Evidence-Based Emergency Care

Pines JM, Carpenter CR, Raja A, et al
Wiley-Blackwell
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As the complexity and sophistication of emergency medicine continue to increase at a dizzying rate, staying current with the medical literature is harder than ever. The practice of emergency medicine has the complicated mission of being comprehensive without missing serious diseases while being mindful of health care costs and resources. Ordering of diagnostic tests is of central importance to this concept. Often we order a variety of diagnostic tests because that is how we were trained, not knowing what the actual test characteristics are.

Evidence-Based Emergency Care: Diagnostic Testing and Clinical Decision Rules (second edition) is a 470-page paperback reference focusing on the performance of specific diagnostic tests and decision instruments in emergency medicine. This book has been considerably expanded from the first edition, with dozens of new topics. The 4 authors begin with a fairly simple and practical review of evidenced-based medicine principles, diagnostic test characteristics, and decision rules. Typically, this is dull reading, but this section nailed it by keeping the discussion concise, simple, and relevant.

This review leads into the meat of the text, which is sections broken down by topic: trauma, cardiology, infectious disease, surgical and abdominal complaints, urology, neurology, and miscellaneous. Within these sections are focused topics (chapters). Each chapter starts with a capsule summary providing relevant take-home points followed by several clinical questions that are subsequently answered with medical literature. For example, “Can laboratory tests be reliably used in the ED [emergency department] to distinguish necrotizing fasciitis from other skin and soft tissue infections?” and “What are the sensitivity and specificity of CT [computed tomography] to rule out necrotizing fasciitis?”

Evidence-Based Emergency Care provides a rational, evidence-based approach to diagnostic testing. The recommendations are balanced with substantiating evidence yet always leave room for clinical judgment. One of the things I enjoyed most about this book was being able to examine actual sensitivities, specificities, and likelihood ratios of various decision instruments and diagnostic tests that I use daily. It was also enlightening to learn several diagnostic strategies and decision instruments that I previously had not used.

I suspect that many of the more seasoned (older) emergency physicians already have a fairly rigid practice pattern and will be less likely to modify their practice in accordance with this book. For younger clinicians (or more open-minded veteran emergency physicians), Evidence-Based Emergency Care can provide a guidepost to help refine a general approach to common ED problems. Additionally, this material is presented in an ideal format for emergency medicine resident education. I certainly feel better equipped to discuss test performance with our residents. After finishing this review, I’ve been keeping this text in my bag during shifts to pull out during relevant clinical situations and discuss with the residents. I think it would be interesting to consider an electronic format or an application for a Smartphone platform.

I suspect that Dr. Pines and colleagues will have limitless avenues to expand the breadth of these works and (who knows?) maybe create an app for that.

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