neutrophil migration to the site of Mr. Jones' infection? (IL-8)
- b) What is the most likely side effect of fast infusion of the appropriate therapy for Mrs. Smith? (Vancomycin – flushing, AKA Redman Syndrome)

Answering these questions requires less critical thinking (like analyzing a brand new MCAT passage) and is more dependent on simply recalling basic facts.

While the need to comprehend such an amazing amount of patterns and information makes the test seem like a daunting obstacle, it is also the reason why the test *is* a conquerable feat. Step 1's predictable design means that we have concrete ways to prepare for each aspect of *2-step reasoning*.

- Pattern recognition – The key here is questions, questions, questions! The more questions you do, the more patterns you'll see. The more patterns you see, the more prepared you'll be for whatever question stems get thrown your way on test day. Roughly 5,000 questions is a good benchmark to keep in mind.
- Regurgitation – Plain and simple, you have to know everything from the broadest concept to the most intricate detail. Fortunately, almost all this information can be found using a combination of First Aid, UWorld, and Pathoma. The hard part is memorizing it all, but we'll get into that later.

## **The ingredients to a great board score (250+):**

50% *Hard work*

25% *The right plan of attack*

25% *Magic*

### ***Hard work***

There is really no way around this one. It is the single most important component of studying and is the common denominator for all great scores. The good news is that this one is completely in your control. You get to decide how much you are willing to sacrifice and how hard you are willing push yourself. There will be much more on what *Hard work* entails later, but here's a preview: 10 hours a day, 8 weeks straight, >5,000 questions, and 2 full-length 7 set practice exam days. You have to ask yourself, "How bad do I want it?"

### ***The right plan of attack***

As mentioned above, creating a plan of attack best suited for you is essential. This is made up of both the resources themselves and the plan; basically how you put those resources into action.

#### **Resources:**

You can put in 15 hours a day, but if you are using off-base resources, or dedicating too much time to low-yield concepts, your hard work will be in vain. The name of the game here is *simplicity*. The fact is that 3 primary resources will cover 95% of the material you will see on test day:

- First Aid (FA) – the backbone of board studying. I saturated this book with all relevant facts from UWorld and Pathoma over my study time to make it the hub of everything I had learned.
- UWorld – the best question bank out there and the most similar in format and content to test day questions.
- Pathoma – invaluable for pathologies and full of Dr. Satar's high-yield tips that cannot be found anywhere else. The videos also offered a great alternative to simply reading text.

#### **Supplemental resources:**

- NBME practice exams – most useful for simulating test day conditions and exposure to more questions.
- Lange Pharm cards & Lippincott's Microcards – I used these for clarification when First Aid or UWorld was unclear/incomplete about a particular topic. I did not use them as a primary source. Odds are if something is that important it will show up in FA or UWorld.
- Anything from our curriculum – I only turned here to make minor annotations to FA when going through 1<sup>st</sup> Pass (more to come).
- Something new – try something not listed here or make your own resource. Be creative and understand what works for you. Remember that you know yourself better than me, or anyone else for that matter.

All that being said, let me repeat, if you *master* the 3 primary resources, you will know enough to obtain a great score. The difficult part is figuring out how to *master* such an enormous amount of information. That's where the plan comes into play.

#### The Plan:

This will act as a general overview. I'll go into more detail in the Methods section. I took my full 8 weeks to study directly after finishing Block 6. Everyday I started studying at 8:00 am. I averaged studying at least 10 hours a day. This stayed consistent everyday for 8 weeks straight.

In 8 weeks, the goal was to get through:

- FA – 3 times
- UWorld – 2 times
- Pathoma – 2 times
- 3 NBMEs
- 2 UWorld tests
- The Free 150

The 8 weeks were broken down into 3 Passes.

- 1<sup>st</sup> Pass (Weeks 1-4) – Information gathering, annotating FA
- 2<sup>nd</sup> Pass (Weeks 5-6) – Reinforcing/reviewing said information
- 3<sup>rd</sup> Pass (Weeks 7-8) – Building endurance for test day

Like *Hard work*, *The right plan of attack* is another ingredient that is completely in your control. You get to pick the resources and you get to decide how to manage your study time.

Coupling these first two factors together means that 75% of a great score is directly up to you. Thus, truly maxing out *Hard work* and *The right plan of attack* should be enough to get just about anyone a respectable score. All that being said, the ability to separate yourself, to reach that next level, lies in the *Magic*.

#### *Magic*

This is a catchall for 3 intangibles, unique to every individual, that factor prominently either during studying or on test day itself:

- Raw God-given intelligence
- Test taking savvy
- Poise under pressure

Raw God-given intelligence:

Everyone possesses a certain amount of this one. God-given intelligence largely influences *how fast* you can amass all the facts, *how long* you can remember

them, and *how many* you can simply cram in. Because the test relies so heavily on regurgitation, memorization obviously plays an essential role to doing well.

Thus, if you have the kind of mind that can read something once and remember it forever, you probably won't need 8 weeks to study (and in fact you will most likely obliterate Step 1). For the rest of us (including myself) that need continuous reinforcement to cement in the facts, we can potentially give ourselves 8 entire weeks to prepare. We have time for constant repetition and time to create ways to make the memorization easier. Again, this comes to the point I made earlier; you know how your mind works better than anyone else. Plan your study time accordingly.

Test taking savvy:

This is the category for those people who just seem to be good at taking standardized tests. Test taking savvy can be broadly defined as the ability to use logic to analyze questions/answers. It is a skill most utilized when difficult problems arise where you may not know everything about the content being tested. Instead, you have to rely on the question's wording/structure and the process of elimination to make an educated guess.

Fortunately, this is the one intangible that can be most improved over the course of the study block. The more board questions you see, the more familiar you'll be with their make-up, and the more adept you'll be at discerning what they want. In addition, here's where having a study buddy can help. Sometimes it can be very useful to have a friend explain how he interpreted and went about answering a difficult question you may have missed.

Poise under pressure:

Whether it is Eli Manning confidently leading a game winning drive in the Super Bowl, or Michael Jordan calmly hitting a go-ahead jumper in the closing seconds of the NBA Finals, these athletes epitomize this intangible. Quite simply, it is the ability to perform your best when the stakes are the highest. It is the capability to feel the pressure, manage the moment, and through it all, keep your composure.

Anyone who has played in a big game knows what this feels like. Test day is like a very big game. Just like you would train for a sporting event, the more you can simulate what it will feel like on Test day, the more accustomed you will be to handling the pressure. Conditioning yourself to block out the stress and concentrate on the task at hand starts from Day 1 of studying. It means taking every question set seriously. It means pushing yourself to stay focused even in the 7<sup>th</sup> set of a mock-test day. And more than anything, it means going with your gut when the chips are down. Believe in yourself and trust in your preparation.

## Methods:

*When I scheduled my test (and why):*

I placed my study block directly after Block 6. I *highly recommend* this strategy because:

- I don't know if you have figured out Cleveland weather yet, but it does not actually get nice here until the middle of May. I chose to study during March and April (when it's grey, rainy, and cold) because I wouldn't want to be outside anyway.
- While repro and biochemistry would have been tough to relearn whether I studied directly after Block 6 or after 4 months of research block, Neurology, Psychiatry, and Head & Neck anatomy were freshest right after the block exam. Putting board studying first allowed me to take advantage of my recent mastery of these subject areas.
- Taking my exam first meant I could use my subsequent Research block as a glorified summer break with absolutely nothing looming over my head (which was awesome by the way).
- Studying for Step 1 gave me a global view of everything I had learned in med school for the first time. It was a great way to prepare myself for rotations.

*How I scheduled my test:*

This was not the easiest, swiftest, or cheapest of processes. I filled out my USMLE application in November so that I could reserve my May test date as soon as it became available at the beginning of December. Stay on top of this so you get the date and location you want.

*How I annotated First Aid (FA):*

Like I stated earlier, my goal was to take every meaningful fact from all my resources (specifically UWorld and Pathoma) and add them to FA. I wanted to funnel everything down to a single master resource to organize the overwhelming amount of information into a uniform framework where I could easily find/recall data. I wrote in pencil directly in the margins of FA, however this required small, neat writing. If you know this will not work for you, here are some other ideas:

- Unbind FA and put it in a three ring binder where you can more easily add your own sheets of notes.
- Add sticky notes directly to the relevant FA pages.

Whatever the case, choose a system and stay organized. It will pay off immensely when you're reviewing 2 days before the test and trying to remember where you made a note about an obscure fact weeks ago.

*When I started board studying:*

I began actual board prep work after I ordered the latest edition of First Aid once it came out in January. Mirroring Block 6, I read through the Neurology and Psychiatry chapters. I used information from our curriculum to make *minor* annotations to clarify and expand upon some sections of FA. I also watched the corresponding Pathoma Neurology chapter and added all necessary info to FA. Be aware that UWorld annotations require a significant amount of room so save some space if you are writing in the margins.

*When I should have started board studying:*

Looking back, it would have been a great idea to start board studying during the Micro section of Block 5. I should have read through the Micro chapter of FA and annotated it with info from our curriculum and Lippincott's Microcards. If I had made my micro "maps" then, it would have made the material far easier to relearn during actual boards study block.

*How I structured my study block (and why):*

Like I stated in *The right plan of attack*, I wanted to get through UWorld twice plus 3 NBMEs, 2 UWorld tests, and the Free 150. That totaled roughly 5,600 questions. Thus, I took my full 8 weeks/56 days so I would be averaging a reasonable 100 questions per day. In addition, I knew that I learned best when I had ample time for repetition and creating study aids. After I knew how much time I would have, I divided the 8 weeks into 3 Passes:

1<sup>st</sup> Pass (Weeks 1-4) – Information gathering, annotating FA

- I went through FA, UWorld, and Pathoma each once.
- UWorld had 2,211 total questions so that meant about 79 questions per day. I kept question counts on the lower end because I knew I would be spending the bulk of my time annotating FA. I eased my way in with 1 set (46 questions) per day during Week 1 and then transitioned to the normal 2 sets (92 questions) per day for Weeks 2-4.
- I watched every Pathoma video and made all necessary FA annotations. Even watching at 2x times speed, this took me a long time. I noted which videos were especially helpful and which ones would be unnecessary/inefficient to re-watch.
- In theory, by the end of Week 4 every important piece of information from UWorld and Pathoma was somewhere in FA. This was a long tiring process, but with the majority of annotating done, it allowed me to simply sit back and review during 2<sup>nd</sup> and 3<sup>rd</sup> Pass.

2<sup>nd</sup> Pass (Weeks 5-6) – Reinforcing/reviewing said information

- Week 5 started with NBME 13 (note that NBMEs and UWorld tests are all 4 sets). This being the first time I had done 4 sets in succession; I was tired by the end of the day.
- Week 6 started with UWorld test 1 plus 2 extra UWorld sets on top of that. Thus this time I did 6 sets in succession. The goal was to build endurance to eventually do full-length 7 set mock tests in 3<sup>rd</sup> Pass.

- I alternated between NBMEs and UWorlDs to see how the scores compared.
- I went through FA again. This time I highlighted important details in a way that allowed me to review an entire page by bouncing from highlight to highlight (rather than reading every word).
- I continued doing 2 UWorld sets every day (except the days I took NBME 13 and UWorld 1). Unlike 1<sup>st</sup> Pass, reviewing/annotating my question sets took much less time.
- I began watching the most useful Pathoma videos for a second time. Because I did not have to take notes, and watched at 2x times, whole chapters went by quickly.
- I took this time to make/complete study sheets specifically for Micro, Biochem, and Pharm (more on these later).
- I also pinpointed information that required brute force one-to-one memorization and started building large decks of flash cards using a program like iFlash. In all, I created over 30 decks. During 3<sup>rd</sup> Pass, rather than simply reading over text, I tested myself by continuously running through the decks until I hammered home the info.
- By the end of Week 6, FA was highlighted and could now be reviewed very quickly. All study sheets for Micro, Biochem, and Pharm were complete. The flash card decks were written and ready to go. My endurance was at a point where I was ready to take a full-length 7 set mock test.

### 3<sup>rd</sup> Pass (Weeks 7-8) – Building endurance for Test Day

- Week 7 started with NBME 15 plus 3 extra UWorld sets (My first full-length 7 set day).
- Midway through Week 7 I took UWorld test 2.
- Week 8 started with NBME 16 plus 3 extra UWorld sets (My second full-length 7 set day).
- Midway through Week 8 (3 days before Test Day) I took the Free 150.
- I quickly went through FA again by reading through all my highlights. In my last 2 full study days before the test, I fired through the most difficult/highest yield chapters one more time (thus hitting these select chapters a fourth time).
- I finished off UWorld the second to last day before the test.
- I continued watching the best Pathoma videos at 2x times speed.
- I reviewed my Micro, Biochem, and Pharm sheets.
- I ran through every flash card deck several times.
- By the end of Week 8, I was tired, but ready for the real deal.

I *strongly recommend* printing out a blank calendar and planning out each day so you guarantee yourself enough time to complete everything. This is important and I'm happy to help with/look over your schedule, just let me know.



*How I structured each day (and why):*

I wanted everything I did to mirror Test Day. From day 1, I wanted my body and mind to get into the rhythm of what Test Day would feel like. Thus, my schedule everyday centered around the fact that my real test started at 9:00 am:

- 7:00 am – wake up
- 8:00 am – get to school
- 8:00-9:00 am – warm up
  - During 1<sup>st</sup> and 2<sup>nd</sup> Pass this meant reviewing a couple topics with my buddy that we had agreed upon the night before.
  - During 3<sup>rd</sup> Pass this meant running through numerous flash card decks.
- 9:00 am – start UWorld sets
  - I did the normal 2 sets back to back without a break because my Test Day schedule had 2 sets back to back as well.
  - The sets went slower during 1st Pass. I nearly took the full time most days.
  - 2<sup>nd</sup> and 3<sup>rd</sup> Pass understandably went quicker because it was the second time I had seen the questions.
- ~11:00 am – start reviewing UWorld sets
  - During 1<sup>st</sup> Pass this took anywhere from 3-6 hours because of all the necessary annotations (more on UWorld specifics later).
  - During 2<sup>nd</sup> and 3<sup>rd</sup> Pass however, I reduced this to less than an hour because everything important should have already been written down.
- 2:00 pm – lunch
  - I know this seems late for lunch, but working basically straight through from 8:00 am – 2:00 pm meant that I already had 6 of the target 10 hours a day down. Front-loading helped train me to keep focus for 6 hours straight.
  - This strategy paralleled Test Day that runs essentially straight through from 9:00 am – 5:00 pm.
- 3:00 pm-6:00 pm – more studying
  - Days I went to the gym cut into this 3 hour study block and I probably did not get home until closer to 7:00 pm.
  - Notice again how 9 hours of studying are crammed from 8:00 am to 6:00 pm, which parallels the timeframe on Test Day.
- 6:00 pm-9:00 pm
  - I used this time to go home, cook, eat, shower, clean, do laundry, go grocery shopping, etc.
- 9:00 pm-10:00 or 11:00pm – more studying
- ~11:30 pm – Bedtime
  - This ensured 7-8 hours of sleep a night

Besides days I had mock tests and the day before the test, I rarely wavered from this routine. After 8 nonstop weeks, my body and mind were prepared to perform for the entirety of Test Day.

### *How I used UWorld:*

First a little about UWorld itself:

- You can take question sets on timed/untimed or tutor mode. Tutor mode gives you immediate feedback (correct/incorrect) after you answer each question.
- You can select question sets based on Content area (anatomy, behavioral sciences, biochem, etc.) or Organ system (cardiology, pulmonology, endocrine, etc.).
- I used untimed tutor mode during my very first question set to become familiar with the format, and then *never* used it again. Every set I did after was *timed without tutor mode*, just like sets would be on Test Day.
- Upon reviewing your completed question set, UWorld gives you an explanation of what the question is asking, details about every answer choice, and the key take home points. Thus there is a tremendous amount of information from every question that needs to be compiled in FA.
- My mentality the first time through was to “leave no stone unturned.” I annotated FA with every novel piece of information from UWorld including diagrams and wrong answer choices.

During 1<sup>st</sup> Pass, my main goal was to do questions only after I had adequately prepared myself by reviewing the relevant material beforehand. For example, this meant that before I did the UWorld Neurology questions, I would read the FA Neurology chapter and watch/annotate the Pathoma Neurology chapter. In selecting the UWorld question set, I would include all Content areas, but only check off the Neurology Organ system. After completing the set, I annotated FA accordingly and then turned my attention the rest of the day to getting through the FA and Pathoma chapters of whatever UWorld Organ system I had selected to do next.

Because I was doing 92 UWorld questions everyday, I had to continuously evaluate how many questions were left in each Organ system and when I would have to be prepared to start the next one. Often times there were not enough questions left in a single Organ system to do a complete 46 question set. For example, if there were 30 Neurology questions left, I would be sure to have my Cardiology prep work done so I could add Cardio questions to the remaining Neuro questions to make a full 46 item set. Once you buy UWorld and before you start question sets, I *strongly recommend* taking time to evaluate how many questions each Organ system has, what order to do the systems in, and how much time it will take you to get through an entire chapter of FA and Pathoma in preparation. Be organized to ensure you stay on target.

The second time through UWorld was much more straightforward. I had conceivably seen everything once and now I was ready to start mixed question sets, just like Test Day. A mixed set meant including all Content *and* Organ systems so in theory every set was a hodge-podge of everything. These were harder from the standpoint of unpredictability, but overall easier because I knew the material better and recognized several questions from the first time.

*How I studied for Micro:*

Like I stated earlier, this is one subject that would have been helpful to start during Block 5. Because Micro has so many different entities (bacteria, viruses, fungi, etc.), I created “maps” for each family that allowed me to visually place each organism. Each map was confined to a single page (thus a single visual image) and constructed from a combination of FA and Lippincott’s Microcards. I included an example of my Gram-positive map on page 21. In the empty boxes, I wrote the name of the organism and the most important facts. The highest yield bugs were given the largest boxes. I drew the bare bone diagrams during 1<sup>st</sup> Pass and filled them in during 2<sup>nd</sup> Pass.

*How I studied for Biochem:*

Similar to how I approached Micro, Biochem also lent itself to creating large diagrams. I replicated basic pathways from FA and filled them in with other data like regulators, rate-limiting steps, and points where disease occurred. I tried to build flowcharts that unified several pieces of information to create a single complete image. I began these sheets in 1<sup>st</sup> Pass and completed them in 2<sup>nd</sup> Pass.

*How I studied for Pharm:*

This was by far the toughest topic for me during 1<sup>st</sup> and 2<sup>nd</sup> Pass. To turn my weakness into a strength, I knew had to get creative. Like with Micro, I decided to start by grouping drugs by family (cholinergics, beta lactams, epilepsy drugs, etc.). Using FA and Lange Pharm cards, I constructed single sheets for each drug family with empty boxes. Next, I arranged the drugs in alphabetical order and added basic info on mechanism of action, use, and side effects. Then I drew a picture for each drug. Usually the image represented the side effects because they were often the hardest things to remember. I created a key (like a lightning bolt representing seizures) to keep everything uniform. I included an example of my Anti-fungal drugs table on page 22. I organized the empty boxes for each drug family during 1<sup>st</sup> Pass and then drew all the pictures during 2<sup>nd</sup> Pass.

In total I made 32 sheets. Every drug had a corresponding picture. While it took an incredible investment of time during 2<sup>nd</sup> Pass to complete the entire series, by the time I was finished, I had turned all of pharm into individual chunks of visual information. Safe to say drugs no longer gave me any issues.

As evidenced by these previous three categories, I am a very visual learner and I like arts and crafts. I played to my strengths by building my own diagrams that were easier to memorize not only because they were collections of images (as opposed to text/bullet points), but they were also my own creation. They were tailored to how I best remember things.

I know I must sound like a broken record by now, but how I prepped for Micro, Biochem, and Pharm again brings home the point I made in Disclaimer I: identify how *you* study best, be creative, and experiment with something new.

*How I studied for brute force one-to-one memorization:*

As I went through 2<sup>nd</sup> Pass, I identified information that required memorization of basic facts/associations, for example:

- Embryonic arch derivatives – mandible → 1<sup>st</sup> Arch
- HLA Markers – A3 → Hemochromatosis
- Hypersensitivity reactions – Pernicious anemia → Type II
- Roughly 30 more topics

A majority of these topics were lists of simple memorization that came from the Immunology, Pathology, and Pharmacology chapters of FA. To avoid having to continuously re-read the text, I made flash card decks during 2<sup>nd</sup> Pass using iFlash. This proved extremely helpful during 3<sup>rd</sup> Pass when I could essentially quiz myself everyday. If you know flashcards work for you, this could be a very useful tool to hammer home minutia. The earlier you start making decks the better.

*How I took practice tests:*

When I took tests was covered in *How I structured my study block (and why)*. As far as I *how* I approached each practice test, I tried to simulate the real deal every time. I started each one at 9:00 am and structured the sets just like I would on Test Day. I ate the same thing during the breaks and never looked at any scores until I was done with the entire day (remember as I was building endurance I began adding UWorld sets to the back end of the tests).

UWorld tests were great because they gave me explanations to every question (just like normal UWorld question sets). The NBMEs on the other hand, did not give me the correct answers or any explanations after the test. In fact, I had to pay an extra fee just to see the problems I got wrong. Here's another point where having a study buddy helps. There were few questions that my friend and I both got wrong, so when I reviewed my incorrect questions, quite often he could supply the right answers.

After reviewing each test (and of course annotating FA), I took the rest of the day off. This was really my only true "down time" in the whole study block, but it was much needed after doing anywhere from 4 to the 7 sets *and* reviewing each and every question. These mock-tests were the closest thing to replicating what Test Day feels like.

*How I studied with a buddy (and why):*

My friend Oliver and I studied together everyday of study block. Everyday we met at 8:00 am, reviewed material together, stuck to the same schedule, did the same number of questions, ate lunch together, took our test on the same date, etc. I loved having someone there in the trenches with me because:

- He kept me honest. I knew he'd be at school waiting for me at 8:02 am so it was added motivation for me to be on time.
- We did the same question sets and mock-tests, so it was nice to have each other there as a measuring stick to gauge our progress.

- We had different areas of expertise (I liked anatomy and he was great with physio and pharm).
- We worked together to create the large data sets for the flash card decks.
- He was intelligent and could answer a majority of my questions. When I came up against difficult problems, he offered a new perspective and often showed me where I was going wrong. Having someone who could quickly answer questions that otherwise would have taken me awhile to look up saved me an enormous amount of time.
- He understood how I felt and could relate to what I was going through.

I can honestly say there is no way I could have done what I did without Oliver there every step of the way. Obviously, this will not work for everyone, but if you have a good friend who can keep you focused, complement your learning style, and push you to be better, it's definitely something to consider.

*How I spent my last 2 full study days before the test:*

As study block winded down, I realized that although I wanted to go through everything once more, there was just not enough time. It came to point where I had to choose the toughest/highest yield FA chapters and Pathoma videos and cram as many of them into the final two study days as possible. By skimming through my highlights, I managed to consume roughly 300 pages of FA.

*How I spent the day before the test:*

I got up at 7:00 am, got to school by 8:00 am, and ran through every flash card deck one more time. My buddy and I finished by noon, walked over to check out the on-campus test center, and then took the rest of the day off. We drove back to my home where my ma had cooked us a pre-test feast. We ate a great meal, talked about things other than rare enzyme deficiencies, and tried to take our minds off the impending endeavor the next day. Getting away from my study environment definitely helped me calm my nerves and clear my head.

*Where I studied:*

I went to school everyday and found a room with white boards. There is no way I would have been able to maintain focus for such long stretches if I stayed in my apartment where there were countless more distractions.

*How much I drank:*

None.

*How much I slept:*

7-8 hours a night.

*How much I exercised:*

2-3 times a week during 1<sup>st</sup> Pass. Once a week in 2<sup>nd</sup> and 3<sup>rd</sup> Pass.

*What I did after the test:*

Call me.

## How to know you're on pace for a 250+:

I have yet to see a single tool that can give everyone an accurate score prediction. From my experience, different resources are more predictive for different people, so it really is a crapshoot. For that reason, I'm going to list out general benchmarks for several resources. If you're at or above these numbers, then rest assured, you're in line to score big:

- UWorld 1<sup>st</sup> time – 70% correct
- UWorld 2<sup>nd</sup> time – 90% correct
- UWorld Tests (1 & 2) – 260 average
- NBMEs (13, 15, & 16) – 240 average
- Free 150 – 85% correct

Note that these scores are based on the plan previously detailed. If you do completely mixed sets the first time through UWorld, or take an NBME before finishing 1<sup>st</sup> Pass, obviously your scores may be lower.

## Test Day:

By the time I got here, I had reached my limit. I was tired, but I knew I had done everything I could to prepare myself. The only thing left to do was take the damn thing and get on with my life.

A couple things about the test itself:

- It looks exactly like UWorld.
- There are 7 sections of 46 questions. You have 1 hour to complete each section.
- There is a 15 minute tutorial at the beginning of the test. However, if you have been using UWorld, you know how the format works and can skip this, which adds the 15 minutes to your total break time.
- You are given 8 hours to complete the entire thing, which means 1 hour of built in break time (assuming you skip the tutorial) that you get to decide how to divvy up.
- You are given a small dry erase board and marker for scratch work.
- You are given a locker that can be accessed during break time. In theory you could bring FA and look over sections while you eat lunch (but I wouldn't recommend that).
- During break time, you can leave the testing center and go for a walk if you really wanted to.

As far as my routine, I approached Test Day just like every other day:

- 7:00 am wake up
- 8:00 am – get to my friend's place
- 8:00-8:30 am – warm up with flash card decks
- 8:45 am – arrive at test center
- 9:00 am – start the test

As far as my mentality, there were a couple keys I kept in mind:

- Proper pacing was probably the most important aspect of my approach. Because I knew I did not think well when I felt the clock ticking down in my head, I tried to make sure I finished each set with around 10 minutes left so I would never feel rushed. To achieve this, I made a conscious effort to quickly get through the first 10 questions so I would start off on the right foot.
- I anticipated seeing strange questions. When they came up, I stayed calm, chose the most logical answer, and moved on without wasting too much time. Sometimes these off the wall questions are simply “test questions,” meaning they do not count towards the overall score, and are rather there just as a built in survey for the test creators.
- I did not get hung up on old questions. Once I finished a set, I tried to push everything that had just happened in the last hour from my mind and start fresh on the next batch of problems.
- I knew it was going to be a long day, but the only thing I could do was take it one question at a time.
- I trusted in my preparation and did not second-guess myself. Once I chose an answer, I only came back to it if I had it marked. Very rarely did I actually change the original answer.

I decided to structure my break time just like I had been prepping the past 8 weeks. I was used to doing 2 UWorld sets back to back. I completed all the 4 set practice tests with only a small break in the middle. I knew the 7<sup>th</sup> set would be difficult simply because I would be tired. So with this in mind, I arranged the day:

- Tutorial – I used the first 5 minutes to fill my dry erase board with necessary equations and then skipped the rest.
- Sets 1 & 2 – back to back
- Break – I took 5 minutes to walk out of the room, stretch, go to the backroom, and clear my head.
- Sets 3 & 4 – back to back
  - Set 4 was one of the tougher sets because I had been essentially working 4 hours straight with only a minimal break and no food.
- Break – I took 20 minutes to eat lunch. I ate the same thing I did during the practice tests: a bar, a banana, and some water.
- Sets 5 & 6 – back to back
- Break – Knowing I had ample break time left, I took 10 minutes to walk around, go to the bathroom, and muster strength for the home stretch.
- Set 7 – Although I was exhausted, it was nice going into this last set knowing I only had 46 questions left.

Whatever structure you decide for Test Day, I *highly recommend* choosing something early in study block so you can begin applying the strategy during your mock-test days to see how it works for you.

## **Some thoughts looking back:**

### *How I felt walking out of the test:*

I was tired, but so happy to be done. It felt like a weight lifted off my chest. The three of us who followed this study plan agreed that while the test was challenging, it was nothing we did not expect. It was on par with our study materials and we felt like there was no better way we could have prepared.

### *How I stuck to the schedule for 8 weeks straight:*

First, I was realistic about my expectations right from the beginning. I accepted the fact that this was going to be a long monotonous 2 months. Delayed gratification was my mantra.

Second, in the few days after the Block 6 SSEQ and before I officially starting boards studying, I took care of all outstanding matters (family, friends, housing, etc.). This helped keep distractions to a minimum.

Third, I had my buddy Oliver. On days I felt lazy and sluggish, he pushed me to work harder and reminded me that we had a job to do. He was the motivation I needed when I could not muster enough for myself.

Fourth, I saw tangible results. As the weeks progressed, I watched my scores slowly improve as I gradually obtained a better handle of the material. The positive reinforcement told me the plan was working and urged me to continue the hard work.

Overall, when I coupled all those factors together, sticking to the schedule was not as hard as it seemed. Now for those of you who have a tough time adhering to a strict regimen, I don't quite know what to tell you. Your best bet may be finding a friend to study with who can set the agenda and keep you on track.

### *How I responded when I had bad days:*

When you do over 5,000 questions, you are bound to come across some tough sets. It happens to everyone. There were days when I thought I had adequately prepared, only to find myself halfway through a set and already knowing I was getting slaughtered. It left a bad taste in my mouth. It made me question if all the hours were worth it. Sometimes it even made me doubt myself.

These days are going to happen. And when they do, remember that we are defined *not* by our failures, but rather, by the strength of our response. It is the will to keep fighting that makes us who we are.

I looked at these days as a chance to reevaluate myself. I reflected on my process, identified how and why I had gone wrong, and considered ways to improve. Every time I stumbled was a chance to address my weaknesses, a chance to get stronger. Ultimately, I used each setback as motivation. I may not have been good enough that day, but like hell if I couldn't find a way to be that much better tomorrow.



*Some common studying pitfalls:*

I hate my study block – Studying for this test should not feel like agonizing torture. If it does, you may have crafted the wrong plan for yourself and it will most likely be very difficult to stick to a strategy you despise so much. Don't get me wrong, some days were harder than others to buckle down and focus, but on the whole, I enjoyed the experience (albeit it helped that I was spending my days with one of my good friends). Assess how each week is going and be open to making the necessary changes to your schedule to create a more pleasant learning environment.

I don't feel like this resource is helping me – Ditch it sooner rather than later. If you don't think a particular source aids you in scoring better on your UWorld sets, or does not provide any new information to add to FA, it may be an inefficient use of your time.

My test is too soon – Push it back! It's tough to study when you feel like you're under the gun. For me, I initially scheduled the full 8 weeks because I knew I would deal better with a few days too many rather than a few days too little.

My test is too late – As you get deep into study block, you may realize that you hit a plateau. It's a place where you've approached the maximum amount of information your brain can store. Every time you learn something new, it feels like something old falls out the back. This is probably a sign that you need to move your test up so you avoid the eventual decline that comes after plateau phase. Ideally, you should be taking your test when you hit your peak.

I feel like I need a break, but I don't want to get off schedule – Take some time off. There's a fine line between pushing through the fatigue and legitimately needing a breather. Be conscious of where that line is. It's tough to study efficiently when you are mentally or physically exhausted. It'd be better use of your time to take an evening off (go to dinner, watch a movie, whatever you have to do to decompress) and come back refreshed the next morning. In the scheme of an entire study block, a few evenings here and there are not going to change anything (and this is another reason why having the full 8 weeks was nice, taking a small break never made me feel like I was getting behind because I knew I had more than enough time).

*Something on the Free 150:*

It's a 3 set practice exam put out by the NBME. It is the only tool I came across that used the same format for listening to heart sounds as Step 1 itself (that being where you can move the stethoscope around the chest with your clicker). In addition, one of my questions on Test day was a direct replica of a question from the Free 150.

### **For those who's goal is a 230-249:**

This guide may seem a little intense. That being said, while you may be basing your goal on a specialty you want to go in to now, understand that come third year you may be exposed to a brand new field that makes you change your mind about your future. In case that something is a competitive specialty, it's good to have a score that allows you to be competitive. The bottom line is, it's hard to know what will happen between now and the time you apply to residency. I would encourage you to reach for a number that gives you options no matter what happens.

### **For those who's goal is a 260+:**

Take full advantage of the things in your power, trust in your preparation, and keep your poise on test day. Realize that only a handful of questions may separate a mid-250 from a 260.

### **For those who's goal is a 270:**

First a little perspective before we touch this one...

Because neither the NBME nor medical schools typically release data detailing all Step 1 scores (as opposed to simple averages), some of the information about these elite numbers is anecdotal. While I can speak from experience, and have tried to uncover as much hard evidence as possible, some of this information may not be entirely complete.

In the last 4 years here at Case, the highest score achieved is thought to be a 271, a score that not surprisingly approaches the 99<sup>th</sup> percentile. In that time, there have been roughly 10-15 people with scores  $\geq 267$ . Needless to say, numbers like these open every door to every program in every field anywhere in the country. Your options are limitless.

I specifically included this section because I want you to know that something like this *is* possible. If you work as hard as you can, design a perfect individualized plan, and possess God-given intelligence, test-taking savvy, and poise under pressure, you have a chance... and then on top of all that, you will need a little luck. No matter how incredibly prepared you are, to reach this level, where a single question can swing a score by entire point, you will need a couple answers to fall your way.

Although the margin for error is slim, this *is* attainable. Maximize the things you can control, and most importantly, believe in yourself. Before you can do something great, you have to believe deep down that you are indeed capable of achieving anything you set your mind to.

### **Oliver's pearls of wisdom (or not so much??):**

If you've made it this far, I promise I won't be as long-winded as Nick. I wanted to add a few of my final thoughts, in addition to echoing what has already been said about doing what works for you.

- **Firecracker:** Many people swear by it. I personally tried it and it wasn't for me. It's OK if it's not for you, and it's OK if it is. But don't let other people freak you out because they did 200 something firecracker questions a day. I didn't use firecracker at all. At the end of the day, there's no concrete evidence one way or the other that firecracker is that "protein shake" you need to smash the test or that it's detrimental and too time-consuming.
- **Step 1 Classes:** There are a few out there, common ones being Kaplan, DIT, etc. I personally wouldn't recommend one for two reasons: 1) They are incredibly expensive. 2) It forces you to follow their schedule when you know best what things you need to spend more and less time with.
- **First Pass using this guide:** This was a brutal time and I constantly felt behind schedule because it took so long to annotate and gather everything from UWorld and Pathoma. I barely had any time to read FA to unlock a new organ system of UWorld questions. It's OK to be a little flexible. While it's important to follow the *routine* religiously, your day-to-day schedule can vary a little as long as your long-term (say weekly) schedule is being met.
- **Biochem:** A helpful thing to keep in mind when studying a vast subject like Biochem is to understand how these reactions all fit together and the ultimate goal of these pathways instead of simply knowing what enzyme does what. It's easy to get caught up in the very specific details and then you realize you don't even understand the relevance or importance of a pathway. Understanding pathways will serve you well because at some point you will see Biochem questions you have never seen before, but you can use your understanding to reason through it and pick the right answer.
- **Don't hang on to your practice test scores too much.** If you are crushing it, that's awesome, but there's a reason we listed "benchmarks" rather than absolute numbers to shoot for. Take solace in knowing that you have now seen one more question that you won't miss on test day.
- **Finally, sleep, sleep, and sleep.** The jury is not out on this one; the effects of sleep on your health and mental acuity are endless. As Nick stated, give yourself at least 7 hours of sleep a night.

That's all I have. I hope it helps you keep a level head during study block.

I wish you all the best of luck.

Feel free to contact me (nps15@case.edu) or Oliver (oxk49@case.edu) with any questions.

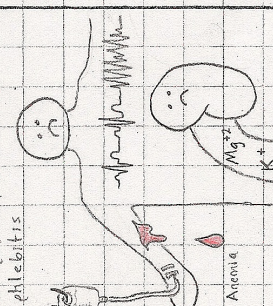
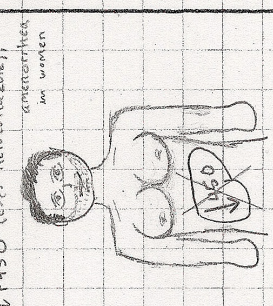
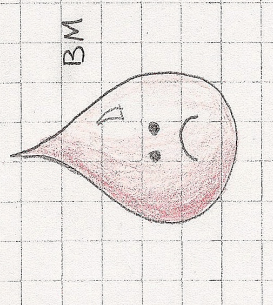
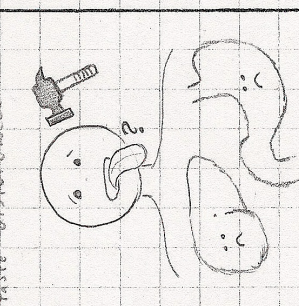
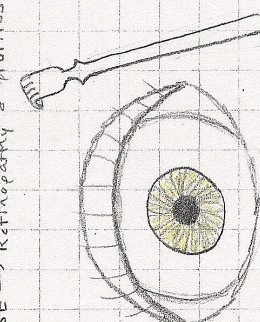
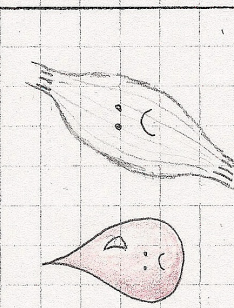
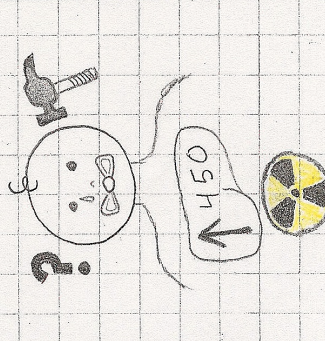
**Nicholas Satariano, 16'**

### **Acknowledgements**

I want to thank *Brian Swendseid* (15') and *Pete Surace* (15') for their guidance; *Elias Kikano* (16') for his technical support; *Amanda Woljan* (17') for her perspective; and of course *Oliver Ko* (16') for his commitment to staying with me in the trenches.





Pyrimidine → only Flucytosin	→ Lanosterol → Ergosterol → 14α demethylase → P450	→ β-glucan → Echinocandins
Anti-Fungals		
Amphotericin B	Azoles	Echinocandins
Mech → binds Ergosterol forming membrane holes	Mech → inhibits fungal P450 (14α-demethylase) that converts Lanosterol to Ergosterol	Mech → Inhibits synth. of β-glucan → inhib. cell wall
Use → serious, systemic, CNS mycoses, invasive mucor	Use → Intracerebral for Dimorphic, Chlorinazole for topical, Fluconazole → Candida	Use → systemic mycoses esp. Cryptoc meningitis in tandem w/ AmpB
SE → Infusion → fever/chills & hypotension, nephrotox, arrhythmias, anemia, IV phlebitis	SE → testosterone synth. inhib. (gynecomastia), liver dysfunction, P450 (esp. Ketoconazole), anticonvulsants in women	SE → GI & flushing (Hist.)
		
Nystatin	Terbinafine	Anti-Protozoal
Mech → same as AmpB	Mech → inhibits fungal squalene epoxidase → inh. Lanosterol synth.	Mech → blocks heme polymerase, Toxic heme cannot be converted to hemozoin, toxic to plasmodia
Topical form	Use → Dermatophytes, esp. involvement of finger or toe nails	Use → Plasmodia, besides falciparum → membrane pump conveys resistance
Use → "Swish & swallow" for oral candidiasis (often after steroid inhalation)	SE → GI, HA, hepatotox, taste disturbance	SE → Retinopathy & pruritus
Topical → diaper rash or vaginal candidiasis		
		Chloroquine
		Mech → glycoproteins normally synthesized by virus-infected cells → antiviral & antitumor prop.
		Use
		IFN α → chronic HepB/C, Kaposi, hairy cell, condyloma acuminata (HPV), RCC, malignant melanoma
		IFN β → MS
		IFN γ → chr. stem cell disease
		SE → neutropenia, myopathy
		
		Interferans
		Mech → interferes w/ microtubule fun & mitosis
		Use → Oral Tx for superficial inf. → Dermatophytes
		SE → Teratogenic, carcinogenic, confusion, HA, ↑ P450
		
		Griseofulvin