CASES
in Clinical Medicine

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This book is dedicated to my father with love.
Thanks for always being there for me.
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Introduction

Welcome to one of the most rewarding, challenging, exciting, and fastest-growing careers in the world—the physician assistant (PA) profession.

Cases in Clinical Medicine has been specially developed to assist PA students’ transition from the didactic to the clinical portion of their medical training by utilizing case-based learning (CBL). However, it would be appropriate for use by allopathic and osteopathic medical students, nurse practitioner students, and other health professions’ students.

Until now, most of your education has been provided in the form of lecture-based learning. This is an appropriate method to obtain a solid core of medical knowledge. By contrast, CBL teaches you by providing a brief case scenario in which you must assimilate your analytical skills with this medical knowledge to appropriately manage this fictitious patient’s case as opposed to the traditional method of memorizing and regurgitating facts. Thus, CBL more closely simulates the actual practice of medicine.

Additionally, to this point in your training, most of your history and physical examination skills have been limited to the actual practice of medicine there is insufficient time to perform an entire history and physical examination during every patient encounter. Therefore, in a problem-focused visit, you will be called upon to utilize your clinical skills and knowledge of evidence-based medicine to limit the components of the patient’s history, portions of the physical examination, and diagnostic studies to those that are most likely to yield useful clinical information on which to formulate the patient’s differential diagnosis list, correct diagnosis, and treatment plan with respect to the patient’s chief complaint.

Many guidelines have been developed by reputable organized specialty medical societies and government agencies as a tool to assist you in your evaluation and treatment of the patients with certain medical conditions. However, it is important to remember that these are just what they say they are—guidelines. Therefore, sound medical knowledge and good clinical skills are required to use them appropriately.

Cases in Clinical Medicine has been created to assist you in developing the aforementioned skills. In the first half of each chapter in this book, you will be provided basic histories on fictitious patients. This information will be followed by a series of approximately five options in five different categories; the first three are additional historical data, physical examination components, and diagnostic tests. Utilizing your medical knowledge, clinical expertise, and analytical skills, you will be asked to determine which of the given choice(s) is/are essential, or pertinent, in working to achieve the correct diagnosis and what is extraneous for each patient complaint. Additionally, you should be able to provide justification for your decisions. Unless stated otherwise, for each question, none to all of the options can be correct.

Regardless of whether an item in the history, physical examination, and diagnostic study sections is determined to be essential or nonessential, you will be provided with a response for it. For example, if one of the components of a physical examination is a heart examination, you will be provided with the findings of the heart examination in the subsequent physical examination section, regardless of whether a heart examination is essential or nonessential to the patient’s complaint. Therefore, you should not let the appearance of this information influence your decisions.

You will note that some of the questions, especially in the history section, have more than one component. The reasoning behind this approach is that in the clinical setting, if you get a positive response to a question, you would follow it up with other ones pertaining to that topic. Or, you might ask a series of questions along the same lines to rule in or eliminate a potential differential diagnosis. Therefore, in order to provide as much information on the topic as possible, these “cluster” questions have been combined into a single option instead of being asked separately. In general, anytime a positive response is elicited from the patient, additional questioning is required for further clarification of the symptom.

Occasionally, you will see terminology stating a certain component of the physical examination is unremarkable. Although this is useful in medical writing to minimize the size of the case presentation, it is never appropriate in the charting of an actual patient encounter. The use of the abbreviation “wnl” for “within normal limits” is likewise not an acceptable charting term. In fact, it is frequently the basis of medical jokes where it is stated to mean “we never looked.” In correct charting, you must always list what components were performed along with their findings.

Essentially, by the time you have completed your history and physical examination, you should have a fairly good idea of the patient’s diagnosis (or at least a limited differential diagnosis list). Diagnostic studies are utilized to confirm your suspicions. Their only other purpose is to monitor the patient’s progress in chronic conditions. They should never be ordered at random in hopes that they will provide a clue to the patient’s diagnosis. Therefore, any diagnostic test that is ordered
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should provide information that assists directly in appropriately evaluating and treating the patient’s chief complaint.

Furthermore, it is essential for the healthcare provider (HCP) to realize that the “normal” values established for diagnostic tests are derived from the value that is found in 95% of the adult population (although some do contain age-specific ranges). Therefore, it is possible for a patient to have a result that is slightly lower or slightly higher than the stated “normal” value and still be “normal” for that patient. It goes back to the old axiom, “Treat the patient, not the test.”

After you complete these three sections, you will be asked a question regarding the fictitious patient’s most likely diagnosis; unless otherwise stated, there will only be a single response for this question. This will be followed by a question regarding the treatment plan for the patient.

Every available option is often not going to be included for each case discussed. For example, all treatment plans, regardless of the purpose of the patient’s visit, must include the following information: patient education regarding his or her current medical condition; nonprescription treatments (if any) and instructions for usage; medication(s) (if any) prescribed, including usage, mechanism of action, and possible adverse effects; when the patient’s next appointment is going to be scheduled, why it is being scheduled, and the importance of keeping it; what to do if symptoms increase, adverse effects of the medication occur, or some other question or problem occurs in the interim; and recommended age-appropriate health maintenance visits, including appropriate diagnostic testing and immunizations, if due, past due, or not previously done. Obviously, making each of these an option in all the cases would severely limit the amount of other information that could be included and discussed.

Similarly, problem-focused histories and physical examinations do not contain all the information as a complete H&P does. However, there are some components that are essential to every encounter. In addition to a chief complaint and history of the present illness (HPI), a pertinent review of systems (ROS) is required. Furthermore, the following data need to be reviewed with the patient at every visit: past medical history, past surgical history, past hospitalization history, medications (including prescription, over-the-counter, vitamins, supplements, herbal preparation, and contraceptive methods), medication allergies, smoking history (including number of cigarettes per day, how long patient has smoked, when the patient plans to quit smoking, and when patient quit if a past smoker), alcohol history (including number and type of drinks at setting and frequency), illicit drug use, date and normalcy of last menses in reproductive-aged females, and status of last health maintenance educational examination (including diagnostic testing and immunization). The only requirement for a physical examination is a complete set of vital signs including height, weight, pulse, blood pressure, respirations, and temperature. The only exception would be height on an adult; it is only necessary to perform it once a year.

The usage of electronic medical records (EMRs), summarizing forms, flow charts, and printed patient educational materials can assist in expediting this process. Furthermore, much of this information can be obtained by a trusted nurse, nursing assistant, or medical assistant and reviewed by the HCP to further streamline the process.

Although the majority of the cases in this book follow the typical, structured, nonurgent pattern of medical care—obtaining an appropriate history, performing a focused physical examination, ordering relevant diagnostic studies, establishing a diagnosis, and instituting an appropriate treatment plan—in the real-world practice of medicine many of these steps are going on simultaneously based on the severity of the patient’s condition and type of illness.

The second half of each chapter provides you with the correct responses and the reasoning behind why the given response is essential or nonessential (or correct or incorrect) plus additional clinical knowledge and epidemiologic data regarding the case. Those options identified as “nonessential” are designated as such primarily because the information obtained by that selection is extremely unlikely to provide any useful clinical information on which to base the patient’s diagnosis and/or treatment plan; hence, they do not need to be performed as part of a problem-focused evaluation. Therefore, in some of these cases, there will be no further explanation regarding their exclusion from the patient’s evaluation.

Because the practice of medicine is an art utilizing science, there is not a “one size fits all” or “cookbook” approach that can be used to evaluate patients with similar complaints. As stated previously, the options listed in these cases are not the only potential historical questions, physical examination components, diagnostic tests, or treatment options that might be required or considered in an actual clinical situation. Additionally, this book is not meant to be a thorough clinical review of the topics presented in the cases. Therefore, this textbook is not designed and should not be utilized as a reference for the diagnosing and treating of patients in the clinical setting. The names and cases are fictitious; any resemblance to an actual patient is purely coincidental. Cases in Clinical Medicine can also be a helpful adjunct to assist you as you prepare for the initial Physician Assistant National Certification Examination (PANCE) sponsored by the National Commission on the Certification of Physician Assistants (NCCPA). The chapters and topics are based on the blueprint provided by the NCCPA regarding the exam content. It can also serve as an appropriate component of review materials for the generalist component of the recertification examination (Physician Assistant National Recertifying Examination [PANRE]).

Best of luck as you begin your career as a physician assistant!
How to Utilize This Textbook

RECOMMENDED

- Read the case presentation.
- From the choices provided, determine which additional components of a medical history are essential to obtain from the case patient in order to formulate an appropriate differential diagnosis list. Remember that none to all of the responses can be correct.
- Review the information provided by the patient and/or his or her legal guardian/accompanying individual. Remember, some type of additional data is going to be supplied for each choice, even if it is a nonessential selection.
- From the choices provided, determine which components of a physical examination are essential in establishing (following) the patient’s working diagnosis from the list of differential diagnoses. Remember that none to all of the responses can be correct.
- Review the information obtained from the physical examination, keeping in mind that some type of finding is going to be supplied for each choice, even if it is a nonessential selection.
- From the choices provided, determine which diagnostic studies are essential to confirm the working diagnosis, should be performed as a baseline study, to follow-up on chronic medical conditions. Again, remember that none to all of the responses could be correct.
- Review the information obtained by the diagnostic studies, keeping in mind that some type of result is going to be supplied for each choice, even if it is a nonessential selection. Laboratory reference ranges are provided.
- Based on this information, select the most likely diagnosis (unless the text specifically instructs you to select more than one) from the choices provided for the patient.
- From the list provided, select the most appropriate components of a treatment plan for the patient, remembering that none to all of the responses could be correct.
- Compare your responses with those provided in the second half of the chapter and review the rationales explaining why the selections were essential versus nonessential (or correct vs incorrect) for all items.
- Remember, you should be able to provide justification to explain why you made your particular selections.
- For additional information on a particular topic, obtain and review the accompanying reference/additional reading materials found at the end of each chapter.

ALTERNATIVE

- Read the case presentation.
- From the choices provided, determine which additional components of a medical history are essential to obtain from the case patient in order to formulate an appropriate differential diagnosis list. Remember that none to all of the responses could be correct.
- Compare responses with those provided in the second half of the chapter and review the rationale for each of the selections causing them to be essential versus nonessential.
- Review the information provided in the patient response section in the first part of the chapter. Remember that regardless of whether the item was essential or nonessential, some type of additional data is going to be supplied for each choice.
- From the choices provided, determine which components of a physical examination are essential in establishing the patient’s working diagnosis from the list of differential diagnoses. Remember that none to all of the responses could be correct.
- Compare responses with those provided in the second portion of the chapter and review the reasons selections were essential versus nonessential for each item.
- Review the information obtained by the physical examination in the first part of the chapter, keeping in mind that some type of finding is going to be supplied for each choice, even if it is a nonessential selection.
- From the choices provided, determine which diagnostic components are essential to confirm the working diagnosis. Remember that none to all of the responses could be correct.
- Compare responses with those provided in the second half of the chapter and review the rationale for each item regardless if essential or nonessential.
- Review the diagnostic results provided in the first portion of the chapter, keeping in mind that a result is going to appear for each choice, regardless of whether it was determined to be essential or not.
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- Based on this information, select the most likely diagnosis (unless the text specifically instructs you to select more than one) from the choices provided for the patient.
- Compare the diagnosis with those provided in the second half of the chapter and review the reasons each selection was correct or incorrect.
- From the list provided in the first part of the chapter, select the most appropriate components of a treatment plan for the patient and explain why. Remember that none to all of the responses could be correct.
- Compare responses with those provided in the second part of the book and review the reasons the selection was correct or incorrect.
- Remember, you should be able to provide justification for why you made your particular selections.
- For additional information on a particular topic, obtain and review the accompanying reference/additional reading materials contained at the end of each chapter.
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