How to Help Residents Prepare for the ABIM Exam Cases

Case 1 Amar the anxious test taker

Amar is a PGY2 scoring in the 30th percentile on the ITE. He was disappointed but not surprised; it confirmed his fears. He studies regularly with MKSAP and performs well in low-stress settings. Amar struggles with anxiety during exams, especially with self-doubt and answer uncertainty. He often narrows to two choices but spends too much time deciding. He has trouble sleeping before exams and feels his concentration suffers on test day. He is unsure how to address these issues moving forward.

1. Use the CHEC-IN framework to identify challenges this resident may have with test taking
2. How would you develop an effective ABIM study plan for this learner?

Case 2 Alexander the seemingly apathetic

Alexander is a PGY3 advisee pursuing pulm/crit fellowship with declining ITE scores: 20% (PGY1), 25% (PGY2),15% (PGY3). You met with him after each ITE. He attributes poor scores to being a "bad test taker" and external circumstances. PGY1: Didn't take test seriously. PGY2: Took ITE post-night shift in ICU, rushed to go home and sleep. Claims his medical knowledge is fine since evaluations haven't raised concerns. This year, you ensured he was on elective and stressed the importance of the exam. You plan to meet again to discuss strategies and next steps.

1. Use the CHEC-IN framework to identify challenges this resident may have with test taking
2. How would you develop an effective ABIM study plan for this learner?

CHEC-IN Framework for ABIM Success

- Check in on learner wellbeing
- Explore insight/perspective on ITE performance
- Contextualize ITE score
- Interview about prior test taking experience (see Appendix C below)
- Next steps: agree on mutual goals, develop a study plan, and schedule follow up

Creating an Effective Study Plan for ABIM Exam

Time Allocation	• PGY2: 90 minutes/week • PGY3: 180 minutes/week
Study Consistency	• 30 minutes per day • 6x per week
Balanced Approach	• 50% reading • 50% retrieval
Avoid burnout	• 1 day off per week • Prioritize sleep and wellbeing

Study Skills and Test Taking Strategies for Coaching Medical Learners Based On Identified Areas of Struggle

Appendix C. Interview guide for faculty coaches

Introductions

1. Introduce yourself and your role, including any potential or perceived conflicts of interest
2. Ask the learner to introduce themselves and begin to get to know them. This lets the learner know that you are interested and invested in them as a person. It also begins to create a safe space for you to work together. (e.g. Where are you from? What do you enjoy doing? What are your career aspirations?)

Explore Prior Experience and Test Performance

1. Ask the learner about
    a. Prior standardized test performance
        i. If a learner has done well on standardized tests before, they likely have the needed test taking skills and foundational study habits. Their study habits may need to be adjusted to the new content or changed based on available time. For example, blocks of time available for studying are not present in residency as they were in medical school. Many of these learners need to be reminded to go back to strategies that have worked in the past, but that were abandoned.
        ii. If a learner has not done well on standardized test before, they will need more foundation skill development.
    b. If their primary language is different from the language of the exam (i.e. learned English as a second language)
        i. Learners who speak English as a second language are more likely to struggle with completing exams on time, as they may have a slower reading rate. This also impacts the efficiency of studying.
    c. Study resources used prior to the failed exam
        i. Some learners use too many resources. Others use incorrect resources that are either too simplified or too broad. It may be helpful to understand why the learner isn't using the recommended resources.
    d. How much time the learner spends studying, did they get through all of the material and how many practice questions were completed prior to exam failure?
        i. Students perception of expectations is widely variable. This question helps the coach know if the student understands the expectations. It may also reveal unexpected barriers to learning, such as family obligation or a sleep disorder.
    e. Review histograms (if available) from prior exam failures or practice exams
        i. Students who have a variable performance based on topic (i.e. failed renal but pass cardiology) tend to have the necessary test taking skills. Instead they need to focus on missed content.
        ii. Learners who perform poorly across the histogram need more global study and test taking skill development.
    f. Any unusual or unexpected events that may have impacted test performance
        i. Open ended questions give the learners a chance to divulge unexpected challenges that can be addressed.

Appendix A. Reported concerns and observations of medical learners who had failed a standardized exam.

Common Problems
1. I am not sure how many resources to use while I am studying.
2. I don't know how many practice questions to do before the exam.
3. I'm too tired to study.
4. I don't remember what I study.
5. There is too much material to learn.
6. I am easily distracted.
7. I'm too busy to spend hours studying.
8. I have trouble making a study schedule.
9. I have trouble following a study schedule.
10. I prefer to learn by listening.
11. I prefer to learn by doing a task rather than just reading about it.
12. I think I would do better if I could take a review course.
13. I can narrow the answer down to 2 choices… and then I pick the wrong answer.
14. Other than reading the explanation, I don't know what to do when I get a practice question wrong.
15. I can't decide where I should study.
16. I should be studying for my upcoming exam, but I really have to pass the test I just failed.
17. I have always been a bad test taker
18. I performed well on medical school exams, but have always done poorly on standardized exams.
19. I scored fine on exams until…
20. The grading histogram from the failed exam (if available) shows that I score poorly on all topics and sections.
21. The grading histogram from the failed exam (if available) shows I score well on some topics and poorly on others.
22. I always score well on certain blocks (e.g. I score well on the first block then fade; I'm a slow starter but do great on the last blocks)
23. I would do better if I have enough time to finish the questions on the test.
24. I'm very anxious about taking the exam again.

Appendix B. Suggested strategies to address reported concerns and observed struggles.[1-9]

Concern	Strategy
1. I am not sure how many resources to use while I am studying.	• Use one or two resources maximum with a bank of questions and learn them well. Avoid having so many study materials that you don't learn any of them well. • If you are unsure which study materials you should use, ask your course director, chiefs, senior residents, or program director. There will likely be a consensus. They may also know where to find discounted items or even lend you study material. Outdated editions are not recommended. • For standardized exams, any information in journal articles that has been published in the past year will either not be on the exam, or if the new material results in changes to an old question, that question will likely not be counted.
2. I don't know how many practice questions to do before the exam.	• If you are planning on reading a review series and completing practice questions, the recommendation is a minimum of 1500 practice questions before a standardized exam. If you are planning on doing questions only, the recommendation is that you complete 2500 practice questions prior to the exam. This assumes that for each question you do not know well or get incorrect, that you go back and review the answer, explanation and review material to ensure understanding of the topic. • For many of the subspecialties, it may be difficult to find more than a few hundred practice questions. As you read consider asking yourself, how would a test question ask me about this material? Consider making up questions or pairing with another fellow and writing questions for each other. Also, ask your program director as they may have stock piled questions that you can use to practice. Additional questions can be found by using the general specialties question bank. For example, if you are a pediatric gastroenterology fellow, complete all of the practice gastroenterology questions in a general pediatric question bank.
3. I'm too tired to study.	• The more active the learning process, the more likely you are to stay mentally engaged and awake (that includes no day dreaming). Write. Diagram. Draw. Build algorithms. Color code your notes. Create a notebook or flashcards in which you: o Record information that you read, but do not know well… so that you can review the material again. Take the time, in the moment to understand the information, then record it in a way that will help you remember. o Record facts that you will have to sit down and memorize. o In the same notebook or on flashcards, record the ONE key point of each question that you get wrong or are unsure of. While the cases in questions change and the phrasing of the question, the key points remain consistent and are often repeated multiple times within the same exam. o Once you finish going through your review material, you can then just study from this notebook or flashcards. This will help eliminate redundancy in studying, as too often learners keep going back to the same text re-reading what they do know to find what they need to review again. You can go back and review this book or flashcards a few times before the exam. Some trainees will even rewrite this notebook whittling it down to smaller books, as they study and master the content. They are then left with only a few pages to review the night before the test. o The goal is to revisit the material that you don't know 4-5 times. • If you might have a sleep disorder… seek a diagnosis and treat it. Physicians are notoriously bad at taking care of themselves. The consequences of a

	failed exam or being placed on probation for poor medical knowledge during training are catastrophic and even more tragic if preventable with treatment.
4. I don't remember what I study.	• To remember what you have studied, you will need to revisit the information > 6 hours after you review it and ideally after a good night's sleep (again, at least 6 hours). • There are many ways to revisit the material without taking too much extra time out of your day. o Teach someone what you just learned (residents, students, etc). You will learn and they will rate you higher for having taken the time to teach. o Recite what you learned as you are commuting to work, walking the dog, telling your significant other about your day. Be as detailed as possible… not I read about heart failure, but I learned that x medicines affect mortality for patient with heart failure and x medications only affect quality of life but do not extend survival. o Recite from memory your latest entry into your study notebook from the prior study session. On Tuesday when you sit down to study, first ask yourself the key points that you wrote in your notebook on Monday evening, or even from Sunday evening. If this feels a little hard, it is probably helping where if it feels too easy, it is likely to be remembered long-term. o Bring in practice board questions as a learning exercise for residents/students. They will really appreciate the teaching and again, you will receive higher ratings from your learners. o Create pod casts to teach yourself the material you just read and listen to them on your way to work. >>Identify a few people that you feel are engaged and interested in board questions (there are many nerds among us). Bring them questions that you are struggling to understand or questions where the answer seems different than clinical practice. It will help you retain the key points. o Compare patient cases with the material that you are studying. o Quiz yourself with the flashcards that you have made at the start of each study session. • Most learners spend all of their time studying, without taking time too *recall* what they have learned… resulting in a lot of wasted time studying with little retention of material.
5. There is too much material to learn.	• When studying for course exams, many students feel like there is too much information to learn. • Prior to attending a class, pre-read all of the lecture material (if available) so that during the class instead of trying to write down everything the professor says, you can work on understanding the content and taking more selective notes. The notes taken during lectures should be on concepts and key points, rather than everything. • Instead of trying to learn everything from each lecture, start by reviewing the course objectives. Spend your time and energy learning the objectives, then concentrating on material that the lecturer repeats and/or provides examples. These will be your highest yield topics.
6. I am easily distracted.	• If you have ADHD or might have challenges with concentration… seek a diagnosis and treat it. Physicians are notoriously bad at taking care of themselves. The consequences of a failed exam or being placed on probation for poor medical knowledge during trainee are catastrophic and even more tragic if preventable with treatment. • If you don't have ADHD, but still find yourself easily distracted see strategies for #3 which provides tips for active learning.

7. I'm too busy to spend hours studying.	• Quality over quantity. You don't need to spend 2 hours a day studying or every day off studying for 4 hours. Looking up the answer to just 1 question per day creates a wealth of accumulated knowledge. • For courses with larger amounts of information to be learned, especially in the preclinical years, start by reviewing the course and each lecture's objectives. • Read about one finite topic per day. i.e. Do not read about "HIV tonight." Instead, read about acute presentation of HIV, or prophylaxis for patients with HIV, or neurology complications and opportunistic infections in HIV. • Record information that you read, but do not know well… that you will need to review again. Once you finish going through your review material, you can then just study from this notebook. This will help prevent you from spending too much time on information that you already know, leaving time and energy to spend on what you have yet to learn. You can go back and review this book of "highlights" a few times before the exam (see #3). • Practice the recall techniques in the section "I don't remember what I study." (see #4)
8. I have trouble making a study schedule.	• Sit down with someone who can help you create a study schedule. It can be someone from your program administration, a peer or even a non-medical friend. • Ideally, you will want to begin studying at least one year prior to the major standardized exam. (The board certification exams are harder than the USMLE Steps. Don't be surprised!) Divide the number of topics that you need to review by the number of months or rotation that you have before the exam. Try to match the subjects with your rotation schedule. If you are studying cardiology during your cardiology elective, you will remember more and also have faculty available to answer questions as they arise. Likewise, complete the practice questions for each topic each month as they correspond to your reading. • Study the highest yield topics, meaning those most frequently tested on your exam as noted on the exam website, earlier rather than later. Spend proportionally more time on higher yield topics. • Be sure to build some vacation time into your schedule.
9. I have trouble following a study schedule.	• Find a method for keeping you accountable to your study schedule… set deadlines and create rewards. • Some learners set a goal of 5 questions per day and track their progress on a calendar or spreadsheet for accountability. If they only complete 2 questions on Monday then they must complete 8 on Tuesday. • Some ask their program administration or a friend to monitor their studying by voluntarily handing in answers to practice questions. Others tell their rotation attendings and report out on their progress each week. Try not to rely on your significant other as that might create relationship stress. • Some trainees set up a self-reward system to help motivate them to study. If I complete the chapter on post-operative infections and 50 questions, I can go hiking next weekend, get a massage, or I will buy myself new music, a piece of jewelry, new skis etc.
10. I prefer to learn by listening.	• After you read a chapter or set of topics, create a podcast (or other audio recording) in which you teach yourself the material that you just read. Then listen to the audio recording. Many learners choose to listen on their way to and from work, but this will depend on how you commute. • Consider using audio review courses. Listening alone is not enough, but it may help build a foundation for more active studying. (See #3)
11. I prefer to learn by doing a task rather than just reading about it.	• Writing is the equivalent of "doing" while studying. Write. Diagram. Draw. Build algorithms. Color code your notes. Compare and contrast information as you take notes. See #3.

	• Writing alone is not enough, but it may help build a foundation for other forms of studying, including listening, applying and recalling the information. • Consider exploring the work of Allen Mullen (mullenmemory.com) about how to build memory palaces to retain information. This will help with memorizing, but not necessarily understanding.
12. I think I would do better if I could take a review course.	• Talk to your program director or Student Affairs office about taking a course. Depending on the program and the number of similar requests, your program may be able to accommodate this request and assist with defraying the cost. • If you do attend a course, you will want to complete all of your exam studying prior to the course. Review your review material and complete at least 1200 questions before the course. It is impossible to learn years of information in a single course. Use the course as a review only to help refresh your memory and provide an opportunity to ask any final questions that you might have. Take the actual exam immediately after the review course, or as close to the end of the course as possible.
13. I can narrow the answer down to 2 choices… and then I pick the wrong answer.	• If you are able to narrow the answer choices down to 2 (and the correct answer is among the 2), and then are unable to choose the correct answer, you lack specificity of knowledge. Your general, intuitive knowledge that you use to practice medicine may be fine. However, they are testing the details. Look for the differences in the details between the two answer choices. That is the key teaching point for you for that particular practice question. • Then ask yourself, "how would they have written the question for my incorrect choice to be correct?" e.g. they would have had to tell me that the patient was having fevers for that answer to be correct, since they didn't the other answer is a better choice. • Never give up! Even if you can eliminate one answer choice your odds of getting the question correct increases.
14. Other than reading the explanation, I don't know what to do when I get a practice question wrong.	• Ask yourself, "What is the question really asking?" • Did you make any assumptions? If the information is not in the question stem, then you don't need it to answer the question. Remember, the cases on the exam will most likely be based on typical presentations. i.e. if you think the answer is Turner's syndrome, then the stem must tell you that the patient is female short statured with a web neck and shield chest. • If you get a question wrong while you are studying, ask yourself how would they have written the question for my incorrect choice to be correct? (i.e. in order for "*s. pneumoniae*" to be correct, they would have to tell us that the patient was febrile and has focal rales, egophony or an infiltrate on the chest xray. They did not so the answer must be "a. COPD exacerbation") • Did you compare the answer choices to the question or to the other choices? Always compare back to the question and stem. • If the images are blurry, don't panic. Questions with images can usually be answered by reading the stem alone. The image is likely bonus information to support your answer. • The test writers want to make sure that you are safe to practice. Focus on red flags, critical clinical decision points and even ask yourself, does the answer choice affect patient outcome? • For questions missed, did you not know the information? Organize the information incorrectly? Not spend enough time on the question? Misread the question? Forget to read all of the answer choices? Get discouraged and invest less effort in the question? Is there a maladaptive pattern that you can work on breaking?

15. I can't decide where I should study.	• Take practice tests and complete practice questions in an environment that simulates the testing environment. Many learners like coffee houses because there is minimal background noise and few people moving around, similar to testing environments. Don't let friends or music at the coffee house distract you or choose another coffee house.
16. I should be studying for my upcoming exam, but I really have to pass the test I just failed.	• If you are struggling to pass an exam, trying to master two body's of knowledge (i.e. cardiology and internal medicine) at the same time, is a recipe for failure. • Talk to your course or program director and let them know your predicament. They are equally invested in you passing the first exam, otherwise you will likely not be eligible to take the fellowship or subsequent exams. • Let them help you decide when to retake exams. Let them know that you will need time (likely months to a year) to re-study for the failed exam. This may mean a low score on your in-training exam. After you complete the failed exam, assure your faculty that you will rededicate your study efforts to their program or course.
17. I have always been a bad test taker	• Don't give up. You are not destined to always be a bad test taker. Take time to read through all of the ways in which you may be struggling. Expect that you will need to study more than your peers to do as well as them on exams, that you will need to complete more practice questions before taking an exam. • Make sure that you are not trying to merely memorize all of the content, but that you understand the information and how it fits into the larger context of your specialty. i.e. Instead of memorizing that chronic pulmonary obstructive disease results in hypoxemia and hypercapnea and asthma does not. Learn that COPD results in impairment by inflammatory narrowing of the small airways as in asthma, but also by proteolytic digestion of actual lung tissue adjacent to these lung areas. It is this loss of alveoli surface area that results in poor gas exchange, unique to COPD. Instead of memorizing that the treatment for Langerhans histiocytosis is smoking cessation, learn that Langerhans histiocytosis is one of three smoking related interstitial lung diseases, along with respiratory bronchiolitis interstitial lung disease(RSILD) and desquamative interstitial pneumonia(DIP), all of which are treated with smoking cessation. DIP can be differentiated from the others by the thin wall cysts and nodules found in the upper lobes on CT scan. • Work on questions with a teacher who can watch you work through questions aloud and help you identify challenges…Do you get distracted? Do you key in on the most valuable information? Do you lose this train of thought and have to go back and reread? There is no data to globally suggest that reading the question or the answers before the stem is more helpful, though this works well for some individuals if they maintain a consistent process.
18. I performed well on medical school exams, but have always done poorly on standardized exams.	• Many questions on medical school exams were one-step questions. When completing questions on standardized exams, most questions have two steps. The question may present a case, but instead of asking for the diagnosis, the question asks for the best treatment or the best next step. i.e. A 45 yo previously healthy female presents to your office with squeezing chest pain associated with difficulty swallowing and occasional regurgitation. A barium swallow shows a "corkscrew" esophagus. What is the best treatment? • When completing practice questions, be sure to identify both the answer and the missing unwritten step. i.e. The unwritten step in this case is the diagnosis of esophageal spasm.

19. I scored fine on exams until…	• When? Try to identify the specific time that your exam scores dropped. o The most common reason for this is that you changed the way you study. What methods worked in the past that you have stopped using? Perhaps you took notes as you studied or met with peers in study groups. Can you re-adopt those methods that allowed you to succeed? If your schedule doesn't allow for the same type of studying see #6 for more strategies. o The second most common reason is distraction. o Sometimes the distraction is external. A new baby or expectations of family members or old friends. Communication is the best way to create space among the distractions to allow time for studying. i.e. A resident stopped studying when his son was born. He felt guilty that he was not more available to help his wife, so he stopped studying (and starting arriving late to work) so that he could help her more in the mornings. After he failed his in-training exam, he sat down with his wife to explain that he needed space to study. During this conversation, he learned that she didn't expect him to be available in the mornings and that she could easily manage in the mornings by herself. She anticipated that he would not be as available until residency was finished. o Sometimes however the distraction is internal. Residency is challenging, isolating and at times overwhelming. Residents and fellows frequently experience depression, anxiety, and sadness that can both be distracting to learning and make one less motivated to sit down and study at the end of a long day. Strongly consider seeking treatment. Residents and fellows actively and frequently seek mental health help throughout training. Depression and anxiety can prevent trainees from learning. If you are not learning despite long hours in the clinical world and hours studying, seek help. Otherwise you will be wasting huge amounts of time and quickly get burned out. o Occasionally, trainees experience an event, such as a car accident, skiing accident or bout with meningitis that change the way they think. If anything has changed the way you process information, then you will also need to dramatically change the way that you study. If you are not learning despite long hours in the clinical world and hours studying, seek help as you may need formal neuropsychiatric testing to establish how you process information and the best methods for learning.
20. The grading histogram from the failed exam (if available) shows that I score poorly on all topics and sections.	• You need to acquire better test taking skills. • Get to know the test – How long is it and how will you need to manage your test? How many questions? How many sections? How many questions per session? How much time per section? Which topics are of highest yield? You will need to learn all topics, but this will help you prioritize your study time. If 20% of the exam is pulmonary, then it should account for 20% of your study time. • Take practice tests and complete practice questions in an environment that simulates the testing environment. The practice tests should mimic sections the exam, in terms of time allotted, number of questions, variety of questions, and difficulty of questions.

	• Do not rush through a question, but if it is taking more than 2 minutes, move on. • During the final 1 minute of the time period, fill in answers to the unanswered questions. • Have a consistent approach to answering questions. i.e. Read the question at the end of the passage first, then go back and read through the body of the question, consider an answer and then read the answer choices. • Try looking at questions from both the big picture view and the detailed view. • If you do not have difficulty finishing tests on time: practice questions in smaller blocks (1-5) then check your answers. Smaller blocks reinforce content. • If you have trouble finishing tests on time: you will want to practice larger blocks of questions where you time yourself to help establish and improve upon your pace. Keep track of how long it takes to complete a certain number of questions. Practice managing the clock during the exam. • Practice rephrasing questions, explaining why the given answer is correct and the incorrect answers are wrong. Once you understand the question, go back and identify the key words in the question stem. • For questions missed, did you not know the information? Organize the information incorrectly? Not spend enough time on the question? Misread the question? Forget to read all of the answer choices? Get discouraged and invest less effort in the question? Is there a maladaptive pattern that you can work on breaking? Think about what someone in your specialty needs to know. Of note, the people that write board exams want to ensure that you are safe to practice. • Also try asking yourself, if that is the answer, what must be in the question stem? i.e. If the answer is Turner's Syndrome, the case must say a small statured female… otherwise, that isn't the answer. Be sure to synthesize information as you are reading questions. i.e. read 180/90 not as numbers but as "very hypertensive," read right knee pain as unilateral large joint arthralgia.
21. The grading histogram from the failed exam (if available) shows I score well on some topics and poorly on others.	• This indicates that you have the necessary test taking skills to do well, but that you need more time learning specific content areas. Make a list of the content areas that you struggled with and then list out the content areas that you did well on. • Why did you do well on those specific sections? Had you just read about them? Then you will need to spend more time reading about the topics and doing practice questions. Did they correspond to clinical rotations that you have completed? Then try to choose electives in the content areas that you did not do as well on. • Did you perform worse on topics that you studied months ago and better on topics that you have studied recently? As you are studying, keep a notebook or flashcards where you record all of the information that you do not know, that you still need to learn. Then before the exam review this notebook/flashcards, reminding you of the content that you reviewed months ago. See #3. • Another tip is to be sure to learn the "red flags" for your specialty. i.e. When does a person with gastroesophageal reflux need an esophagogastroduodenoscopy(EGD)? What are the red flag symptoms? The examiners want you to be safe to practice.
22. I always score well on certain blocks (e.g. I score well on the first block then fade; I'm a	• If you have failed or performed poorly on an exam, it may be helpful to ask about general patterns on exams. Some learners score better on earlier versus later blocks while others do well at the beginning of each block, others do better at the end.

slow starter but do great on the last blocks)	• If you are a slow starter, than you may need to do a few practice questions before the exam starts to get your mind in the game. Slow starters also tend to do better with shorter breaks so as not to lose momentum. Also, if you have time at the end of a section, go back and retake the first 3-5 questions as you were just getting warmed up and may need to reconsider those answers. • If you fade fast, you will want to test out a variety of techniques while studying to best prepare you for the test day. At least 3 months prior to the exam, complete long blocks of practice test questions, with several in a row, as would best simulate the real exam. i.e. 40 question blocks, completing 4 blocks in a row. During these test simulations, practice techniques for maintaining your energy through the test by experimenting with eating a snack (low carb/high protein), caffeine, exercising between blocks (running, stretching, stair climbing), listening to music, etc.
23. I would do better if I have enough time to finish the questions on the test.	• Have a consistent approach to answering questions. i.e. Read the question at the end of the passage first, then go back and read through the body of the question, consider an answer and then read the answer choices. • Be sure to synthesize information as you are reading questions: read 180/90 not as numbers but as "very hypertensive" • If you have trouble finishing tests on time: you will want to practice larger blocks of questions (40-50) where you time yourself to help establish your pace. Keep track of how long it takes to complete a certain number of questions. Are you getting faster with each block? • Learn to manage the clock during the exam. How often do you look at the clock? Is it helping you move through the questions or taking up too much time? Decide how long you should spend on 10 questions, and by what time you want to have them answered. Look at the clock after every 10 questions or if you think a question is taking too long. How much time do you have left to finish the 10 questions or that block of the exam? Get comfortable looking at the clock quickly and making a quick decision based on how much time has passed. • Repetition leads to efficiency, especially if English is not your first language. If after completing 1000 practice questions, timed in larger blocks, you are still struggling to finish on time. You will likely benefit from talking to a remediation or learning specialist. • Work on questions with a teacher who can watch you work through questions aloud and help you identify challenges…Do you get distracted? Do you key in on the most valuable information? Do you lose this train of thought and have to go back and reread? Do you become paralyzed just before you choose an answer?
24. I'm very anxious about taking the exam again.	• Watch the TED talk by Amy Cuddy on power poses and try it before the exam. • Make sure that when you are seated and taking the exam that you are leaning forward in to the exam. You have got this! It doesn't have you. • If your anxiety is paralyzing, strongly consider seeking treatment. Students, residents and fellows actively and frequently seek mental health help throughout training, including for exams. • Practice meditation or positive affirmation exercises.

1. Merriam AB, Caffarella RS, Baumgartner LM. *Learning in Adulthood: A Comprehensive Guide*. Denver, Colorado: Jossey-Bass; 2006.
2. Cleland J, Arnold R, Chesser A. Failing finals is often a surprise for the student but not the teacher: Identifying difficulties and supporting students with academic difficulties. *Med Teach*. 2005; 27(6): 504-8.
3. Mattick K, Knight L. High quality learning: Harder to achieve than we think? *Med Educ*. 2007; 41(7): 638-44.

4. Hembree R. Correlates, causes, and effects, and treatment of test anxiety. *Rev Educ Res.* 1988; 58(1): 47-77.
5. Laatsch L. Evaluation and treatment of students with difficulties passing the step examinations. *Acad Med.* 2009; 84(5): 677-83.
6. Coumarbatch J, Robinson L, Thomas R, Bridge PD. Strategies for identifying students at risk for USMLE Step 1 failure. *Fam Med.* 2010; 42(2): 105-110.
7. Karpicke JD. Retrieval-based learning: Active retrieval promotes meaningful learning. *Cur Dir Psych Sci.* 2012; 21: 157-163.
8. *Barron's How to Prepare for the MCAT.* New York, NY: Barron's Educational Series; 2006: 1-25.
9. *Kaplan MCAT.* Fort Lauderdale, FL: Kaplan, Inc. 2003: 1-22.

Creating an Effective Study Plan for ABIM Exam

Time Allocation	• PGY2: 90 minutes/week • PGY3: 180 minutes/week
Study Consistency	• 30 minutes per day • 6x per week
Balanced Approach	• 50% reading • 50% retrieval
Avoid burnout	• 1 day off per week • Prioritize sleep and wellbeing