INTRODUCTION

Relax.

This section is intended to make your exam preparation easier, not harder. Our goal is to reduce your level of stress and help you make the most of your study effort by helping you understand more about the United States Medical Licensing Examination, Step 1 (USMLE Step 1)—especially what the new FRED computer-based testing (CBT) is likely to mean to you. As a medical student, you are no doubt familiar with taking standardized examinations and quickly absorbing large amounts of material. When you first confront the USMLE Step 1, however, you may find it easy to become sidetracked and not achieve your goal of studying with maximum effectiveness. Common mistakes that students make when studying for the boards include the following:

- “Stressing out” owing to an inadequate understanding of the computer-based format
- Not understanding how scoring is performed or what your score means
- Starting First Aid too late
- Starting to study too late
- Using inefficient or inappropriate study methods
- Buying the wrong books or buying more books than you can ever use
- Buying only one publisher’s review series for all subjects
- Not using practice examinations to maximum benefit
- Not using review books along with your classes
- Not analyzing and improving your test-taking strategies
- Getting bogged down by reviewing difficult topics excessively
- Studying material that is rarely tested on the USMLE Step 1
- Failing to master certain high-yield subjects owing to overconfidence
- Using First Aid as your sole study resource

In this section, we offer advice to help you avoid these pitfalls and be more productive in your studies. To begin, it is important for you to understand what the examination involves.

USMLE STEP 1—THE CBT BASICS

Some degree of concern about your performance on the USMLE Step 1 examination is both expected and appropriate. All too often, however, medical students become unnecessarily anxious about the examination. It is therefore important to understand precisely what the USMLE Step 1 involves. As you become familiar with Step 1, you can translate your anxiety into more efficient preparation.

The USMLE Step 1 is the first of three examinations that you must pass in order to become a licensed physician in the United States. The USMLE is a joint endeavor of the National Board of Medical Examiners (NBME) and the
Federation of State Medical Boards (FSMB). In previous years, the examination was strictly organized around seven traditional disciplines: anatomy, behavioral science, biochemistry, microbiology, pathology, pharmacology, and physiology. In June 1991, the NBME began administering the “new” NBME Part I examination, which offered a more integrated and multidisciplinary format coupled with more clinically oriented questions.

In 1992, the USMLE replaced both the Federation Licensing Examination (FLEX) and the certifying examinations of the NBME. The USMLE now serves as the single examination system for U.S. medical students and international medical graduates (IMGs) seeking medical licensure in the United States.

**How Is the CBT Structured?**

The CBT Step 1 exam consists of seven question “blocks” of 50 questions each (see Figure 1) for a total of 350 questions, timed at 60 minutes per block. A short 11-question survey follows the last question block. The computer begins the survey with a prompt to proceed to the next block of questions. Don’t be fooled! “Block 8” is the NBME survey.

These blocks were designed to reduce eyestrain and fatigue during the exam. Once an examinee finishes a particular block, he or she must click on a screen icon to continue to the next block. Examinees will not be able to change answers to questions from any previously completed block of questions. These blocks will be timed, and examinees should only worry about keeping up with the time limits.

Prometric test centers offer Step 1 on a year-round basis, except for the first two weeks in January. The exam is given every day except Sunday at most centers. Some schools administer the exam on their own campuses.

**FIGURE 1. Schematic of CBT Exam.**
What Is the CBT Like?

Because of the unique environment of the CBT, it’s important that you be familiar ahead of time with what your test-day conditions will be like. Familiarizing yourself with the testing interface before the exam can add 15 minutes to your break time! This is because a 15-minute tutorial, offered on exam day, may be skipped if you are already familiar with the exam procedures and the testing interface (see description of CD-ROM below). The 15 minutes is added to your allotted break time (should you choose to skip the tutorial).

For security reasons, examinees are not allowed to bring any personal electronic equipment into the testing area. This includes digital watches, watches with computer communication and/or memory capability, cellular telephones, and electronic paging devices. Food and beverages are also prohibited. The testing centers are monitored by audio and video surveillance equipment.

In 2006, the USMLE completed its transition to FRED. FRED is a computer-based format that is similar to the old forms of CBT, with minor differences.

The typical question screen in FRED has a question followed by a number of choices on which an examinee can click, together with a number of navigational buttons on top. There is a countdown timer on the upper left-hand corner of the screen as well. There is also a button that allows the examinee to mark the question for review. If questions happen to be longer than the screen (such as a surgery case), a scroll bar appears on the right, allowing the examinee to see the rest of the question. Regardless of whether the examinee clicks on the answer or leaves it blank, he or she must click the “Next” button to advance to the next question.

Some questions contain figures or color illustrations. These are typically situated to the right of the question. Although the contrast and brightness of the screen can be adjusted, there are no other ways to manipulate the picture (e.g., no zooming or panning).

The examinee can call up a window displaying normal lab values. In order to do so, he or she must hit the “Lab” icon on the top part of the screen. Afterward, the examinee will have the option to choose between “Blood,” “Cerebrospinal,” “Hematologic,” or “Sweat and Urine.” The normal-values screen may obscure the question if it is expanded. The examinee may have to scroll down to search for the needed laboratory values.

FRED allows the examinee to see a running list of the questions on the left part of the screen at all times. Also, with the new software, examinees will be able to highlight or cross out information using their mouse. Finally, there is an “Annotate” icon on the top part of the screen that allows students to write notes to themselves for review at a later time. Examinees need to be careful with all of these new features, because failure to do so can cost valuable time!
What Does the CBT Format Mean to Me?

The significance of the CBT to you depends on the requirements of your school and your level of computer knowledge. If you hate computers and freak out whenever you see one, you might want to face your fears as soon as possible. Spend some time playing with a Windows-based system and pointing and clicking icons or buttons with a mouse. These are the absolute basics, and you won’t want to waste valuable exam time figuring them out on test day. Your test taking will proceed by pointing and clicking, essentially without the use of the keyboard. The free CD is an excellent way to become familiar with the test interface.

For those who feel they would benefit, the USMLE offers an opportunity to take a simulated test, or “CBT Practice Session at a Prometric center.” Students are eligible to take the three-and-one-half-hour practice session after they have received their fluorescent orange scheduling permit (see below).

The same USMLE Step 1 sample test items (150 questions) available on the CD or USMLE Web site, www.usmle.org, are used at these sessions. No new items will be presented. The session is divided into three one-hour blocks of 50 test items each and costs about $42. The student receives a printed percent-correct score after completing the session. No explanations of questions are provided.

How Do I Register to Take the Exam?

Step 1 or Step 2 applications may be printed from the USMLE Web site. The application allows applicants to select one of 12 overlapping three-month blocks in which to be tested (e.g., April–May–June, June–July–August). The application includes a photo ID form that must be certified by an official at your medical school to verify your enrollment. After the NBME processes your application, it will send you a fluorescent orange slip of paper called a scheduling permit.

The scheduling permit you receive from the NBME will contain your USMLE identification number, the eligibility period in which you may take the exam, and two unique numbers. One of these is known as your “scheduling number.” You must have this number to make your exam appointment with Prometric. The other number is known as the “candidate identification number,” or CIN. Examinees must enter their CINs at the Prometric workstation to access their exams. Prometric has no access to the codes. Do not lose your permit! You will not be allowed to take the boards unless you present this permit along with an unexpired, government-issued photo identification with your signature (such as a driver’s license or passport). Make sure the name on your photo ID exactly matches the name appearing on your scheduling permit.

Once you receive your scheduling permit, you may call the Prometric toll-free number to arrange a time to take the exam. Although requests for taking
the exam may be completed more than six months before the test date, examinees will not receive their scheduling permits earlier than six months before the eligibility period. The eligibility period is the three-month period you have chosen to take the exam. Most medical students choose the April–June or June–August period. Because exams are scheduled on a “first-come, first-served” basis, it is recommended that you telephone Prometric as soon as you have received your permit. After you’ve scheduled your exam, it’s a good idea to confirm your exam appointment with Prometric at least one week prior to your test date. Prometric does not provide written confirmation of exam date, time, or location. Be sure to read the 2007 USMLE Bulletin of Information for further details.

What If I Need to Reschedule the Exam?

You can change your date and/or center by contacting Prometric at 1-800-MED-EXAM (1-800-633-3926) or www.prometric.com. Make sure to have your CIN when rescheduling. If you are rescheduling by phone, you must speak with a Prometric representative; leaving a voice-mail message will not suffice. To avoid a rescheduling fee, you will need to request a change before noon EST at least five business days before your appointment. Please note that your rescheduled test date must fall within your assigned three-month eligibility period.

Where Can I Take the Exam?

Your testing location is arranged with Prometric when you call for your test date (after you receive your scheduling permit). For a list of Prometric locations nearest you, visit www.prometric.com.
How Long Will I Have to Wait Before I Get My Scores?

The USMLE reports scores three to six weeks after the examinee’s test date. Scores are always released on a Wednesday. During peak times, score reports may take up to six weeks. Official information concerning the time required for score reporting is posted on the USMLE Web site.

What About Time?

Time is of special interest on the CBT exam. Here’s a breakdown of the exam schedule:

- 15 minutes Tutorial (skip if familiar)
- 7 hours 60-minute question blocks
- 45 minutes Break time (includes time for lunch)

The computer will keep track of how much time has elapsed. However, the computer will show you only how much time you have remaining in a given block. Therefore, it is up to you to determine if you are pacing yourself properly (at a rate of approximately one question per 72 seconds).

The computer will not warn you if you are spending more than your allotted time for a break. You should therefore budget your time so that you can take your break when you need it and have time to eat. You must be especially careful not to spend too much time in between blocks (you should keep track of how much time elapsed from when you finish a block until you begin your next block). After you finish one question block, you’ll need to click the mouse when you are ready to proceed to the next block of questions.

Forty-five minutes is the minimum break time for the day. You can gain extra break time (but not time for the question blocks) by skipping the tutorial or by finishing a block ahead of the allotted time.

If I Freak Out and Leave, What Happens to My Score?

Your scheduling permit shows a CIN that you will enter onto your computer screen to start your exam. Entering the CIN is the same as breaking the seal on a test book, and you are considered to have started the exam when you do so. However, no score will be reported if you do not complete the exam. In fact, if you leave at any time from the start of the test to the last block, no score will be reported. The fact that you started but did not complete the exam, however, will appear on your USMLE score transcript.

The exam ends when all blocks have been completed or their time has expired. As you leave the testing center, you will receive a printed test-completion notice to document your completion of the exam. To receive an official score, you must finish the entire exam.
What Types of Questions Are Asked?

Although numerous changes had to be made for the CBT format, the question types are the same as in previous years.

One-best-answer items are the only multiple-choice format. Most questions consist of a clinical scenario or a direct question followed by a list of five or more options. You are required to select the one best answer among the options. There are no “except,” “not,” or matching questions on the exam. A number of options may be partially correct, in which case you must select the option that best answers the question or completes the statement. Additionally, keep in mind that experimental questions may appear on the exam (see Difficult Questions, p. 23).

How Is the Test Scored?

Each Step 1 examinee receives a score report that has the examinee’s pass/fail status, two test scores, and a graphic depiction of the examinee’s performance by discipline and organ system or subject area (see Figures 2A and 2B). The actual organ system profiles reported may depend on the statistical characteristics of a given administration of the examination.

For 1999, the NBME provided two overall test scores based on the total number of items answered correctly on the examination (see Figure 3). The first score, a three-digit score, was reported as the test score on which a mean was 215 and the standard deviation was 20. The second score, a two-digit score, defines 75 as the minimum passing score (equivalent to a score of 179 on the first scale). A score of 82 is equivalent to a score of 200 on the first score scale. To avoid confusion, we refer to scores using the three-digit scale with a mean of 215 and a standard deviation of 20.

A score of 182 or higher is required to pass Step 1. Passing the CBT Step 1 is estimated to correspond to answering 60–70% of the questions correctly. In 2005, the pass rates for first-time test takers from accredited U.S. and Canadian medical schools was 90% (see Table 1). These statistics prove it—you’re much more likely to pass than fail. Although the NBME may adjust the minimum passing score at any time, no further adjustment is expected for several years.

According to the USMLE, medical schools receive a listing of total scores and pass/fail results plus group summaries by discipline and organ system. Students can withhold their scores from their medical school if they wish. Official USMLE transcripts, which can be sent on request to residency programs, include only total scores, not performance profiles.

Consult the USMLE Web site or your medical school for the most current and accurate information regarding the examination.
What Does My Score Mean?

For students, the most important point with the Step 1 score is passing versus failing. Passing essentially means, “Hey, you’re on your way to becoming a fully licensed doc.”

Beyond that, the main point of having a quantitative score is to give you a sense of how you’ve done aside from the fact that you’ve passed the exam. The two-digit or three-digit score gauges how you have done with respect to the content on the exam.

Since the content of the exam is what drives the score, the profile of the exam is what remains relatively constant over the years. That is to say that each exam pro-
file includes a certain number of “very hard” questions along with “medium” and “easy” ones. The questions vary, but the profile of the exam doesn’t change much. This ensures that someone who scored 200 on the boards yesterday achieved a level of knowledge similar to that of the person who scored 200 four years ago.

**Official NBME/USMLE Resources**

We strongly encourage students to use the free materials provided by the testing agencies (see p. 25) and to study in detail the following NBME publications, all of which are available on CD-ROM or at the USMLE Web site, www.usmle.org:
**FIGURE 3.** Scoring Scales for the USMLE Step 1.

<table>
<thead>
<tr>
<th>3-digit score</th>
<th>2-digit score</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEM = 4 pts</td>
<td>SEM = 1 pt</td>
</tr>
<tr>
<td>160</td>
<td>69</td>
</tr>
<tr>
<td>170 (–2 SD)</td>
<td>75</td>
</tr>
<tr>
<td>190 (–1 SD)</td>
<td>82</td>
</tr>
<tr>
<td>200</td>
<td>–88</td>
</tr>
<tr>
<td>210 (x)</td>
<td>–95</td>
</tr>
<tr>
<td>220 (+1 SD)</td>
<td></td>
</tr>
<tr>
<td>230</td>
<td></td>
</tr>
<tr>
<td>240</td>
<td></td>
</tr>
<tr>
<td>250</td>
<td></td>
</tr>
<tr>
<td>260 (+2 SD)</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 1.** Passing Rates for the 2004–2005 USMLE Step 1.

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th></th>
<th>2005</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. TAKEN</td>
<td>PASSING (%)</td>
<td>No. TAKEN</td>
<td>PASSING (%)</td>
</tr>
<tr>
<td><strong>NBME-registered examinees (U.S./Canadian)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-time takers</td>
<td>16,703</td>
<td>93</td>
<td>16,799</td>
<td>94</td>
</tr>
<tr>
<td>Repeaters</td>
<td>1,652</td>
<td>64</td>
<td>1,491</td>
<td>65</td>
</tr>
<tr>
<td><strong>Allopathic total</strong></td>
<td>18,355</td>
<td>91</td>
<td>18,290</td>
<td>92</td>
</tr>
<tr>
<td>Osteopathic students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-time takers</td>
<td>1,131</td>
<td>70</td>
<td>1,265</td>
<td>73</td>
</tr>
<tr>
<td>Repeaters</td>
<td>61</td>
<td>53</td>
<td>66</td>
<td>53</td>
</tr>
<tr>
<td><strong>Osteopathic total</strong></td>
<td>1,192</td>
<td>69</td>
<td>1,331</td>
<td>72</td>
</tr>
<tr>
<td><strong>Total (U.S./Canadian)</strong></td>
<td>19,547</td>
<td>89</td>
<td>19,621</td>
<td>90</td>
</tr>
<tr>
<td>IMG examinees (ECFMG(^b) registrants)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-time takers</td>
<td>12,251</td>
<td>67</td>
<td>13,488</td>
<td>68</td>
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<tr>
<td>Repeaters</td>
<td>5,964</td>
<td>40</td>
<td>5,911</td>
<td>39</td>
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<tr>
<td><strong>IMG total</strong></td>
<td>18,215</td>
<td>58</td>
<td>19,399</td>
<td>59</td>
</tr>
<tr>
<td><strong>Total Step 1 examinees</strong></td>
<td>37,762</td>
<td>74</td>
<td>39,020</td>
<td>75</td>
</tr>
</tbody>
</table>

\(^a\)Reflects the most current data available at the time of publishing.
\(^b\)Educational Commission for Foreign Medical Graduates.