

## **Teach Evidence-Based Medicine (EBM)**

Compliments of OUCOM/CORE Faculty Development

- I. Remind learners what EBM is and its role in medicine:  
"EBM is the integration of *best research evidence* with *clinical expertise* and *patient values*...When these three elements are integrated, clinicians and patients form a diagnostic and therapeutic alliance which optimizes clinical outcomes and quality of life."
- "By *best research evidence* we mean clinically relevant research, often from the basic sciences of medicine, but especially from patient-centered clinical research into the accuracy and precision of diagnostic tests (including the clinical examination), the power of prognostic markers, and the efficacy and safety of therapeutic, rehabilitative, and preventive regimens. New evidence from clinical research both invalidates previously accepted diagnostic tests and treatments and replaces them with new ones that are more powerful, more accurate, more efficacious, and safer."
  - "By *clinical expertise* we mean the ability to use our clinical skills and past experience to rapidly identify each patient's unique health state and diagnosis, their individual risks and benefits of potential interventions, and their personal values and expectations."
  - "By *patient values* we mean the unique preferences, concerns, and expectations each patient brings to a clinical encounter and which must be integrated into clinical decisions if they are to serve the patient."
- (Sackett, D. L., Straus, S. E., Richardson, W. S., Rosenberg, W., & Haynes, R. B. (2000). *Evidence-based medicine: how to practice and teach EBM* (2nd ed.). Edinburgh: Churchill Livingstone)
- II. Teach learners the 5 steps of EBM according to Sackett, D. L., Straus, S. E., Richardson, W. S., Rosenberg, W., & Haynes, R. B. (2000). *Evidence-based medicine: how to practice and teach EBM* (2nd ed.). Edinburgh: Churchill Livingstone:
1. CONVERT the need for information into answerable questions.
  2. TRACK DOWN the best evidence with which to answer the questions.
  3. CRITICALLY APPRAISE the evidence for its validity, impact, and applicability.
  4. INTEGRATE the critical appraisal with our clinical expertise and with our patient's unique biology, values, and circumstances.
  5. EVALUATE our effectiveness and efficiency in executing steps 1-4 and seek ways to improve them both for next time.
- III. Remind learners about EBM's application to clinical teaching:
- Demonstrating to trainees how you are incorporating EBM in patient care is certainly part of the process of teaching EBM.

- Examples of educational programs wherein EBM can be incorporated are: morning report, journal club, teaching rounds, noon lectures, and others.
  - For an example of EBM applied to morning report, read the article – Reilly, B. & Lemon, M. (1997). Evidence-based morning report: a popular new format in a large teaching hospital. *American Journal of Medicine*, 103(5):419-26.
  - For an example of EBM applied to rounds, read the article – Schneeweiss, R. (1997). Morning rounds and the search for evidence-based answers to clinical questions. *Journal of the American Board of Family Practice*, 10(4):298-300.

IV. Recommend EBM resources to learners:

Sackett, D. L., Straus, S. E., Richardson, W. S., Rosenberg, W., & Haynes, R. B. (2000). *Evidence-based medicine: how to practice and teach EBM* (2nd ed.). Edinburgh: Churchill Livingstone:

Check [www.oucom.ohiou.edu/ebm](http://www.oucom.ohiou.edu/ebm) (site with EBM information and links)

Check [www.cebm.utoronto.ca/](http://www.cebm.utoronto.ca/) (develop, disseminate, and evaluate resources that can be used to practise and teach EBM for undergraduate, postgraduate and continuing education for health care professionals from a variety of clinical disciplines).