

Teaching Tips

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Teaching Students to Avoid Diagnostic Errors

By introducing common causes of error and teaching techniques to recognize such causes, the likelihood of errors may decrease.

Discuss the effect of heuristics on clinical reasoning

- A heuristic aids problem solving by drawing on past experience or typical cases, but can also add bias or inhibit critical thinking.
- Ask students to reflect on how they use heuristics to make decisions during clinic sessions.

Common heuristics include:

- Anchored
- Availability
- Representativeness

Examples:

- Selective inclusion of symptoms to support decision
- Frequent diagnoses based on time of year
- Presentation is compared to a typical case



Some of these techniques do take time, a luxury busy clinicians rarely have. Rather than attempt multiple strategies each session, just try one at a time.

Utilize a systematic approach to evaluate common medical conditions

One method is the *anatomical approach*: If a patient has pain, ask the student to:

1. describe structures within and surrounding the location of pain, and
2. articulate why each structure is a possible source of pain.

Emphasize the clinical exam as part of the bigger picture

Teach students to consider all data, including lab and imaging results, as part of a comprehensive evaluation rather than relying on a single test for diagnosis.

Think zebras, but remember horses

Common diagnoses do occur commonly. But, by asking students to consider less common diagnoses, they may be more likely to recognize them when they actually exist.



Acknowledge feelings

Despite best intentions, how we feel about patients can impact diagnostic decisions. Teach students to recognize their reactions to a patient. You might say...

"This patient is known to be confrontational. I admit she's angered me in the past, so I need to pause and be sure my interactions with her and my decisions are not influenced by those past encounters."

Admit mistakes

Share past mistakes. Although challenging to admit, the process encourages students to self-reflect and evaluate their own diagnostic skills.

For more detailed information and six additional tips, see reference.

Reference: Trowbridge R. (2008). Twelve Tips for the Avoidance of Diagnostic Errors. *Medical Teacher*, 30: 496-500.