Evidence-based medicine for developing countries project

A guide for the global health residents before embarking on your research/project

Suggested reading and resources:
1. Is Evidence-Based Medicine Relevant to the Developing World?
   http://medicine.plosjournals.org/archive/1549-1676/2/5/pdf/10.1371_journal.pmed.0020107-S.pdf
2. The need and means for evidence-based medicine in developing countries
   http://ebm.bmj.com/cgi/content/full/5/4/100
3. Center for Evidence-based Medicine. EBM in developing countries.
   http://www.cebm.utoronto.ca/syllabi/devl/
4. Getting evidence into practice in developing countries.
   http://intqhc.oxfordjournals.org/cgi/reprint/17/5/447
5. Pitt Supercourse http://www.pitt.edu/~super1/

Barriers to practice evidence-based medicine in developing countries:
1. resource limitation: unreliable drug supply, inadequate staffing, poor laboratory support, high patient volume
2. Lack of pharmaceutical regulation and economic incentives: the influence of pharmaceutical companies in developing countries is even more profound. There may be overuse of diagnostic tests and ineffective or harmful treatments. Dispensing doctors and ownership of equipment or hospital facilities are commonly coupled with influence by drug companies and foreign “experts.”
3. medical questions are commonly so complex as to make the application of best practice obtained from clinical trials a rarity rather than the norm
4. information available to health professionals in less-developed countries is outdated and incomplete; there is insufficient evidence-based content that is cost-comparative and directly applicable to resource-poor settings
5. lack of investment in biomedical research in less-developed countries, in the dissemination and organization of research findings, and in adapting source information into end-user products that are easily accessible, readable, reliable, and relevant; research done in less-developed countries is under-represented in the major databases (MEDLINE and EMBASE)
6. poor access to computers and electronic searches; capacity for individual practitioners to undertake systematic reviews is greatly reduced
7. costs and benefits of introducing EBM into health-care systems of such countries
application of available evidence to the population at hand may be difficult. Patients from less-developed countries may be different from those included in published studies and so results may not be generalizable to a particular patient population.

Why EBM in developing countries is necessary and possible:
1. Financial resources are limited, so the provision of effective health care is even more vital. Individual patient bears the cost of health care so if we provide care that is ineffective, then we are responsible for exacerbating patients’ deprivation and poverty. Put it another way, increasing evidence based clinical care in middle and low income countries can have substantive health gains.
2. Expert opinion and personal experience are not sufficient to produce high-quality care for people in the less-developed world. We need to address the existing barriers rather than to advocate second-best options. Doctors in less-developed countries have learnt to tolerate a great deal of uncertainty in their daily practice and rely on poorly generalizable evidence. This needs to change!
3. The Cochrane Collaboration is actively encouraging participation of reviewers from poorer countries. There are Cochrane Centres in Brasil, China and South Africa. The number of systematic reviews relevant to developing countries is increasing. The WHO and World Bank are making investments in EBM and evidence-based policy.

Ideas for your EBM in DC project:
1. How to disseminate and implement EBM at your site? Consider elements of the history and the physical exam as “diagnostic tests.” Use JAMA’s Rational Clinical Exam, which publishes the sensitivity and specificity of history and PE findings to help you make your diagnosis. You may not need a test to make the diagnosis if the likelihood ratio for a certain element of the history is very high and your pre-test probably is high. Consider making copies of JAMA’s Rational Clinical Exam series available to all health care providers in the clinic and hospital and teach others how to use it. (see the framework below)
2. Embark on your own systematic review (usually takes 2 years or more from search to publication)
3. Create/formalize a series of clinical questions that will form a foundation for future research and/or Cochrane review
4. Focus on clinical areas that have not been previously addressed (as most of the reviews to date are on maternal/child health and infectious diseases) such as hypertension management, diabetes, congestive heart failure, nonischemic cardiomyopathy, etc.

Framework for dissemination and implementation of evidence based medicine

Level 1: Awareness raising

Purpose

• Increase awareness about effective interventions and the potential gains from using research based knowledge in policy and practice
Activities

- Produce and publish relevant systematic reviews in a variety of professional and consumer publications
- Communicate potential relevance of systematic reviews to current practice, with examples through commentaries

Level 2: Targeting groups and individuals responsible for implementation

Purpose

• Identify target groups and individuals with specific roles in implementing research based knowledge in practice

Activities

- Identify target groups, such as health ministry policy makers, donor aid advisers, professional groups, managers with responsibility for clinical and public health policy
- Communicate results from systematic reviews and their implications for practice face to face and with short summaries
- Give examples of how others have used systematic reviews combined with audit to change practice for the better in their own hospital or practice.
- Make people aware of the evidence base for effective practice change

Level 3: Pilot and innovation projects

Purpose

• Support individuals in specific pilot projects to evaluate potential ways to implement change in practices that seem to run contrary to current available evidence

Activities

- Identify collaborators engaged in or interested in developing pilot projects to implement research findings and where they perceive there is an opportunity to make care more evidence based
• Help them in to stimulate change (such as by audit and feedback or by means of opinion leaders) to practices for which there is reliable evidence from systematic reviews of effectiveness
• Ensure collaborators monitor change in policy and practice

Level 4: National or institutional policies for evidence based decisions

Purpose

• Encourage national governments, institutions, or donors to commit to evidence based approaches, with effective implementation and monitoring systems

Activities

• Work with government and donors in establishing or strengthening health technology assessment offices or similar bodies at national level
• Encourage national policies for evidence based guidelines, with management systems to ensure that guidelines are implemented and monitored
• Help institutions to train doctors, nurses, and other health staff to deliver training in evidence based approaches

http://www.bmj.com/cgi/content/full/329/7473/1036