Evidence-Based Medicine Limitations of EBM

Component 2 / Unit 5

Limitations of EBM

- EBM is a "system of belief that requires prospectively collected objective evidence of everything except its own utility" (Bleck, 2000)
- There is no evidence that EBM is "evidence-based," i.e., leads to better care (Charlton, 1998)
- It may be of limited value for individual patients
  - Patients are often excluded from RCTs when they have the very conditions for whom the results will be applied (Heiat, 2002; McAlister, 2003)

Categorization of criticisms (Cohen, 2004)

- Based on empiricism, which is inadequate
- Definition is narrow and excludes things important to clinicians
- Itself not evidence-based
- Usefulness is limited in applying to patients
- Threatens autonomy of clinician-patient relationship

Epiricism in science (Harari, 2001)

- Empiricism is belief that scientific observations can be made independent of biases of observer
- Empirical observation (i.e., RCTs and observational studies) is only one form of scientific observation; others include pathophysiologic reasoning, qualitative analysis, etc.
- RCTs eliminate some forms of bias but may introduce others, e.g., only measurable things are measured

EBM threatens autonomy of clinician-patient relationship

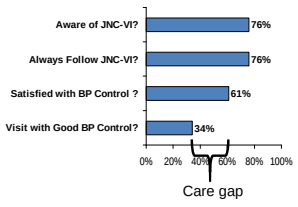
- "Best" evidence may not apply to all patients (Hill, 2000)
- Readers of scientific literature do not begin with a "blank slate" and bring biases based on their previous views, especially in areas such as alternative medicine (Kaptchuk, 2003)

Other challenges to evidence-based approach (Larson, 1999)

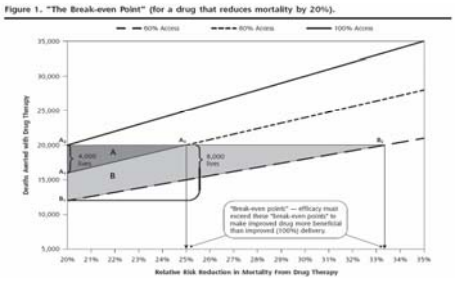
- Costs often not considered
- Individual preference and variability ignored
- Regional differences in practice
- Marketing and other factors driving patient preferences, including desire for alternative medicine
- Selective use of evidence by clinicians, patients, payors, and others

From EBM to evidence-based practice?

- Many advocate moving towards "evidence-based practice" (Dawes, 2005), which involves focusing on measuring and improving quality (Shojania, 2005)
- Closing the "care gap?" Example from hypertension (Oliveria, 2002; courtesy D. Dorr)



Benefits of better treatment efficacy vs. access to it (Woolf, 2005)



So where do we go with EBM?

- EBM must evolve to recognize its place in health care (Haynes, 2002)
- EBM has had mixed record success (Timmermans, 2005)
- My view
  - One cannot be too dogmatic about anything
  - But we must continue to have "enlightened skepticism"
- Yours?