

DIAGNOSTIC DECISION MAKING

Diagnostic decision making refers to the process of evaluating a patient complaint to develop a differential diagnosis, design a diagnostic evaluation, and arrive at a final diagnosis. Hospitalists frequently care for acutely ill patients with undifferentiated symptoms such as shortness of breath or chest pain. Establishing a correct diagnosis in these situations allows for timely therapeutic interventions and eliminates unnecessary diagnostic evaluation. Hospitalists assess disease prevalence, pre-test probability, and post-test probability to make a diagnostic decision. By using efficient and timely diagnostic decision making, hospitalists can positively impact the quality and cost of medical care.

KNOWLEDGE

Hospitalists should be able to:

- Describe the prevalence of common disease states to the local patient population.
- Explain appropriate resources to determine prevalence and incidence of disease states.
- Formulate a pretest probability using initial history, physical examination, and preliminary diagnostic information when available.
- Define and differentiate problem solving strategies, including hypothesis testing and pattern recognition.
- Define and differentiate prevalence, pre-test probability, test characteristics (including sensitivity, specificity, negative predictive value, positive predictive value, likelihood ratios), and post-test probability.
- Describe the concepts that underlie Bayes theorem, and how it is used in diagnostic decision making.
- Describe the relevance of sensitivity and specificity in interpreting diagnostic findings.
- Describe the sensitivity and specificity for common clinical syndromes of key clinical presentations and diagnostic findings.
- Name appropriate sources of information regarding evidence based clinical decision making.
- Describe the factors that account for excessive or indiscriminate testing.

SKILLS

Hospitalists should be able to:

- Obtain a targeted history, eliciting symptoms and data that help refine the diagnostic hypothesis.
- Perform a physical examination to further refine the diagnostic hypothesis.
- Order the indicated tests based on knowledge of disease prevalence, clinical uncertainty, and risk of morbidity and mortality.
- Calculate post-test probabilities of disease using pre-test probabilities and likelihood ratios.

ATTITUDES

Hospitalists should be able to:

- Communicate with patients and families to explain the differential diagnosis and evaluation of the patient's presenting symptoms.
- Communicate with patients and families to explain how testing will change the scope of diagnostic possibilities.
- Determine when sufficient evaluation has occurred, in the absence of diagnostic certainty.
- Communicate with other physicians, trainees and healthcare providers to explain the rationale for use of diagnostic tests.
- Recognize that each test should be preceded by a conscious decision to change or maintain the clinical care or initiate further diagnostic evaluation as indicated, based on the test results.
- Analyze the value of each diagnostic test, especially testing procedures that carry significant patient discomfort or risk.
- Appreciate that all tests have false positive and false negative results, and rigorously scrutinize or repeat the testing when the result is in question.
- Lead, coordinate or participate in the development of clinical care pathways.
- Incorporate the principles of evidenced based medicine, health care costs, and patient preferences and values into each patient's diagnostic evaluation.