SECTION II
The Patient Encounter

- Introduction
- Doorway Information
- Taking the History
- The Physical Exam
- Closure
- How to Interact with Special Patients
- Challenging Questions and Situations
- Counseling
- The Patient Note
As previously described in Section I, the Clinical Skills (CS) exam consists of 10–12 clinical encounters with trained “standardized patients” (SPs), with each encounter designed to replicate situations commonly seen in clinics, doctors’ offices, and emergency departments.

Each encounter in the Step 2 CS is 15 minutes long. You will be given a warning when five minutes remain in the session. The 15-minute period allotted for each of your interviews includes meeting the patient, taking the history, performing the physical exam, discussing your findings and plans, and answering any questions the patient might have. After that, you will have 10 minutes to summarize the patient history and physical exam and to formulate your differential diagnosis and workup plan. All this may seem overwhelming, but it need not be. This chapter will guide you through the process step by step.

Fifteen minutes should be adequate for most patient encounters as long as you budget your time wisely. The most common reasons for running out of time are as follows:

- Taking an overly detailed history
- Conducting an unnecessarily detailed physical exam
- Carrying out the encounter in a slow or disorganized fashion
- Allowing the patient to stray away from relevant topics
- Failing to adequately control challenging (e.g., unresponsive, angry, crying) patients

To best manage your encounter, it is recommended that you distribute your time in the following way:

- **Doorway information** (assessing preliminary information posted on the door of each room): 10–20 seconds
- **History**: 7–8 minutes
- **Physical exam**: 3–5 minutes
- **Closure**: 2–3 minutes

Of course, this is only an approximation of how you should divide your time during your 15-minute encounter. In reality, each encounter is different, so some will require more time for taking the history or doing the physical exam, while others will demand that more time be spent on closure and patient counseling. You should thus tailor your time to fit each case. Here are some additional time management tips:

- Do not waste valuable time looking at the clock on the wall. We recommend using the official announcement that five minutes remain in the encounter as your only time indicator. If you have not begun to perform the physical exam by that point, you should do so.
An organized and well-planned history is key. Stay focused on asking questions that are pertinent to the chief complaint.

A brief and focused physical exam is also critical. There is no need to conduct a comprehensive physical exam during encounters.

Never try to save time by ignoring the patient’s questions, requests, or emotional status.

Practice is the best way to improve your performance, efficiency, and sense of timing.

Figure 2-1 further describes the key components and desired outcomes of the clinical encounter. The sections that follow will guide you through each of these components.

**FIGURE 2-1.  Overview of the Clinical Encounter**

**Doorway Information**
**Must get:** Chief complaint, age, sex, and abnormal vital signs.
**Leads to:** Forming a hypothesis (broad differential, relevant points that should be elicited in the history, systems to examine).

**History**
**Must get:** Details of the chief complaint, associated symptoms, and any other relevant information that will help rule in or rule out each item in the differential.
**Leads to:** A more well-defined differential diagnosis, which will help narrow down the procedures that should be performed and the systems that should be examined in the physical exam.

**Physical Exam**
**Must get:** Evaluation of the appropriate systems to help rule in or rule out each item in the differential; any additional information on the patient’s history if required.
**Leads to:** A final differential and an appropriate workup plan.

**Closure**
Explaining the findings, differential, and workup plan to the patient.
Answering the patient’s questions and addressing his concerns.
As has previously been described, you will be given a chance to review some preliminary patient information, known as "doorway information," at the outset of each encounter. This information, which is posted on the door of the examination room, includes the patient’s name, age, and gender; the reason for the visit; the patient’s vital signs (pulse, blood pressure, temperature in both centigrade and Fahrenheit, and respiratory rate); and the task you will be called on to perform.

You should begin by reading the doorway information carefully, checking the chief complaint, and trying to organize in your mind the questions you will need to ask and the systems you will have to examine. Toward this goal, you should look for abnormalities in vital signs without trying to memorize actual numbers. Assume that these vital signs are accurate.

At this time, you should remain calm and confident by reminding yourself that what you are about to encounter is a common medical case. You should also bear in mind that SPs are easier to deal with than real patients in that they are more predictable and already know what you are expected to do. Remember that a second copy of the doorway information sheet will be available on the other side of the door, so you can review that information at the end of each encounter. Note, however, that the time you spend reading the doorway information is included in the 15-minute time limitation.

Your entrance into the examination room is also a critical part of the encounter as a whole. So before you enter the room, be sure to read and commit to memory the patient’s last name. Then knock on the door and, once you have entered the examination room, ask the patient if he or she is the person identified on the door (“Mr. Smith?”). You will receive credit for having done so and will not have to worry about remembering the patient’s name for the remainder of the encounter. If the patient does not respond to your query, consider the possibility that there may be a change in mental status and that the SP might have been instructed not to respond to his or her name.

After your initial entrance, you should shake hands with the patient and introduce yourself in a confident yet friendly manner (e.g., “Hi, I am Dr. Morton. Nice to meet you.”). You may also add something like “I would like to ask you some questions and do a physical exam.” You should make an effort to establish eye contact with the patient during this initial period.

Your ability to take a detailed yet focused history is essential to the formulation of a differential diagnosis and workup plan. The discussion that follows will help guide you through this process in a manner that will maximize your chances of success.
Guidelines

You may take the history while either standing in front of the patient or sitting on the stool that is usually located near the bed. You will find a sheet placed on this stool. Begin by removing the sheet and draping the patient. Doing so prior to taking the history is a good idea to guarantee your credit for that early on.

Don’t cross your arms in front of your chest when talking to the patient, especially with the clipboard in your hands. It’s best to sit down on the stool, relax, and keep the clipboard on your lap. If you decide to stand, maintain a distance of approximately two feet between yourself and the patient.

As previously described, the interview as a whole should take no more than 7–8 minutes. You can start your interview by asking the patient an open-ended question such as “So what brought you to the hospital/clinic today?” or “How can I help you today?” See Figure 2-2 to get an overview of the process.

**FIGURE 2-2. History-Taking Overview**

<table>
<thead>
<tr>
<th>Introductions</th>
</tr>
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<tbody>
<tr>
<td>Knock on the door.</td>
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<tr>
<td>Verify the patient's name.</td>
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<tr>
<td>Introduce yourself and shake hands.</td>
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<tr>
<td>Make eye contact.</td>
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<tr>
<td>Drape the patient and cover the legs.</td>
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</tbody>
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<tr>
<th>What History to Get</th>
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<tr>
<td>Start with an open-ended question.</td>
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<tr>
<td>Then focus on key organ systems and:</td>
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<tr>
<td>Frequency</td>
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<td>Onset</td>
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<td>Relieving factors</td>
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<td>Duration</td>
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<td>Precipitating factors</td>
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<tr>
<td>Associated symptoms</td>
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<td>Previous episodes</td>
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<td>Progression</td>
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<th>How to Get It</th>
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<tr>
<td>Avoid technical medical terms.</td>
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<td>Show empathy and address any patient concerns.</td>
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<tr>
<td>Maintain good eye contact.</td>
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<tr>
<td>Do not interrupt or rush the patient.</td>
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<tr>
<th>Before the Physical Exam</th>
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<tr>
<td>Summarize the history.</td>
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<tr>
<td>Ask if there is anything that was not covered.</td>
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<tr>
<td>Ask if patient has any concerns or questions.</td>
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</table>
Additional Tips

Once the interview has begun, be sure to maintain a professional yet friendly demeanor. You should speak clearly and slowly, and your questions should be short, well phrased, and simple. Toward that end, avoid the use of medical terms; instead, use simple words that a layperson can understand. For example, don’t use the term *renal calculus*; use *kidney stone* instead. If you find yourself obliged to use a medical term that the patient may not understand, try to offer a quick explanation. Don’t wait for the patient to ask you for the meaning of a term, or you may lose credit.

If you don’t understand something the patient has said, you may ask him either to explain his statement or to repeat it: “Can you please explain what you mean by that?” or “Can you please repeat what you have just said?” At the same time, do not rush the patient. Instead, give him the time he needs to respond. In interacting with the patient, you should always remember to ask questions in a neutral and nonjudgmental way.

You should also remember not to interrupt the patient unless it is absolutely necessary. If the patient starts telling lengthy stories that are irrelevant to the chief complaint, you can interrupt him politely but firmly by saying something like “Excuse me, Mr. Johnson. I understand how important those issues are for you, but I’d like to ask you some additional questions about your current problem.” You can also redirect the conversation by summarizing what the patient has told you thus far and then moving to the next step. For example, you can say, “So as I understand it, your abdominal pains are infrequent, last a short time, and are always in the middle of your belly. Now tell me about. . . .”

It is critical to summarize what the patient has told you, not only to verify that you have understood him but also to ensure that you receive credit. You need to use this summary technique no more than once during the encounter in order to get credit, but you may use it more often should you consider it necessary. It is recommended, however, that you give a summary (1) after you have finished taking the history and before you start examining the patient, or (2) just after you have finished examining the patient and before you give him your medical opinion. In either case, your summary should include only the points that are relevant to the patient’s chief complaint.

Minor transitions may also be used during the history. For example, when you want to move from the history of present illness (HPI) to the patient’s past medical history or social and sexual history, you can say something like “I need to ask you some questions about your health in the past,” or “I’d like to ask you a few questions about your lifestyle and personal habits.”

To ensure that you stay on track in gathering information, you will also need to watch the patient carefully, paying attention to his every word, move, or sign. Remember that clinical encounters are staged, so it is uncommon for
something to occur for no reason. Although accidents do happen (e.g., an SP once started to hiccup inadvertently), an SP will most likely cough in an encounter because he is intending to convey that he has bronchitis, not because he “feels like” doing so.

By the same logic, you should address every sign you see in the patient (e.g., “You look sad; do you know the reason?” or “You look concerned; is there anything that is making you worry?”). If your patient is coughing, ask him about his cough even if he didn’t cite it as the reason for his visit. If he is using a tissue, ask to see it in order to check the color of the sputum. A spot of blood on the tissue may take you by surprise!

Finally, take brief notes throughout the interview, mainly to record relevant yet easy-to-forget pieces of information such as the duration of the chief complaint or the number of years the patient smoked. To facilitate this note taking, you will be given a clipboard with 12 blank blue sheets, one for each encounter. The extent of your note taking inside the encounter will depend on how much you trust your memory. Before you finish your interview and move to the physical exam, you may ask the patient something like “Is there anything else you would like to tell me about?” or “Is there anything else you forgot to tell me about?”

Common Questions to Ask the Patient

In this section, we will cover a wide spectrum of questions that you may need to pose in the course of each of your patient interviews. This is not meant to be a complete list. You do not have to use all of the questions outlined below. Instead, be selective in choosing the questions you ask in your efforts to obtain a concise, relevant history. You should also be sure to ask only one question at a time. If you ask complex questions (e.g., “Is there any redness or swelling?”), the SP will likely answer only the last question you posed. Instead, you should slow down and ask about one symptom at a time.

Opening of the encounter:

- “Mr. Jones, hello; I am Dr. Singh. It’s nice to meet you. I’d like to ask you some questions and examine you today.”
- “How can I help you today?”
- “What brought you to the hospital/clinic today?”
- “What made you come in today?”

Pain:

- “Do you have pain?”
- “When did it start?”
- “How long have you had this pain?”
- “How long does it last?”
- “How often does it come on?”
- “Where do you feel the pain?”
- “Can you show me exactly where it is?”

Look for nonverbal clues.
“Does the pain travel anywhere?”
“What is the pain like?”
“How can you describe it for me?”
“Is it sharp, dull, burning, pulsating, cramping, or pressure-like?”
“Is it constant, or does it come and go?”
“On a scale of 1 to 10, with 10 being the worst pain of your life, how would you rate your pain?”
“What brings the pain on?”
“Do you know what causes the pain to start?”
“Does anything make the pain better?”
“Does anything make it worse?”
“Have you had similar pain before?”

Nausea:
“Do you feel nauseated?”
“Do you feel sick to your stomach?”

Vomiting:
“Did you vomit?”
“Did you throw up?”
“What color was the vomit?”
“Did you see any blood in it?”

Cough:
“Do you have a cough?”
“When did it start?”
“How often do you cough?”
“Do you bring up any phlegm with your cough, or is it dry?”
“Does anything come up when you cough?”
“What color is it?”
“Is there any blood in it?”
“Can you estimate the amount of the phlegm? A teaspoon? A tablespoon? A cupful?”
“Does anything make it better?”
“Does anything make it worse?”

Headache:
“Do you get headaches?”
“Tell me about your headaches.”
“Tell me what happens before/during/after your headaches.”
“When do your headaches start?”
“How often do you get them?”
“When your headache starts, how long does it last?”
“Can you show me exactly where you feel the headache?”
“What causes the headache to start?”
“Do you have headaches at certain times of the day?”
“Do your headaches wake you up at night?”
“What makes the headache worse?”
“What makes it better?”
“Can you describe the headache for me, please? Is it sharp, dull, pulsating, pounding, or pressure-like?”
“Do you notice any change in your vision before/during/after the headaches?”
“Do you notice any numbness or weakness before/during/after the headaches?”
“Do you feel nauseated? Do you vomit?”
“Do you notice any fever or stiff neck with your headaches?”

Fever:
“Do you have a fever?”
“Do you have chills?”
“Do you have night sweats?”
“Do you sweat during the night?”
“How high is your fever?”

Shortness of breath:
“Do you get short of breath?”
“Do you get short of breath when you’re climbing stairs?”
“How many steps can you climb before you get short of breath?”
“When did it start?”
“When do you feel short of breath?”
“What makes it worse?”
“What makes it better?”
“Do you wake up at night short of breath?”
“Do you have to prop yourself up on pillows in order to sleep at night? How many?”
“Have you been wheezing?”
“How far do you walk on level ground before you have shortness of breath?”
“Have you noticed any fluid retention around your ankles?”

Urinary symptoms:
“Has there been any change in your urinary habits?”
“Do you have any pain or burning during urination?”
“Have you noticed any change in the color of your urine?”
“How often do you have to urinate?”
“Do you have to wake up at night to urinate?”
“Do you have any difficulty urinating?”
“Do you feel that you haven’t completely emptied your bladder after urination?”
“Do you need to strain/push during urination?”
“Have you noticed any weakness in your stream? Any dribbling of urine?”
“Have you noticed any blood in your urine?”
“Do you feel as though you need to urinate but then very little urine comes out?”
"Do you feel as though you have to urinate all the time?"
"Do you feel as though you have very little time to make it to the bathroom once you feel the urge to urinate?"

Bowel symptoms:
- “Has there been any change in your bowel movements?”
- “Do you have diarrhea?”
- “Are you constipated?”
- “How long have you had diarrhea/constipation?”
- “How many bowel movements do you have per day/week?”
- “What does your stool look like?”
- “What color is your stool?”
- “Is there any mucus or blood in it?”
- “Do you feel any pain when you have a bowel movement?”
- “Did you travel recently?”
- “Do you feel as though you strain to go to the bathroom and then very little feces or none at all come out?”
- “Have you lost control of your bowels?”
- “Do you feel as though you have very little time to make it to the bathroom once you feel the urge to have a bowel movement?”

Weight:
- “Have you noticed any change in your weight?”
- “How many pounds did you gain/lose?”
- “Over what period of time did it happen?”
- “Was the weight gain/loss intentional?”

Appetite:
- “How is your appetite?”
- “Has there been any change in your appetite?”

Diet:
- “Has there been any change in your eating habits?”
- “What do you usually eat?”
- “Did you eat anything unusual lately?”
- “What did you eat before the symptoms started?”
- “Is there any kind of special diet that you are following?”

Sleep:
- “Do you have any problems falling asleep?”
- “Do you have any problems staying asleep?”
- “Do you have any problems waking up?”
- “Do you feel refreshed when you wake up?”
- “Do you snore?”
- “Do you feel sleepy during the day?”
- “How many hours do you sleep?”
- “Do you take any pills to help you go to sleep?”
Dizziness:
- “Do you ever feel dizzy?”
- “Tell me exactly what you mean by dizziness.”
- “Did you feel the room spinning around you, or did you feel lightheaded as if you were going to pass out?”
- “Did you black out?”
- “Did you lose consciousness?”
- “Did you notice any change in your hearing?”
- “Do your ears ring?”
- “Do you feel nauseated? Do you vomit?”
- “What causes this dizziness to happen?”
- “What makes you feel better?”

Joint pain:
- “Do you have any painful joints in your body?”
- “Do you have pain in any of your joints?”
- “Have you noticed any rash with your joint pain?”
- “Is there any redness or swelling of the joint?”

Travel history:
- “Have you traveled recently?”

Past medical history:
- “Have you had this problem or anything similar before?”
- “Have you had any other major illnesses before?”
- “Do you have any other medical problems?”
- “Have you been hospitalized before?”
- “Have you had any surgeries before?”
- “Have you had any accidents or injuries before?”
- “Are you taking any medications?”
- “Are you taking any over-the-counter drugs, vitamins, or herbs?”
- “Do you have any allergies?”

Family history:
- “Does anyone in your family have the same problem or anything similar?”
- “Are your parents alive?”
- “Are they in good health?”
- “What did your mother/father die of?”
- “Are your brothers or sisters alive?”
- “Are they in good health?”

Social history:
- “Do you smoke?”
- “How many packs a day?”
- “How long have you smoked?”
- “Do you drink alcohol?”
- “What do you drink?”
- “How much do you drink per week?”
“Do you use any recreational drugs such as marijuana or cocaine?”
“Which ones do you use?”
“How often do you use them?”
“Do you smoke or inject them?”
“What type of work do you do?”
“Where do you live? With whom?”
“Tell me about your life at home.”
“Are you married?”
“Do you have children?”
“Do you have a lot of stressful situations on your job?”
“Are you exposed to environmental hazards on your job?”

**Alcohol history:**
“How much alcohol do you drink?”
“Tell me about your use of alcohol.”
“Have you ever had a drinking problem?”
“When was your last drink?”
Administer the CAGE questionnaire:
- “Have you ever felt a need to cut down on drinking?”
- “Have you ever felt annoyed by criticism of your drinking?”
- “Have you ever had guilty feelings about drinking?”
- “Have you ever had a drink first thing in the morning (‘eye opener’) to steady your nerves or get rid of a hangover?”

**Sexual history:**
“I would like to ask you some questions about your sexual health and practice.”
“Are you sexually active?”
“Do you use condoms? Always? Other contraceptives?”
“Are you sexually active? With men, women, or both?”
“Tell me about your sexual partner or partners.”
“How many sexual partners have you had in the past year?”
“Do you currently have one partner or more than one?”
“Have you ever had a sexually transmitted disease?”
“Do you have any problems with sexual function?”
“Do you have any problems with erections?”
“Do you use any contraception?”
“Have you ever been tested for HIV?”

**Gynecologic/obstetric history:**
“At what age did you have your first menstrual period?”
“How often do you get your menstrual period?”
“How long does it last?”
“When was the first day of your last menstrual period?”
“Have you noticed any change in your periods?”
“Do you have cramps?”
“How many pads or tampons do you use per day?”
“Have you noticed any spotting between periods?”
“Have you ever been pregnant?”
“How many times?”
“How many children do you have?”
“Have you ever had a miscarriage or an abortion?”
“In what trimester?”
“Do you have pain during intercourse?”
“Do you have any vaginal discharge?”
“Do you have any problems controlling your bladder?”
“Have you had a Pap smear before?”

Pediatric history:
“Was your pregnancy full term (40 weeks or 9 months)?”
“Did you have routine checkups during your pregnancy? How often?”
“Did you have any complications during your pregnancy/during your delivery/after delivery?”
“Was an ultrasound performed during your pregnancy?”
“Did you smoke, drink, or use drugs during your pregnancy?”
“Was it a vaginal delivery or a C-section?”
“Did your child have any medical problems after birth?”
“When did your child have his first bowel movement?”

Growth and development:
“When did your child first smile?”
“When did your child first sit up?”
“When did your child start crawling?”
“When did your child start talking?”
“When did your child start walking?”
“When did your child learn to dress himself?”
“When did your child learn to tie his shoes?”
“When did your child start using short sentences?”
“When did your child start putting things in his mouth?”

Feeding history:
“Did you breast-feed your child?”
“When did your child start eating solid food?”
“How is your child’s appetite?”
“Does your child have any allergies?”
“Is your child’s formula fortified with iron?”
“Are you giving your child pediatric multivitamins?”

Routine care:
“Are your child’s immunizations up to date?”
“When was the date of your child’s last routine checkup?”
“Has your child had any serious illnesses?”
“Is your child taking any medications?”
“Has your child ever been hospitalized?”
Psychiatric history:

- “Tell me about yourself and your future goals.”
- “How long have you been feeling unhappy/sad/anxious/confused?”
- “Do you have any idea what might be causing this?”
- “Would you like to share with me what made you feel this way?”
- “Do you have any friends or family members you can talk to?”
- “Has your appetite changed lately?”
- “Has your weight changed recently?”
- “Tell me how you spend your time/day.”
- “Do you have any problems falling asleep/staying asleep/waking up?”
- “Has there been any change in your sleeping habits lately?”
- “What interests/hobbies do you have? Do you enjoy them?”
- “Do you take interest or pleasure in your daily activities?”
- “Do you have any memory problems?”
- “Do you have difficulty concentrating?”
- “Do you have hope for the future?”
- “Have you ever thought about hurting yourself or ending your life?”
- “Do you think of killing yourself/putting an end to your own life?”
- “Do you have a plan to end your life?”
- “Would you mind telling me about it?”
- “Do you feel that you want to hurt other people? Have you ever done so?”
- “Do you ever see or hear things that others can’t see or hear?”
- “Do you hold beliefs about yourself or the world that other people would find odd?”
- “Do you feel as if other people are trying to harm or control you?”
- “Has anyone in your family ever experienced depression?”
- “Has anyone in your family ever been diagnosed with a mental illness?”
- “Would you like to meet with a counselor to help you with your problem?”
- “Would you like to join a support group?”
- “What do you think makes you feel this way?”
- “Can you tell me more about it?”
- “Have you lost any interest in your social activities and relationships?”
- “Do you feel hopeless?”
- “Do you feel guilty about anything?”
- “How is your energy level?”
- “Can you still perform your daily functions or activities?”
- “Do you have any thoughts of harming yourself?”
- “Do you have any thoughts of harming others?”
- “Whom do you live with?”
- “How do they react to your behavior?”
- “Do you have any problems in your job?”
- “How is your performance on your job?”
- “Have you had any recent emotional or financial problems?”
- “Have you had any recent traumatic event in your family?”
- “Does anyone support you?”
Daily activities (for dementia patients):
- “Tell me about your day yesterday.”
- “Do you need any help bathing?”
- “Do you need any help getting dressed?”
- “What do you need help with when you are getting dressed?”
- “Do you need any help going to the toilet?”
- “Do you need any help transferring from your bed to the chair?”
- “Do you ever have accidents with your urine or bowel movements?”
- “Do you ever not make it to the toilet on time?”
- “Do you need any help feeding yourself?”
- “What do you need help with when you eat?”
- “Do you need any help taking your medications/using the telephone/shopping/ preparing food/cleaning your house/doing laundry/getting from place to place/ managing money?”

Abuse:
- “Are you safe at home?”
- “Is there any threat to your personal safety at home or anywhere else?”
- “Does anyone (your husband/wife/parents/boyfriend) treat you in a way that hurts you or threatens to hurt you?”
- “Can you tell me about the bruises on your arm?”

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**THE PHYSICAL EXAM**

**Guidelines**

In this section, we will suggest a systematic way to perform the physical exam. You can use this method or any other system with which you feel comfortable. Regardless of the method you choose, however, it is essential that you practice until you can perform the physical exam without mistakes or hesitation.

As described earlier, the physical exam can take up to five minutes. Given that the history portion of the encounter is estimated to take 7–8 minutes, you should already have started the physical exam by the time you hear the announcement that you have five minutes remaining in the encounter. Bear in mind that there is no time for a complete physical exam. Instead, you should aim at conducting a focused exam to look for physical findings that can support the differential diagnosis you made after taking the history. See Figure 2-3 for an overview of the process.

Before you begin, you should announce to the patient the need for the physical exam. Then, don’t forget to wash your hands with soap and water and dry them carefully. (You can wear gloves instead if you so choose.) While you are washing your hands, use the time to think about what you should examine and whether there is anything you neglected to ask the patient. You should then drape the patient if you have not yet done so. The drape will be on the stool; unfold it and cover the patient from the waist down.
Before you touch the patient, make sure your hands are warm (rub your hands together if they are cold). In a similar manner, rub the diaphragm of your stethoscope to warm it up before you use it. Do not auscultate or palpate through the patient’s gown.

As you proceed, be sure to ask the patient’s permission before you uncover any part of his body (e.g., “Is it okay if I untie your gown in order to examine your chest?” or “Can I move down the sheet to examine your belly?”). You may also ask the patient to uncover himself. You should expose only the area you need to examine. Do not expose large areas of the patient’s body at once. After you have examined a given area, cover it immediately.

During the physical exam, you will be scored both for performing a given procedure and for doing so correctly. You will not get credit for conducting an extra maneuver or for examining a nonrequired system, but failure to perform a required procedure will cost you a check mark on your list. You should also bear in mind that you are not allowed to perform a corneal reflex, breast, rectal, pelvic, or genital exam. If you think any of the above-mentioned exams is indicated, you should tell the patient that you will need to do the specific exam later and then remember to add the exam to your orders on your patient note (PN). When you have concluded a given procedure, remember to say “thank you.” Then explain the next step, and ask the patient for his permission to proceed. The patient should always be made to feel that he is in control of his body.

In the course of the physical exam, you may ask the patient any additional questions that you feel may be pertinent to the history. It is recommended,
However, that you stop the physical exam while doing so in order to reestablish eye contact. After the patient has answered your questions, you may resume the exam.

Finally, you should remain alert to special situations that may not unfold as would an ordinary physical exam. When you enter the examination room, for example, the patient may hand you an insurance form requesting that only certain systems be examined. In such cases, the patient will usually tell you that you do not need to take a history. Should this occur, simply introduce yourself, proceed to examine the systems listed, and then leave the room. No PN is required under such circumstances; instead, you are required only to fill out the form the patient gave you with the appropriate findings. In such encounters, the emphasis will be on the correct performance of the physical exam maneuvers and on professional and appropriate interaction with the patient.

Physical Exam Review

The following is a review of the steps involved in the examination of each of the body’s main systems. Included are samples of statements that can be used during the physical exam. Remember that it is crucial to keep the patient informed of what is going on as well as to ask his consent before each step.

1. HEENT exam:
   - What to say to the patient before and during the exam:
     - “I need to examine your sinuses, so I am going to press on your forehead and cheeks. Please tell me if you feel pain anywhere.”
     - “I would like to examine your eyes now.”
     - “I am going to shine this light in your eyes. Can you please look at the clock on the wall?”
     - “I need to examine your ears now.”
     - “Can you please open your mouth? I need to check the inside of your mouth and your throat.”
   - What to perform during the HEENT exam:
     - Head:
       1. Inspect the head for signs of trauma and scars.
       2. Palpate the head for tenderness or abnormalities.
     - Eyes:
       1. Inspect the sclerae and conjunctivae for color and irritation.
       2. Check the pupils for symmetry and reactivity to light.
       3. Check the extraocular movements of the eyes.
       4. Check visual acuity with the Snellen eye chart.
       5. Perform a funduscopic exam. Remember the rule “right-right-right” (ophthalmoscope in examiner’s right hand—patient’s right eye—examiner’s right eye) and the rule “left-left-left” (ophthalmoscope in examiner’s left hand—patient’s left eye—examiner’s left eye).
- **Ears:**
  1. Conduct an external ear inspection for discharge, skin changes, or masses.
  2. Palpate the external ear for pain (otitis externa); do the same for the mastoid.
  3. Examine the ear canal and the tympanic membrane using an otoscope. (Don’t forget to use a new speculum for the patient.)
  4. Conduct the Rinne and Weber tests.
- **Nose:**
  1. Inspect the nose.
  2. Palpate the nose and sinuses.
  3. Inspect the nasal turbinates and the nasal septum with a light source.
- **Mouth and throat:**
  1. Inspect with a light.
  2. Tooth tapping may be performed if needed.

2. **Cardiovascular exam:**
   - **What to say to the patient before and during the exam:**
     - “I need to listen to your heart.”
     - “Can you hold your breath, please?”
     - “Can you sit, please?”
     - “Can you turn to your left side, please?”
     - “I am going to examine your legs to check for fluid retention. Is that okay with you?”
     - “I need to check the pulse in your arms and legs now.”
   - **What to perform during the cardiovascular exam:**
     - When examining the heart, do not lift up the patient’s gown. Rather, pull the gown down the shoulder, exposing only the area to be examined.
     - Listen to the carotids for bruits (use the diaphragm of the stethoscope).
     - Look for JVD.
     - Palpate the chest for the PMI, retrosternal heave, and thrills.
     - Listen to at least two of the four cardiac areas. (Listen to the mitral area with the patient on his left side.)
     - Listen to the base of the heart with the patient leaning forward.
     - Check for pedal edema.
     - Check the peripheral pulses.

3. **Pulmonary exam:**
   - **What to say to the patient before and during the exam:**
     - “I need to listen to your lungs now.”
     - “Can you take a deep breath for me, please?”
     - “Can you say ‘99’ for me, please?”
     - “I am going to tap on your back to check your lungs. Is that okay with you?”
   - **What to perform during the pulmonary exam:**
     - Examine both the front and the back of the chest.
     - Don’t percuss or auscultate through the patient’s gown.
Don’t percuss or auscultate over the scapula.
Allow a full inspiration and expiration in each area of the chest.
Inspect: The shape of the chest, respiratory pattern, deformities.
Palpate: Tenderness, tactile fremitus.
Percuss.
Auscultate, egophony.

4. Abdominal exam:
- What to say to the patient before and during the exam:
  - “I need to examine your belly/stomach now.”
  - “I am going to listen to your belly now.”
  - “I am going to press on your belly. Tell me if you feel any pain or discomfort.”
  - “Now I need to tap on your belly.”
  - ”Do you feel any pain when I press in or when I let go? Which hurts more?”
- What to perform during the abdominal exam:
  - Inspect.
  - Auscultate (always auscultate before you palpate the abdomen).
  - Percuss.
  - Palpate: Start from the point that is farthest from the pain; be gentle on the painful area, and don’t try to elicit the pain. Check for rebound tenderness, CVA tenderness, obturator sign, psoas sign, and Murphy’s sign.
  - Check the liver span.

5. Neurologic exam:
- What to say to the patient before and during the exam—mini-mental status exam questions:
  - “I would like to ask you some questions to test your orientation.”
  - “I would like to check your memory and concentration by asking you some questions.”
  - “Can you tell me your name and age?”
  - “Do you know where are you now?”
  - “Do you know the date today?”
  - Show the patient your pen and ask him, “Do you know what this is?”
  - “Now I would like to ask you some questions to check your memory.”
  - “I will name three objects for you, and I want you to repeat them immediately, okay? Chair, bed, and pen.” (Tests immediate memory.)
  - “I will ask you to repeat the names of these three objects after a few minutes.” (Tests short-term memory.)
  - “Do you remember what you had for lunch yesterday?” (Tests recent memory.)
  - “When did you get married?” (Tests distant memory.)
  - “Now, can you repeat for me the names of the three objects that I mentioned to you?” (Tests short-term memory.)
  - “Are you left-handed or right-handed?”
- “I will give you a piece of paper. I want you to take the paper in your right hand, fold the paper in half, and put it on the floor.” (Three-step command.)
- “Now I want you to write your name on the paper.”
- “I want you to count backward starting with the number 100,” or “Take 7 away from 100 and tell me what number you get; then keep taking 7 away until I tell you to stop.” (Tests concentration.)
- “Spell ‘world’ forward and backward.” (Tests concentration.)
- “What would you do if you saw a fire coming out of a paper basket?” (Tests judgment.)

What to say to the patient before and during the exam—neurologic exam questions:
- “I am going to check your reflexes now.”
- “I am going to test the strength of your muscles now.”
- “This is up, and this is down. Tell me which direction I am moving your big toe.”
- “Can you walk across the room for me, please?”

What to perform during the neurologic exam:
- Mental status examination: Orientation, memory, concentration.
- Cranial nerves:
  1. II: Vision.
  2. III, IV, VI: Extraocular movements.
  4. VII: Smile, lifting of brows, close your eyes and don’t let me open them.
  5. IX, X: Symmetrical palate movement, gag reflex.
  6. XI: “Shrug your shoulders.”
  7. XII: “Stick out your tongue.”
- Motor system:
  1. Passive motion.
  3. Hands: “Spread your fingers apart; close your fist.”
  4. Legs: Knee extension (“kick out”), knee flexion (“pull in”).
  5. Ankles: “Push on the gas pedal.”
- Reflexes: Biceps, triceps, brachioradialis, patellar, Achilles, Babinski.
- Sensory system: Sharp (pin)/dull (cotton swab), vibration, position sense.
- Cerebellum: Finger-to-nose, heel-to-shin, rapid alternating movements, Romberg sign, gait.
- Meningeal signs: Neck stiffness, Kernig, Brudzinski.

6. Joint exam:
- What to say to the patient before and during the exam:
  - “Tell me if you feel pain anywhere.”
  - “I am going to examine your knee/ankle now.”
- What to perform during the joint exam:
  - Inspect and compare joint with the opposite side.
  - Palpate.
- Check for joint effusion.
- Check for crepitus.
- Check the joint range of motion.

**Useful scales:**

- Reflexes (0–4), with 0 being completely areflexic:
  - 1: Hyporeflexia.
  - 2: Normal reflexes.
  - 3: Hyperreflexia.
  - 4: Hyperreflexia plus clonus (test the ankle and the knee).

- Strength (0–5), with 0 representing an inability to move the limb:
  - 1: Can move limb (wiggle toes).
  - 2: Can lift limb against gravity.
  - 3: Can lift limb with one-finger resistance from the examiner.
  - 4: Can lift limb with two-finger resistance from the examiner.
  - 5: Has full strength.

- Pulses (0–4), with 0 representing pulselessness:
  - 1: Weak pulse.
  - 2: Regular pulse.
  - 3: Increased pulse.
  - 4: Pounding pulse.

**Special Challenges During the Physical Exam**

During the course of the physical exam, you may encounter any number of special problems. The following are examples of such challenges along with potential responses to them.

- **Listening to the heart in a female patient**: You can place the stethoscope anywhere around the patient’s bra and between the breasts. To auscultate or palpate the PMI, if necessary, ask the patient, “Can you please lift up your breast?”

- **Examining a patient who is in severe pain**: A patient in severe pain may initially seem unapproachable, refuse the physical exam, and insist that you give him something to stop his pain. In such cases, you should first ask the patient’s permission to perform the physical exam. If he refuses, gently say, “I understand that you are in severe pain, and I want to help you. The physical exam that I want to do is very important to help determine what is causing your pain. I will be as quick and gentle as possible, and once I find the reason for your pain, I should be able to give you something to make you more comfortable.”

- **Examining lesions**: If you see a scar, a mole (nevus), a psoriatic lesion, or any other skin lesion during the exam, you should mention it and ask the patient about it even if it is not related to the patient’s complaint.

- **Examining bruising**: Inquire about any bruises you see on the patient’s body, and think about abuse as a possible cause.

- **Running out of time**: If you don’t have time for a full mini-mental status exam, at least ask patients if they know their name, where they are, and what day it is.
**SP Simulation of Physical Exam Findings**

It bears repeating that during the physical exam, it is necessary to remain cautious and attentive, as the symptoms patients exhibit during the encounter are seldom accidental and are usually reproducible. So when you notice any positive sign, take it seriously. The following are some physical signs that may be simulated by the SP:

1. **Abdomen:**
   - Abdominal tenderness: The patient feels pain when you press on his abdomen. Remember that the patient is an actor. When you palpate the area, he will feel pain where he is supposed to feel pain regardless of the amount of pressure you exert. So don’t try to palpate the same area again; instead, move on, and consider the pain on palpation a positive sign.
   - Abdominal rigidity: The patient will contract his abdominal muscles when you try to palpate the abdomen.
   - Rebound tenderness of the abdomen.
   - CVA tenderness.

2. **Chest:**
   - Shortness of breath.
   - Wheezing: This may often sound strange, as if the patient were whistling from his mouth.
   - Decreased respiratory sounds: The patient will move his chest without really inhaling any air so that you do not hear any respiratory sounds.
   - Increased fremitus: The patient will say “99” in a coarse voice, creating more fremitus than usual.

3. **Nervous system:**
   - Confusion.
   - Dementia.
   - Extensor plantar response (Babinski’s sign).
   - Absent or hyperactive tendon reflexes (stroke, diabetes mellitus): Eliciting the reflex in the SP is not like doing so in a real patient, where you must try more than once to ensure that you have not missed the tendon and that your strike is strong enough. In a clinical encounter, try the reflex only once; if you don’t see it, it is not there. If the patient wants to show you hyperactive DTRs, he will make sure to respond with an exaggerated jerk even to the lightest and most awkward hammer hit.
   - Facial paralysis.
   - Hemiparesis.
   - Gait abnormalities.
   - Ataxia.
   - Chorea.
   - Hearing loss.
   - Tinel’s sign.
   - Phalen’s sign.
   - Nuchal rigidity.
   - Kernig’s sign.
   - Brudzinski’s sign.
4. Eyes:
- Visual loss (central, peripheral): In a young patient, this may be multiple sclerosis.
- Photophobia: The patient will say, “I hate the light” or “I don’t feel comfortable in bright light.” Dim the light to make the patient feel more comfortable.
- Lid lag.
- Nystagmus.

5. Muscles and joints:
- Muscle weakness.
- Rigidity.
- Spasticity.
- Parkinsonism: Shuffling gait (difficulty initiating and stopping ambulation, small steps, no swinging of the arms), resting tremor, masked facies, rare blinking, and cogwheel rigidity.
- Restricted range of motion of joints.

6. Bruits and murmurs:
- Renal artery stenosis: A patient with hypertension who is not responding to multiple antihypertensive medications. Do not be surprised if you hear an abdominal bruit.
- Thyroid bruit.
- Carotid bruit: The patient says “Hush, hush” when you place the stethoscope over his neck.
- Heart murmur: Once you place the stethoscope on the patient’s heart, you will hear him saying “Hush, hush.”

7. Skin:
- Skin lesions: You may see artificial skin discoloration (e.g., painful red spots on the shin for erythema nodosum in a patient with sarcoidosis; redness over an inflamed joint in a patient with arthritis).

8. Real physical exam findings:
- You may see real C-section, appendectomy, cholecystectomy, or other scars. Don’t overlook them. Always inquire about any scar you see.
- You may see a real nevus (mole). Ask the patient about it and advise him to check it routinely and report any change in it.
- You may see real skin lesions, such as pityriasis rosea in a Christmas tree pattern, seborrheic dermatitis of the scalp, or acne vulgaris.
- When you listen to a patient’s heart, don’t be surprised to hear a real heart murmur.
- A patient with a sore throat may present with real enlarged tonsils.

CLOSURE

Finishing the history and the physical exam does not mean that the encounter is over. To the contrary, closure is a critical part of the encounter. See Figure 2-4 for an overview of the process. During closure, you are expected to do several things:
- Make a transition to mark the end of your encounter.
- Summarize the chief complaint and the HPI if you have not already done so before the physical exam.
- Summarize your findings from the physical exam.
- Give your impression of the patient’s clinical condition and most likely diagnosis.
- Suggest a diagnostic workup.
- Answer any questions the patient might have.
- Address the patient’s concerns.
- Check to see if the patient has any more questions.
- Leave the room.

To transition into the closure, you should begin by saying something like “Thank you for letting me examine you, Mrs. Jones. Now I would like to sit down with you and give you my impression.” You should then tell the patient about the possible differential diagnoses (keep to a maximum of three) and explain the meaning of any complicated medical terms you might use. You might also point out the organ or system that you think is involved and explain a simple mechanism of the disease. You should not, however, give the patient a definitive diagnosis at this time. Instead, tell him that you still need to run some tests in order to establish the final diagnosis. In some cases there will actually be no final diagnosis; instead, the case will be constructed in such a way as to be a mixture of signs and symptoms that can be construed to indicate any number of diseases.

During closure, almost every patient will have at least one challenging question to which you must respond (e.g., “Do you think I have cancer, doctor?”
or “Am I going to get better?”). In answering these questions, be honest yet diplomatic. Essentially, being honest with the patient means not giving false reassurances such as “I am sure you will be cured after a week of antibiotics,” or “Don’t worry, I am sure that it is not cancer.” What you might say instead is, “Well, I cannot exclude the possibility of cancer at this point. We need to do additional testing. Regardless of the final diagnosis, however, I want you to be assured that I will be available for any support you need.”

If you do not know the answer to a patient’s question, you should state as much. See the end of this chapter for examples of challenging questions patients might pose along with potential responses to them.

During closure, you should also explain to the patient the diagnostic tests you are planning to order. In doing so, you should again use nontechnical terms—for example, “We need to run some blood tests to check the function of your liver and kidneys,” or “You need to have a chest x-ray and a CT scan of the head.” You may further explain the latter by saying, “The CT scan is a type of x-ray imaging that gives us clear images of sections of the body.” You should then add, “After we get the results of those tests, we will meet again to discuss them in detail along with the final diagnosis and the treatment plan.” Finally, you should conclude by asking the patient if he still has any questions.

If you find you are running out of time, do not compromise the closure. If time constraints dictate that you choose between a thorough physical exam and an appropriate closure, give priority to the execution of a proper closure.

Before you leave the room, you can finish your encounter by looking the patient in the eye and saying something like “Okay, Mr. Jones, I’ll contact you when I have your test results. It was nice meeting you.” You may then shake the patient’s hand and leave the room. You are allowed to leave the room as soon as you think you have completed the encounter. Once you have left the encounter room, you will not be allowed to go back inside.

**HOW TO INTERACT WITH SPECIAL PATIENTS**

The following are guidelines for dealing with atypical or uncommon patients or encounters.

- **The anxious patient:** Encourage the patient to talk about his feelings. Ask him about the things that are causing him to feel anxious. Give him reasonable reassurance.
- **The angry patient:** Stay calm and don’t be scared. Remember that the patient is not really angry; he is just acting angry to test your response. Let him express his feelings, and ask about the reason for his anger. You should also address the patient’s anger in a reasonable way. For example, if the patient is complaining that he has been waiting for a long time, tell him you understand. Explain that the clinic is crowded, and there were many
patients who had appointments prior to his. Reassure the patient that now that it is his turn, you will focus on his case and take care of him.

- **The crying patient:** Allow the crying patient to express his feelings, and wait in silence for him to finish. Offer him a tissue, and show him empathy in your facial expressions. You may also place your hand lightly on the patient’s shoulder or arm and say something like “I know that you feel sad. Would you like to tell me about it?” Don’t worry about time constraints in such cases. Remember that the patient is an actor and that his crying is timed. He will allow you to continue the encounter in peace if you respond correctly.

- **The patient who is in pain:** Show compassion for the patient’s pain. Say something like “I know that you are in pain.” Offer help by asking, “Is there anything I can do for you to help you feel more comfortable?” Do not repeat painful maneuvers. If the patient does not allow you to touch his abdomen because of the severe pain he is experiencing, tell him, “I know that you are in pain, and I want to help you. I need to examine you, though, to be able to locate the source of pain and give you the right treatment.” Reassure the patient by saying, “I will be as quick and gentle as possible.”

- **The patient who can’t pay for the tests or for treatment:** Reassure the patient by saying, “Not having enough money doesn’t mean you can’t get treatment.” You might also add, “We will refer you to a social worker who can help you find resources.”

- **The patient who refuses to answer your question or let you examine him:** Explain to the patient why the question or the physical exam is important. Tell him that they are necessary to allow you to understand the problem and arrive at a diagnosis. If the patient still refuses to cooperate, skip the question or the maneuver and document his refusal and your counseling in the PN.

- **The hard-of-hearing patient:** Face the patient directly to allow him to read your lips. Speak slowly, and do not cover your mouth. Use gestures to reinforce your words. If the patient has unilateral hearing loss, sit close to the hearing side.

- **The patient who doesn’t know the names of his medications or is taking medications whose names you don’t recognize:** Ask the patient if he has a prescription or a written list of the medications he is currently taking.

- **The phone encounter:** The Step 2 CS exam may include a telephone encounter. As with other encounters, patient information will be posted on the door before you enter the examination room. Once you are inside, sit in front of the desk with the telephone, and push the speaker button by the yellow dot to be connected to the patient. Do not dial any numbers or touch any other buttons. You are permitted to call the SP only once. Treat this like a normal encounter and gather all the necessary information. To end the call, press the speaker button above the yellow dot. As in the pediatric encounter, there is no physical exam, so leave this portion of the PN blank.
During your encounters, every patient will ask you one or more challenging questions. Your reactions and answers to these questions will be scored. Such questions may be explicit ones that you are expected to answer directly, or they may take the form of indirect comments or statements that must be properly addressed in order to reveal an underlying concern. When answering the challenging questions, try to remember the following guidelines:

- Be honest and diplomatic.
- Before addressing the patient’s issue, you might restate the issue back to the patient to let him know that you understand.
- Don’t give the patient a final diagnosis. Instead, tell the patient about your initial impressions and about the workup you have in mind to reach a conclusive diagnosis.
- Do not give false reassurances.
- If you do not know the answer to the patient’s question, just tell him so.

The following are examples of challenging questions:

<table>
<thead>
<tr>
<th>Confidentiality/Ethical Issues</th>
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<tbody>
<tr>
<td><strong>Challenging Question</strong></td>
</tr>
<tr>
<td>A patient who needs emergent surgery says, “I can’t afford the cost of staying in the hospital. I have no insurance. Just give me something to relieve the pain, and I will leave.”</td>
</tr>
<tr>
<td>“Should I tell my sexual partner about my venereal disease?”</td>
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<tr>
<td>An anxious patient who you suspect has been abused asks, “Why are you asking me these questions?”</td>
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<tr>
<td>A patient recently diagnosed with HIV asks, “Do I have to tell my wife?”</td>
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</tbody>
</table>
### Patient Belief/Behavioral Issues

<table>
<thead>
<tr>
<th>Challenging Question</th>
<th>Possible Response</th>
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</thead>
<tbody>
<tr>
<td>An elderly patient says, “I think that it is normal at my age to have this problem” (impotence), or “I am just getting old.”</td>
<td>“Age may play a role in the change you are experiencing in your sexual function, but your problem may have other causes that we should rule out, such as certain diseases (hypertension, diabetes) or certain medications. We also have medications that may improve your sexual function.”</td>
</tr>
<tr>
<td>“I read in a journal that the treatment of this disease is herbal compounds.”</td>
<td>“Herbal medicines have been suggested for many diseases. However, their safety and efficacy may not always be clear-cut. Let me know the name of the herbal medicine and I will check into its potential treatment role for this disease.”</td>
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<tr>
<td>“I am afraid of surgery.”</td>
<td>“I understand your feelings. It is normal and very common to have these feelings before surgery. Is there anything specific that you are concerned about?”</td>
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<tr>
<td>A patient who has a serious problem (unstable angina, colon cancer) asks, “I want to go on a trip with my wife. Can we do the tests after I come back?”</td>
<td>“I know that you don’t want to put off your trip, but you may have a serious problem that may benefit from early diagnosis and management.”</td>
</tr>
<tr>
<td>“I did not understand your question, doctor. Could you repeat it, please?”</td>
<td>Repeat the question again slowly. If the patient still doesn’t comprehend the question, ask if there is any specific word he didn’t understand and try to explain it or use a simpler one.</td>
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<tr>
<td>“What is a bronchoscopy?” (MRI, CT, x-ray, colonoscopy)</td>
<td>Explain the meaning using simple words. For example, “Bronchoscopy is using a thin tube connected to a camera to look into your respiratory airways and parts of your lungs,” or “An MRI is a machine that uses a big magnet to obtain detailed pictures of your brain or body.”</td>
</tr>
<tr>
<td>Challenging Question</td>
<td>Possible Response</td>
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<tr>
<td>“What do you mean by ‘workup’?”</td>
<td>“It means all the tests that we are going to do to help us make the final diagnosis.”</td>
</tr>
<tr>
<td>A patient who is late in seeking medical advice asks, “Do you think it is too late for recovery?”</td>
<td>“I am glad that you came for help. We will do our best and hope for the best.”</td>
</tr>
<tr>
<td>A patient with pleuritic chest pain asks, “Is this a heart attack? Am I going to die?”</td>
<td>“Given your current presentation, my suspicion for a heart attack is low. It is more likely that inflammation of the membranes surrounding your lungs is causing your pain, and this is usually not a life-threatening condition. However, we still need to do some tests to confirm the diagnosis and rule out heart problems.”</td>
</tr>
<tr>
<td>“Do you think I have colon cancer?” “Do you think I have a brain tumor?” “Do I have endometrial cancer?”</td>
<td>“That is one of the possibilities, but there are other explanations for your symptoms that we should rule out before making a diagnosis.”</td>
</tr>
<tr>
<td>“My friend told me that you are a very fine doctor. That’s why I came to you to refill my prescription.”</td>
<td>“I am flattered, but since this is your first visit, I can’t give you a refill without reviewing your history to better understand your need for this medication. I will also need to do a physical exam and perhaps order some tests.”</td>
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<tr>
<td>“Will my insurance cover the expenses of this test?”</td>
<td>“I’m not sure, but I can refer you to a social worker who does have that information. If necessary, I can write a note to your insurance company indicating the importance of this test.”</td>
</tr>
<tr>
<td>A person who wants to return to work at a job that can negatively affect his health asks, “Can I go back to work?”</td>
<td>“Unfortunately, work may actually worsen your condition. Therefore, I would prefer that you stay at home for now. I can write a letter to your employer explaining your situation.”</td>
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<tr>
<td>“Do you think that this tumor I have could become malignant?”</td>
<td>“We really won’t know until we remove the mass and get a pathology report on it.”</td>
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<tr>
<td>Challenging Question</td>
<td>Possible Response</td>
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<tr>
<td>“Since I stopped smoking, I have gained weight. I want to go back to smoking in order to lose weight.”</td>
<td>“There are healthier ways to lose weight than smoking, such as exercise and diet. Smoking will increase your risk of cancer, heart problems, and lung disease.”</td>
</tr>
<tr>
<td>A patient with a shoulder injury says, “I am afraid of losing my job if my shoulder doesn’t get better.”</td>
<td>“We will do our best to help you recover from your shoulder injury. With your permission, I will communicate the situation to your employer.”</td>
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<tr>
<td>“Will I ever feel better, doctor?”</td>
<td>The answer differs depending on the prognosis of the disease and can vary from “Yes, most people with this disease are completely cured” to “Complete cure may be difficult at this advanced stage, but we have a lot to offer in terms of controlling the symptoms and improving your quality of life.”</td>
</tr>
<tr>
<td>A person who has a broken arm asks, “Doctor, do you think I will be able to move my arm again like before?”</td>
<td>“It is hard to tell right now, but those fractures usually heal well, and with physical therapy you should regain the normal range of motion of your arm.”</td>
</tr>
<tr>
<td>“I think that life is full of misery. Why do we have to live?”</td>
<td>“Life can be challenging. Is there something in particular that is bothering you? Have you thought of ending your life?” You can then continue screening for depression.</td>
</tr>
<tr>
<td>A young man with multiple sexual partners and a recent-onset skin rash says, “I am afraid that I might have AIDS.”</td>
<td>“Having multiple sexual partners does put you at risk for HIV infection, but this rash may be due to many other causes. I agree that we should do an HIV test on you in addition to a few other tests.”</td>
</tr>
<tr>
<td>A patient who needs hospitalization says, “My child is at home alone. I have to leave now.”</td>
<td>“I understand your concern about your child, but right now staying in the hospital is in your best interest. One of our social workers can make some phone calls to arrange for child care.”</td>
</tr>
<tr>
<td>Challenging Question</td>
<td>Possible Response</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>“Do you have anything that will make me feel better? Please, doctor, I am in pain.”</td>
<td>“I know that you’re in pain, but I need to know what’s causing your pain in order to give you the appropriate treatment. After I am done with my evaluation, we can decide on the best way to help manage your pain.”</td>
</tr>
<tr>
<td>A patient you believe is pretending (malingering) says, “Please, doctor, I need a week off from work. The pain in my back is terrible.”</td>
<td>“I know that you are uncomfortable, but after examining you, I don’t find disability significant enough to keep you out of work. I plan to prescribe pain medication and exercises, but a big part of your recovery will be continuing your normal daily activities.”</td>
</tr>
<tr>
<td>“Stop asking me all these stupid questions and just give me something for this pain.”</td>
<td>“I know that you’re in pain, but I need to determine the cause of the pain in order to give you the right treatment. After I am done with my evaluation, we will give you the appropriate treatment.”</td>
</tr>
<tr>
<td>“So what’s the plan, doctor?”</td>
<td>“After we get the results of your tests, we will meet again. At that time, I will try to answer any questions you may have.”</td>
</tr>
<tr>
<td>“Do you think I will need surgery?”</td>
<td>“I will try to manage your problem medically, but if that doesn’t work, you may need surgery. We can see how things go and then try to make that decision together in the future.”</td>
</tr>
<tr>
<td>A female patient has only one sexual partner, and she is diagnosed with an STD. She asks you, “Could he possibly be cheating on me?”</td>
<td>“You most likely contracted this infection from your partner. It would be best to talk to your partner about this to clear things up. He needs to be tested and treated, or else you risk becoming reinfected.”</td>
</tr>
<tr>
<td>A patient is shouting angrily, “Where have you been, doctor? I have been waiting here for the whole day.”</td>
<td>“I am sorry you had to wait so long. We had some unexpected delays with a few of the earlier patients this morning. But I’m here now, and I will focus on you and your concerns.”</td>
</tr>
<tr>
<td>Disease-Related Issues</td>
<td>Challenging Question</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>An educated 58-year-old woman asks, “I read in a scientific journal that hormonal replacement therapy causes breast cancer. What do you think of that, doctor?”</strong></td>
<td>“It appears to be true. Studies show a slight increase in the risk of developing breast cancer after four years of combination estrogen and progesterone use for hormonal replacement therapy. The current recommendations are to use hormonal replacement therapy solely for the relief of hot flashes, and only for a limited period of time.”</td>
</tr>
<tr>
<td><strong>“Did I have a stroke?”</strong></td>
<td>“We don’t know yet. Your symptoms could be explained by a small stroke, but we need to wait for the results of your MRI.”</td>
</tr>
<tr>
<td><strong>“Do I have lung cancer?”</strong></td>
<td>“We don’t know at this point. It is a possibility, but we still need to do additional tests.”</td>
</tr>
<tr>
<td><strong>An African-American man with sickle cell anemia presents with back and chest pain and says, “Please, doctor, I need some Demerol now or I will die from pain.”</strong></td>
<td><strong>“I know that you are in pain, but I need to ask you a few questions first to better understand your pain. Then we will get you medicines for your pain.”</strong></td>
</tr>
<tr>
<td><strong>A patient with symptoms of a common cold says, “I think I need antibiotics, doctor.”</strong></td>
<td>“It appears that you have a viral common cold. Antibiotics do not treat viruses, and they have adverse effects that could even make you feel worse. We should focus on treating your symptoms.”</td>
</tr>
<tr>
<td><strong>“My mother had breast cancer. What is the possibility that I will have breast cancer, too?”</strong></td>
<td>“You are at increased risk, but it doesn’t mean that you will get it. There are other risk factors that need to be considered, and regular screening tests will be very important.”</td>
</tr>
<tr>
<td><strong>A 55-year-old man says, “I had a colonoscopy six years ago, and they removed a polyp. Do you think that I have to repeat the colonoscopy?”</strong></td>
<td>“Yes, it should be repeated. We need to screen for more polyps, and in this way we hope to prevent the development of colon cancer.”</td>
</tr>
<tr>
<td>Challenging Question</td>
<td>Possible Response</td>
</tr>
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<td>--------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>A patient with headache or confusion asks, “Do you think I have Alzheimer’s disease?”</td>
<td>“I don’t know. Alzheimer’s is one of several possible causes that we will investigate.”</td>
</tr>
<tr>
<td>“Can I get pregnant even though my tubes are tied?”</td>
<td>“There is no single contraceptive method that is 100% effective. The risk of pregnancy after tubal ligation is less than 1%, but it is a real risk.”</td>
</tr>
<tr>
<td>A woman who is in her first trimester of pregnancy with vaginal bleeding asks, “Do you think I am losing my pregnancy?”</td>
<td>“Bleeding early in pregnancy increases your risk of losing the pregnancy, but at the same time, most women who have bleeding carry the pregnancy to term without problems.”</td>
</tr>
<tr>
<td>“My brother has colon cancer. What are the chances that I will have colon cancer as well?”</td>
<td>“Some types of colon cancer are hereditary, and you may be at increased risk, but it doesn’t mean that you will get colon cancer for sure. I need to get more information about your personal and family history to determine your level of risk.”</td>
</tr>
<tr>
<td>A patient with palpitations says, “My mother had a thyroid problem; do you think it is my thyroid?”</td>
<td>“It’s possible. We always check a thyroid blood test, but we will also consider many other possible causes of palpitations.”</td>
</tr>
<tr>
<td>“Obesity runs in my family. Do you think that this is why I am overweight?”</td>
<td>“Genes play an important role in obesity, but lifestyle, diet, and daily habits are also major factors influencing weight. These factors can be used in a way that can help you lose weight.”</td>
</tr>
<tr>
<td>A young man with dysuria asks, “Do you think I have an STD?”</td>
<td>“That is one of the possibilities. We will do some cultures to find out for sure, and we will also check a urine sample, since your symptoms may be due to a urinary tract infection.”</td>
</tr>
<tr>
<td>“I am drinking a lot of water, doctor. What do you think the reason is?”</td>
<td>“This may simply be due to dehydration, or it may be a sign of a disease such as diabetes. We need to do some tests to determine the cause.”</td>
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</table>
### Challenging Question Possible Response

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
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<tbody>
<tr>
<td>A patient with COPD asks, “Will I get better if I stop smoking?”</td>
<td>“Most patients with your condition who stop smoking will experience a gradual improvement in their symptoms, in addition to a significantly decreased risk of lung cancer in the future.”</td>
</tr>
<tr>
<td>A patient with possible appendicitis is asking for a cup of water to drink.</td>
<td>“I am sorry, but I can’t give you anything to eat or drink right now. You may need emergent surgery, and anesthesia is much safer if your stomach is completely empty.”</td>
</tr>
<tr>
<td>A patient with infectious mononucleosis asks, “Can I go back to school, doctor?”</td>
<td>“Now that you have recovered from the acute stage of the disease, you can go back to school, but I want you to stay away from any strenuous exercise or contact sports, as you may rupture your spleen.”</td>
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### Counseling

During at least one of your encounters, you are likely to find a patient who smokes, drinks, or has another habit that may adversely affect his health. Although these behaviors may or may not be relevant to your primary diagnosis, it is important that they be addressed in a rapid yet caring manner. Here are some examples of conversations you might have with your patient. Try to practice saying some of these aloud, making sure to change them to fit your personality and style.

#### The Smoker

**Examinee:** Do you smoke cigarettes?
**SP:** Yes, I have smoked one pack a day for 20 years.
**Examinee:** Have you ever tried to quit?
**SP:** Of course, but it never works.
**Examinee:** Well, I strongly recommend that you quit smoking. Smoking is a major cause of cancer and heart disease. Are you interested in trying to quit now?
**SP1:** Yes. (If the answer is “no,” see below.)
**Examinee:** I would be happy to help you quit smoking. We have many tools to help you do that, and I will be with you every step of the way. Let’s set up an appointment for two weeks from today, and we can get started on it then. Is that okay with you?
**SP2:** No, I don’t want to quit.
Examinee: I understand that you aren’t ready to quit smoking yet, but I want to assure you that whenever you are ready, I will be here to help you.

**The Alcoholic**

Examinee: How many drinks do you have in a week?
SP: It is hard to say. Too many.
Examinee: How many drinks do you have per day?
SP: Oh, maybe five or so.
Examinee: Have you ever felt the need to cut down on your drinking? Have you ever felt annoyed by criticism of your drinking? Have you ever felt guilty about drinking? Have you ever had to take a morning eye opener? (A “yes” answer to any one of the questions in the CAGE questionnaire should raise suspicion and prompt further questioning.)
SP: All of these things apply.
Examinee: I am concerned about your drinking. It can lead to liver disease, cause problems with bleeding, or even predispose you to early dementia. Are you interested in cutting down or quitting?
SP1: Yes. (If the answer is “no,” see below.)
Examinee: I am glad you want to quit. A variety of resources are available to help you quit drinking, and I would like to discuss them with you. Let’s make an appointment later this week to talk about your options. In the meantime, I have printed up a list of resources, and my office assistant will bring it to you.
SP2: No, I am not ready to quit.
Examinee: I realize that you are not ready to quit drinking, but I want to assure you that if you do decide to try, I will be here for you. Okay?

**The Patient with Uncontrolled Diabetes**

Examinee: Apparently, your diabetes is not adequately controlled according to your blood glucose readings. How often do you forget to take your medication? (Check for noncompliance.)
SP1: Taking all these medications just gets so confusing. I can never remember when to take them.
Examinee: Diabetes can certainly be a challenge to manage. Do you have someone who could help you take your medications? If not, we have a social worker who might be able to arrange for a nurse to come to your home. Are you interested in that?
SP2: I have been taking my medications exactly as they were prescribed to me.
Examinee: Tell me about your diet. (Check for dietary management.)
SP2: I eat regular meals, but I really like to drink soda. Diet soda tastes awful!
Examinee: You must be very careful about your sugar consumption. It is prudent to keep your blood sugar within normal limits. Persistently high blood sugar can cause damage to your eyes, kidneys, and nerves. Also, you will be at
The Sexually Promiscuous Patient

Examinee: Are you currently in a sexual relationship?
SP: Yes.
Examinee: Can you tell me about your partner or partners?
SP: I have a girlfriend, but I also see a couple of other women on the side.
Examinee: Are you using any type of protection with these partners?
SP: My girlfriend is on the pill, but I don’t use anything with the other women I see.
Examinee: Condoms reduce the risk of sexually transmitted infections. Do you think you could try to use condoms?
SP: I tried them, but I just don’t like them.
Examinee: I understand that you may not like to use condoms, but I am concerned that you may be putting yourself at risk for STDs. You could contract HIV, herpes, chlamydia, or any of a number of other STDs. The complications of these diseases include infertility, painful infections, or even death. If anyone with whom you have sexual contact has an STD, you could share it among all of them, including your girlfriend. I hope you will consider using a condom in the future. Do you have any questions for me?

The Depressed Patient

Examinee: Do you have problems sleeping? Have you lost interest in things that used to interest you? Do you feel guilty? Do you lack your usual energy? Has it been difficult for you to concentrate? Has your appetite changed? Do you feel as though you want to hurt yourself or someone else or commit suicide? (If you suspect depression, ask the questions posed in the mnemonic SIG E CAPS.)
SP: (Answers affirmatively to many of these questions.)
Examinee: You answered “yes” to many of my questions. I believe that you might have the diagnosis of depression. Depression is a common disease; it is due to a chemical imbalance in the brain that causes many of the symptoms you have described to me. Fortunately, we have medications that can help; however, these medications work best when they are combined with counseling. I can write you a prescription and also give you a referral to see a therapist. Is this something you are interested in?
The Patient with an STD (Trichomoniasis)

Examinee: Your symptoms are due to an infection called trichomoniasis, a sexually transmitted infection that has been given to you by one of your sexual partners. This infection responds well to treatment with antibiotics and is curable. You will also need to be tested for all other STDs. Your sexual partner needs to be treated as well; otherwise, you will be at risk of contracting the infection again. You should avoid sexual intercourse (unless you use condoms) until you finish the course of antibiotics and your partner gets treated.

Once you have completed an encounter, your final task will be to compose a PN. (See Figure 2-5 for a detailed overview of the clinical encounter and PN.) Toward this goal, you will find a desk with a sheet of paper on it immediately outside the encounter room. You will be given 10 minutes to write the PN and will be notified when two minutes remain. If you leave the encounter room before the end of the 15-minute period allotted for your patient encounter, you can devote the extra time you have to writing the PN. You are allowed to review the doorway information while you are writing the PN.

The PN sheet located outside the encounter room will have your name, the number of the encounter, and a bar code printed on it. You will not be provided with additional paper, so use the space wisely. You should also take care not to write outside the frame of the sheet, because the paper will be scanned and nothing outside the frame will be read. Be sure to use the pen provided by the examination center, as you are not allowed to use your own pens.

Before you start writing the PN, take a few seconds to review the history, including the chief complaint, how it started, its progression, and the main symptoms. Then take a deep breath and try to relax. If you get nervous and try to rush, your thoughts may become garbled, and you will risk losing the point of your story. As you begin to write, also remember that your handwriting must be legible in order for your PN to be properly scored.

As mentioned previously, you have the option of typing your PNs instead of writing them. Typing is a good choice if you are fast with the keyboard or have bad handwriting. Make a decision about which method you prefer and practice it beforehand. Note that you will not be able to render diagrams such as the neurology stick figure for reflexes. You can simulate typing the PN online at the USMLE Web site. Whether you choose to type or write, you will have to do the same for all PNs.
Opening Scenario
Joseph Short, a 46-year-old male, comes to the ER complaining of chest pain.

Vital Signs
BP: 165/85 mmHg
Temp: 98.6°F (37°C)
RR: 22/minute
HR: 90/minute, regular

Examinee Tasks
1. Take a focused history.
2. Perform a focused physical exam (do not perform rectal, genitourinary, or female breast exam).
3. Explain your clinical impression and workup plan to the patient.
4. Write the patient note after leaving the room.

Checklist/SP Sheet

PATIENT DESCRIPTION
Patient is a 46 yo M.

NOTES FOR THE SP
• Lie on the bed and exhibit pain.
• Place your hands in the middle of your chest.
• Exhibit difficulty breathing.
• If ECG is mentioned by the examinee, ask, “What is an ECG?”

CHALLENGING QUESTIONS TO ASK
“Is this a heart attack? Am I going to die?”

SAMPLE EXAMINEE RESPONSE
“As you suspect, your symptoms are of considerable concern. We need to learn more about what’s going on to know if your pain is life threatening.”

Examinee Checklist
ENTRANCE:
☐ Examinee knocked on the door before entering.
☐ Examinee introduced self by name.
☐ Examinee identified his/her role or position.
☐ Examinee correctly used patient’s name.
☐ Examinee made eye contact with the SP.
### History:

- Examinee showed compassion for your pain.

<table>
<thead>
<tr>
<th>Question</th>
<th>Patient Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Chief complaint</td>
<td>Chest pain.</td>
</tr>
<tr>
<td>☑ Onset</td>
<td>Forty minutes ago.</td>
</tr>
<tr>
<td>☑ Precipitating events</td>
<td>Nothing; I was asleep and I woke up at 5:00 in the morning having this pain.</td>
</tr>
<tr>
<td>☑ Progression</td>
<td>Constant severity.</td>
</tr>
<tr>
<td>☑ Severity on a scale</td>
<td>7/10.</td>
</tr>
<tr>
<td>☑ Location</td>
<td>Middle of the chest.</td>
</tr>
<tr>
<td>☑ Radiation</td>
<td>To my neck and left arm.</td>
</tr>
<tr>
<td>☑ Quality</td>
<td>Pressure.</td>
</tr>
<tr>
<td>☑ Alleviating/exacerbating factors</td>
<td>Nothing.</td>
</tr>
<tr>
<td>☑ Shortness of breath</td>
<td>Yes.</td>
</tr>
<tr>
<td>☑ Nausea/vomiting</td>
<td>I feel nauseated, but I didn’t vomit.</td>
</tr>
<tr>
<td>☑ Sweating</td>
<td>Yes.</td>
</tr>
<tr>
<td>☑ Associated symptoms</td>
<td>None.</td>
</tr>
<tr>
<td>☑ Previous episodes of similar pain</td>
<td>Yes, but not exactly the same.</td>
</tr>
<tr>
<td>☑ Onset</td>
<td>The past three months.</td>
</tr>
<tr>
<td>☑ Severity</td>
<td>Less severe.</td>
</tr>
<tr>
<td>☑ Frequency</td>
<td>Two to three episodes a week for 5–10 minutes.</td>
</tr>
<tr>
<td>☑ Precipitating events</td>
<td>Walking up the stairs, strenuous work, and heavy meals.</td>
</tr>
<tr>
<td>☑ Alleviating factors</td>
<td>Antacids.</td>
</tr>
<tr>
<td>☑ Associated symptoms</td>
<td>None.</td>
</tr>
<tr>
<td>☑ Current medications</td>
<td>Maalox, diuretic.</td>
</tr>
<tr>
<td>☑ Past medical history</td>
<td>Hypertension for five years, treated with a diuretic. High cholesterol, managed with diet; I have not been very compliant with the diet. GERD 10 years ago, treated with antacids.</td>
</tr>
<tr>
<td>☑ Past surgical history</td>
<td>None.</td>
</tr>
<tr>
<td>☑ Family history</td>
<td>My father died of lung cancer at age 72. My mother is alive and has a peptic ulcer. No early heart attacks.</td>
</tr>
<tr>
<td>☑ Occupation</td>
<td>Accountant.</td>
</tr>
<tr>
<td>☑ Alcohol use</td>
<td>Once in a while.</td>
</tr>
<tr>
<td>☑ Illicit drug use</td>
<td>Cocaine, once a week.</td>
</tr>
<tr>
<td>☑ Last time of cocaine use</td>
<td>Yesterday afternoon.</td>
</tr>
<tr>
<td><strong>Question</strong></td>
<td><strong>Patient Response</strong></td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>☑ Tobacco</td>
<td>Stopped three months ago.</td>
</tr>
<tr>
<td>☐ Duration</td>
<td>Twenty-five years.</td>
</tr>
<tr>
<td>☐ Amount</td>
<td>One pack a day.</td>
</tr>
<tr>
<td>☐ Sexual activity</td>
<td>Well, doctor, to be honest, I haven’t had sex with my wife for the last three months, because I get this pain in my chest during sex.</td>
</tr>
<tr>
<td>☐ Exercise</td>
<td>No.</td>
</tr>
<tr>
<td>☐ Diet</td>
<td>My doctor gave me a strict diet last year to lower my cholesterol, but I always cheat.</td>
</tr>
<tr>
<td>☐ Drug allergies</td>
<td>No.</td>
</tr>
</tbody>
</table>

**Physical Examination:**

☐ Examinee washed his/her hands.
☐ Examinee asked permission to start the exam.
☐ Examinee used respectful draping.
☐ Examinee did not repeat painful maneuvers.

<table>
<thead>
<tr>
<th><strong>Exam Component</strong></th>
<th><strong>Maneuver</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Neck exam</td>
<td>Looked for JVD, carotid auscultation</td>
</tr>
<tr>
<td>☑ CV exam</td>
<td>Inspection, auscultation, palpation</td>
</tr>
<tr>
<td>☑ Pulmonary exam</td>
<td>Auscultation, palpation, percussion</td>
</tr>
<tr>
<td>☑ Abdominal exam</td>
<td>Auscultation, palpation, percussion</td>
</tr>
<tr>
<td>☑ Extremities</td>
<td>Checked peripheral pulses, checked blood pressure in both arms, looked for edema and cyanosis</td>
</tr>
</tbody>
</table>

**Closure:**

☐ Examinee discussed initial diagnostic impressions.
☐ Examinee discussed initial management plans:
  ☐ Diagnostic tests.
  ☐ Lifestyle modification (diet, exercise).
☐ Examinee asked if the patient has any other questions or concerns.

**Sample Closure:**

Mr. Short, the source of your pain can be a cardiac problem such as a heart attack or angina, or it may be due to acid reflux, lung problems, or disorders related to the large blood vessels in your chest. It is crucial that we perform some tests in order to identify the source of your problem. We will start with an ECG and some blood work, but more complex tests may be needed as well. In the meantime, I would strongly recommend that you stop using cocaine, since use of this drug can lead to a variety of medical problems, including heart attacks. Do you have any questions for me?
# PATIENT NOTE

## History


## Physical Examination


## Differential Diagnosis

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## Diagnostic Workup

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</table>
History

HPI: 46 yo M c/o chest pain. Chest pain started 40 minutes before the patient presented to the ER. The pain woke the patient from sleep at 5 A.M. with a steady 7/10 pressure sensation in the middle of his chest that radiated to the left arm and the neck. Nothing makes it worse or better. Nausea, sweating, and dyspnea are also present. Similar episodes have occurred during the past 3 months, 2–3 times/week. These episodes were precipitated by walking up the stairs, strenuous work, sexual intercourse, and heavy meals. Pain during these episodes was less severe, lasted for 5–10 minutes, and disappeared spontaneously or after taking antacids.

ROS: Negative except as above.

Allergies: NKDA.

Medications: Maalox, diuretic.

PMH: Hypertension for 5 years, treated with a diuretic. High cholesterol, managed with diet. GERD 10 years ago, treated with antacids.

SH: One PPD for 25 years; stopped 3 months ago. Occasional EtOH, occasional cocaine (last used yesterday afternoon). No regular exercise; poorly adherent to diet.

FH: Father died of lung cancer at age 72. Mother has peptic ulcers. No early coronary disease.

Physical Examination

Patient is in severe pain.

VS: BP 165/85 (both arms), RR 22.

Neck: No JVD, no bruits.

Chest: No tenderness, clear symmetric breath sounds bilaterally.

Heart: Apical impulse not displaced; RRR; normal S1/S2; no murmurs, rubs, or gallops.

Abdomen: Soft, nondistended, nontender, H170BS, no hepatosplenomegaly.

Extremities: No edema, peripheral pulses 2+ and symmetric.

Differential Diagnosis

1. Myocardial ischemia or infarction
2. Cocaine-induced myocardial ischemia
3. GERD
4. Aortic dissection
5. Pericarditis
6. Pneumothorax
7. Pulmonary embolism
8. Costochondritis

Diagnostic Workup

1. ECG
2. Cardiac enzymes (CPK, CPK-MB, troponin)
3. CXR
4. Transthoracic echocardiogram
5. Cardiac catheterization
6. Transesophageal echocardiogram
7. CT—chest with IV contrast
8. Upper endoscopy
9. Cholesterol panel
CASE DISCUSSION

Differential Diagnosis

- **Myocardial ischemia or infarction**: The patient has multiple cardiac risk factors (including smoking, hypertension, and hyperlipidemia), and his symptoms are classic for cardiac ischemia.
- **Cocaine-induced**: Cocaine can predispose to premature atherosclerosis or can induce myocardial ischemia and infarction by causing coronary artery vasoconstriction or by increasing myocardial energy requirements.
- **GERD**: Severe chest pain is atypical but not uncommon for GERD and may worsen with recumbency overnight. Other atypical symptoms may include chronic cough, wheezing, or dysphagia. The classic symptom of GERD is heartburn, which may be exacerbated by meals.
- **Aortic dissection**: With the sudden onset of severe chest pain, aortic dissection should be suspected given the high potential for death if missed (and the potential for harm if mistaken for acute MI and treated with thrombolytic therapy). However, the patient's pain is not the classic sudden tearing chest pain that radiates to the back. In addition, his peripheral pulses and blood pressures are not diminished or unequal, and there is no aortic regurgitant murmur (although physical exam findings have poor sensitivity and specificity to diagnose aortic dissection).
- **Pericarditis**: The absence of pain that changes with position or respiration and the absence of a pericardial friction rub make pericarditis less likely.
- **Pneumothorax**: This diagnosis should be entertained in a patient with acute chest pain and difficulty breathing, but it is less likely in this case given that breath sounds are symmetric.
- **Pulmonary embolism**: As above, this is on the differential for acute chest pain and difficulty breathing, but this patient has no apparent risk factors for pulmonary embolism.
- **Costochondritis (or other musculoskeletal chest pain)**: This is more typically associated with pain on palpation or pleuritic pain.

Diagnostic Workup

- **ECG**: Acute myocardial ischemia, infarction, and pericarditis have characteristic changes on ECG.
- **Cardiac enzymes (CPK, CPK-MB, troponin)**: Specific tests for myocardial tissue necrosis that can turn positive as early as 4–6 hours after onset of pain.
- **CXR**: A widened mediastinum suggests aortic dissection and may reveal other causes of chest pain, including pneumothorax and pneumonia.
- **Transthoracic echocardiogram (TTE)**: Can demonstrate segmental wall motion abnormalities in suspected acute MIs (infarction is unlikely in the absence of wall motion abnormalities).
- **Cardiac catheterization**: Can diagnose and treat coronary artery disease.
- **Transesophageal echocardiogram (TEE)**: Highly specific and sensitive for aortic dissection, and can be done rapidly at the bedside.
- **CT—chest with IV contrast**: Another rapidly available diagnostic study that can rule out aortic dissection or pulmonary embolism.
- **Upper endoscopy**: Can be used to document tissue damage characteristic of GERD. However, it can be normal in up to one-half of symptomatic patients; esophageal probe (pH and manometry measurements) together with endoscopic visualization constitutes an effective diagnostic technique.
- **Cholesterol panel**: Can identify a critical risk factor for cardiovascular disease.