Overview of Meta-analysis

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Meta-analysis
Quantitative approach for systematically combining results of previous research to arrive at conclusions about the body of research

Need of Evidence Based Medicine
- Our daily need of valid evidence for diagnosis, therapy, prognosis, prevention
- Textbooks are frequently outdated
- Experts are often wrong
- Explosion in medical publications and journals
- Didactic CME and seminar not able to change the practice
EBM and Health Policy

- Health system
- EBM
- Health Policy
- Scarcity of resources

5 A’s of EBM

- Asking an answerable question (about prevention, diagnosis, prognosis, therapy, causation, etc) based on clinical need
- Acquiring the best evidence with which to answer that question
- Appraising critically that evidence for its validity (closeness to the "truth"), impact (size of the effect), and applicability (usefulness in our clinical practice)
- Applying the evidence, our clinical expertise and our patient’s unique biology, values and circumstances in an integrated manner
- Assessing the outcomes for our patients (or our effectiveness and efficiency in executing the 4 ‘A’s) and seeking ways to improve them both for next time

Transformation of evidence to practice

- Evidence
- Guideline
- Practice
- National Policy

Meta-Analysis an overview - Dr. Saikat Das
• Every decision will have to be based on a systematic appraisal of the best evidence available in the context of the prevailing values & resources available

Components of Meta-analysis

- Quantitative: numbers
- Systematic: methodical
- Combining: putting together
- Previous research
- Conclusion

Steps of Meta-analysis

- Identify studies
- Determine eligibility of studies
  - Inclusion criteria
  - Exclusion criteria
- Extract Data from the studies
- Analysis
Heterogeneity approach

- Fixed effect model
- Random effect model

References

http://www.cochrane.org/resources/handbook/index.htm
http://www.cochrane-net.org/openlearning/
The Revman user guide.
http://www.ccims.net/RevMan/documentation.htm