

## EVIDENCE BASED MEDICINE

Evidence based medicine (EBM) uses a systematic approach to medical decision making and patient care, combining the highest-available level of scientific evidence with practitioner clinical judgment and patient values and preferences. For hospitalists facing multiple critical medical choices daily, an EBM approach helps clinicians collaborate with patients to make the best possible decisions for their inpatient care. Hospitalists use study evidence to answer clinical questions and to develop quality improvement projects, including protocols and clinical pathways that can improve the efficiency, quality, and safety of care within their organizations. Hospitalists further provide leadership in educational efforts that foster a rigorous evidence based approach among medical trainees, hospital staff, and physician colleagues.

### KNOWLEDGE

*Hospitalists should be able to:*

- Describe the necessary steps required to ask and answer clinical questions using standardized EBM methods.
- Describe the four core components of framing clinical questions using an EBM approach.
- Identify peer-reviewed databases and other resources to search for study evidence to answer clinical and systems questions.
- Differentiate between filtered and non-filtered resources, list examples of each, and describe the advantages and disadvantages of each.
- Describe major study types including therapy, diagnosis, prognosis, harm, meta-analysis (systematic review), economic analysis, and decision analysis.
- Describe and differentiate the important strengths and weaknesses of the following study designs: randomized controlled trials, meta-analyses, cohort studies, case-control studies, case series, cost-effectiveness studies, and clinical decision analysis studies.
- Explain the core components and core statistical concepts used in therapy studies, including relative risk, Relative Risk Reduction (RRR), Absolute Risk Reduction (ARR), Number Needed to Treat (NNT) and diagnosis studies, which may include sensitivity, specificity, and likelihood ratio.

### SKILLS

*Hospitalists should be able to:*

- Formulate a well-designed clinical question using the Patient Intervention Comparison Outcome (PICO) approach.
- Identify the most appropriate study design(s) for the specific clinical or systems based question at hand.
- Search filtered and non-filtered information resources efficiently to find answers to clinical questions.
- Critically appraise the validity of individual study methodology and reporting.
- Evaluate and interpret study results, including useful point estimates and precision analysis.
- Apply relevant results of validated studies to individual patient care or systems improvement projects.

### ATTITUDES

*Hospitalists should be able to:*

- Seek the best available evidence to support clinical decisions and process improvements at the individual and institutional level.
- Appreciate that filtered resources allow greater efficiency than non-filtered resources in searching for answers to clinical and systems questions and locating high-quality evidence.
- Reflect upon individual practice patterns to identify new questions.
- Develop a process for the ongoing incorporation of new information into existing clinical practice and system improvement projects.
- Serve as a role model for evidence based point-of-care practice.
- Influence and support other clinicians to develop and utilize EBM skills to improve clinical practice and systems or processes within practice.
- Lead, coordinate or participate in systems interventions to improve the quality, efficiency and standardization of care based on EBM review of the literature.
- Advocate for the institution to provide or facilitate access to high quality point-of-care EBM information resources.