

# What Every Student Should Know about Board-Style Questions

## Anatomy of a Board-Style Question

Board-style questions are *higher-order questions* often requiring two or more inferential “steps” in order to answer the posed question. The vast majority of board items have two main components:

1. **Question Stem**—consisting of two parts: patient vignette + lead-in
  - a. The patient vignette is the clinical scenario
  - b. The lead-in is the last sentence and represents the actual question being asked
2. **Answer Options** (a.k.a., alternatives)—includes one *best* answer plus 3 or more inferior options or distractors

In the generic examples below, note that the distinction between a lower order and a higher order question does not necessarily involve the amount or type of information provided in the vignette, but rather the question posed by the lead-in. Any given vignette could potentially have multiple different lead-ins.

Lower Order	Higher Order
Vignette: A (patient description) has (history findings) and (signs and symptoms). Lead-in: Which of the following is the most likely diagnosis?	Vignette: A (patient description) has (history findings) and (signs and symptoms). Lead-in: Which of the following is the most likely pathological mechanism responsible for this patient's condition?

## How to Approach a Board-Style Question

Successfully tackling a board-style question requires content knowledge, certainly, but also strategy and clinical reasoning skills. By following these simple steps, you can begin to master board-style questions.

1. Though it may seem intuitive to begin at the beginning of the question and read the entire vignette, it is more efficient, especially for long items, to first read the “lead-in”—the actual question—and scan the options. Then, start at the beginning and *read the vignette thoroughly*. Lastly, re-read the lead-in to make sure you understand what’s being asked.
  - a. In contrast, while studying it can be good practice to use a “cover the options” strategy to better test your understanding and recall; however, on the actual exam, reading the lead-in and options first will better prepare you to properly sort the information provided in the clinical scenario.
2. Once you’ve read the lead-in and the options, use clinical reasoning skills to *sort and categorize* the information (history, signs, symptoms, test results) provided in the vignette to create a brief summary or “impression,” referred to as the *problem representation*<sup>1</sup>. This is particularly important for long vignettes because short-term (working) memory is only capable of handling a small number of information items for a brief period. During the exam, it could be useful to jot these things down on the provided scrap paper or white board. Pay particular attention to details that allow you to compare and contrast:
  - a. When possible, summarize using words drawn from paired, opposing descriptors, such as, abrupt v. gradual onset, acute v. chronic, mild v. severe, stable v. unstable, increasing v. decreasing, elevated v. low, multiple v. single involvement, symmetric v. asymmetric, discrete v. continuous, etc.
  - b. Identify pertinent features:
    - i. Defining features: descriptors that are characteristic of the possible options
    - ii. Discriminating features: descriptors that are useful for distinguishing among options
    - iii. Pathognomonic features: though relatively uncommon, these findings (signs, symptoms, test results) are uniquely and distinctively characteristic of a particular diagnosis, i.e., they are “diagnostic” (have high specificity though *not* necessarily high sensitivity)
3. Always make sure you’ve selected the best option and not just the first plausibly correct option you see.
4. Don’t assume the question is trying to trick you. More than likely, if there seems to be an “obvious” choice, it is truly the best option.
5. Remember, all the information you need is in the stem. You may need to make inferences based on that information, but you should not need to make assumptions about other possible case or patient details. If you feel that an important piece of information is missing, then it is *not needed* to answer the question.
6. If you’re stumped, try to identify the underlying scientific concept (e.g., mechanism) that is addressed by the question, eliminate as many inferior options as possible, take your best guess, and move on.

“When picking facts to learn from a long list of tidbits, pick the ones that help distinguish a diagnosis from other likely/related answer choices.”

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<sup>1</sup>Bowen JL. Educational strategies to promote clinical diagnostic reasoning. NEJM 2006;355;21:2217-2225.  
<http://www.nejm.org/doi/full/10.1056/NEJMra054782>

## Board Question Guidelines

As a test-taker it can be helpful to have insights into the “test-maker.” Test item-writers are provided training and guidelines and their submitted test items are then subjected to a rigorous vetting process before being included as a scored item on an actual exam. This process includes content review by experts, proofreading for grammatical and other types of errors, and psychometric testing. Every COMLEX exam includes some number of non-scored “pilot items” that are undergoing psychometric evaluation for future use. Below is a sampling of the guidelines provided to item-writers:

- Questions should assess application of knowledge, not recall of facts.
- Content should be universally accepted as correct, appropriate for 2<sup>nd</sup> year medical students, verifiable with a standard medical publication, and represent the current standard of care (not “cutting edge”).
  - For Level 1 / Step 1, students should be able to answer the question based on their **understanding of basic science**; patient care *experience* should not be required.
- Items should focus on common or potentially catastrophic problems, not atypical presentations or rare conditions (“zebras”).
  - Clinical situations should *not* be geared toward those that would be handled by (sub)specialists.
- Patient vignettes should contain all or some of the following categories of information: presenting problem of patient, history (including duration of signs and symptoms), physical findings, results of diagnostic studies, initial treatment, subsequent findings, etc.
  - The trend is for many of the vignettes to be fairly long (>100 words), which means they take longer to read, provide more data to process, and may present more complicated scenarios.
- Vignettes should avoid including truly misleading information (“red herrings”) but could potentially contain extraneous (unnecessary) information.
- The lead-in should be sufficiently focused to allow the test-taker to pose an answer without looking at the options.
- All answer options should seem plausible to someone who doesn’t fully understand the significance of the information provided or is unable to make the inferences needed to draw the appropriate conclusion.
  - Board questions require selection of a single, **best** option from among less good, but also correct options.

## A Few Reasons Why Board Exams Feel More Daunting than Comprehensive Final Exams

- Breadth of content can lead to feeling overwhelmed by the volume of information that must be learned
- Length of exam is intimidating and can lead to mental fatigue
- Timed exam and question length can pose extra difficulty for slow readers
- “Mixed” subject question blocks eliminates useful contextual information available in course exams
- High exam stakes leads to increased anxiety about consequences of poor performance

Successful preparation involves:

1. Developing and following a structured, comprehensive study plan which covers the topics that will be examined.
2. Completing board-style practice questions in order to:
  - a. Learn content and identify areas of weakness,
  - b. Build test-day endurance by gradually increasing the number of questions completed during “mock exams,”
  - c. Become accustomed to “not knowing what’s coming next” by completing mixed question blocks, and
  - d. Gain confidence in one’s mastery of content and test-taking skills through experience.

“You should almost want to get questions wrong, because then it means you have an opportunity to improve, a potential blind spot to weed out. There are lots of reasons to get questions wrong and you need to approach the explanations as a chance to learn, not a chance to be disappointed.”

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## The “Marathon” Analogy

It is often said that preparing for board exams is like training for a marathon as both involve:

1. Building “mileage” gradually over time. [Mileage = content knowledge]
2. Adjusting to long distances by completing a “long run” every 7-10 days. [Long run = completing simulated exams with high number of questions]
3. Increasing “speed” through interval training and tempo runs. [Speed = information processing time]
4. Incorporating rest and recovery into training regimen. [R&R = breaks from studying]

The marathon analogy helps put things into perspective: studying for boards is a gradual process that cannot and should not be rushed!

## Additional Advice

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