

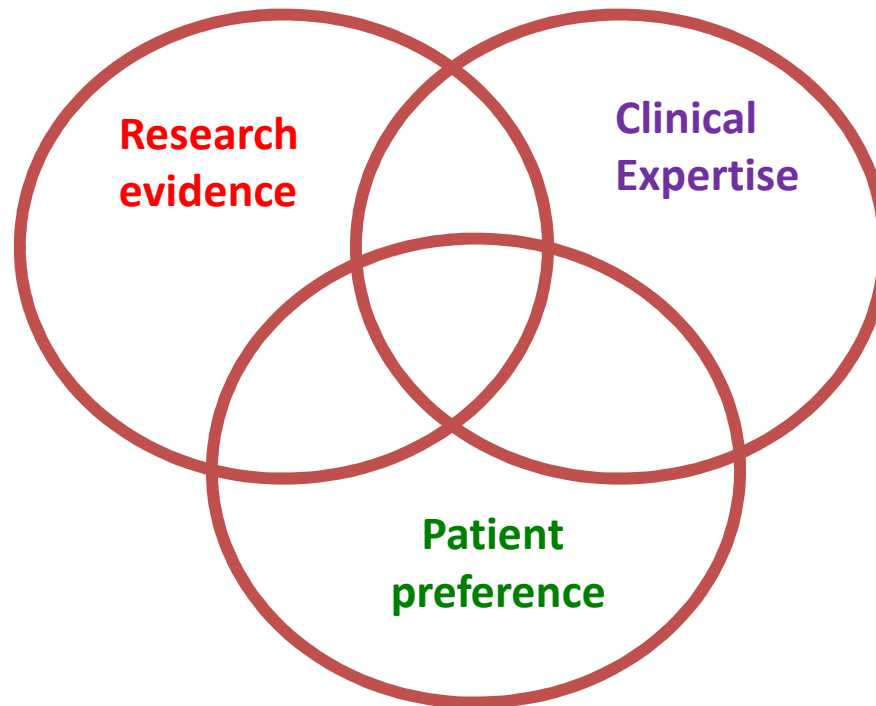
Overview of Meta-analysis

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Meta-analysis

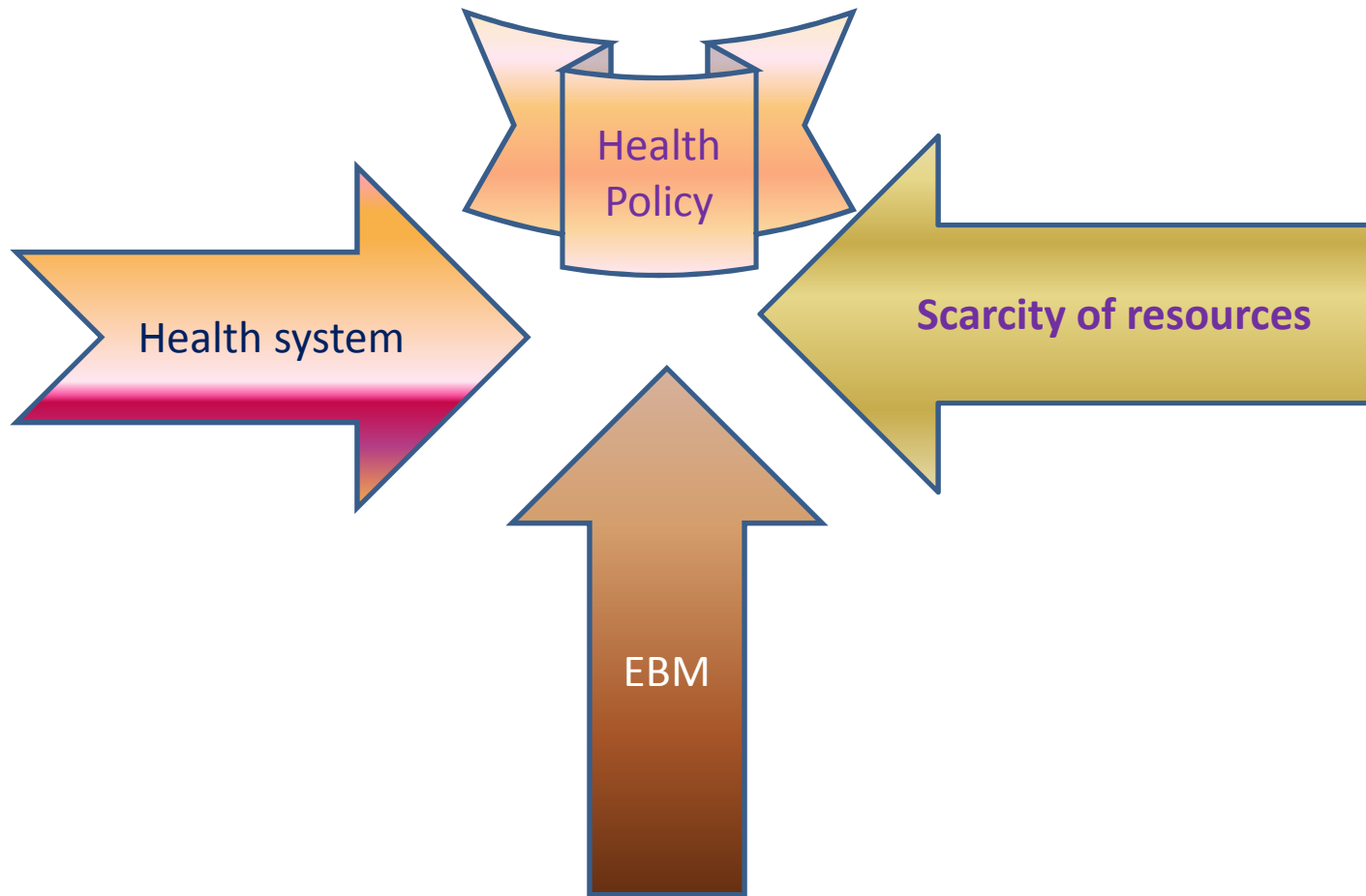
Quantitative approach for systematically combining results of previous research to arrive at conclusions about the body of research



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- Textbooks are frequently outdated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

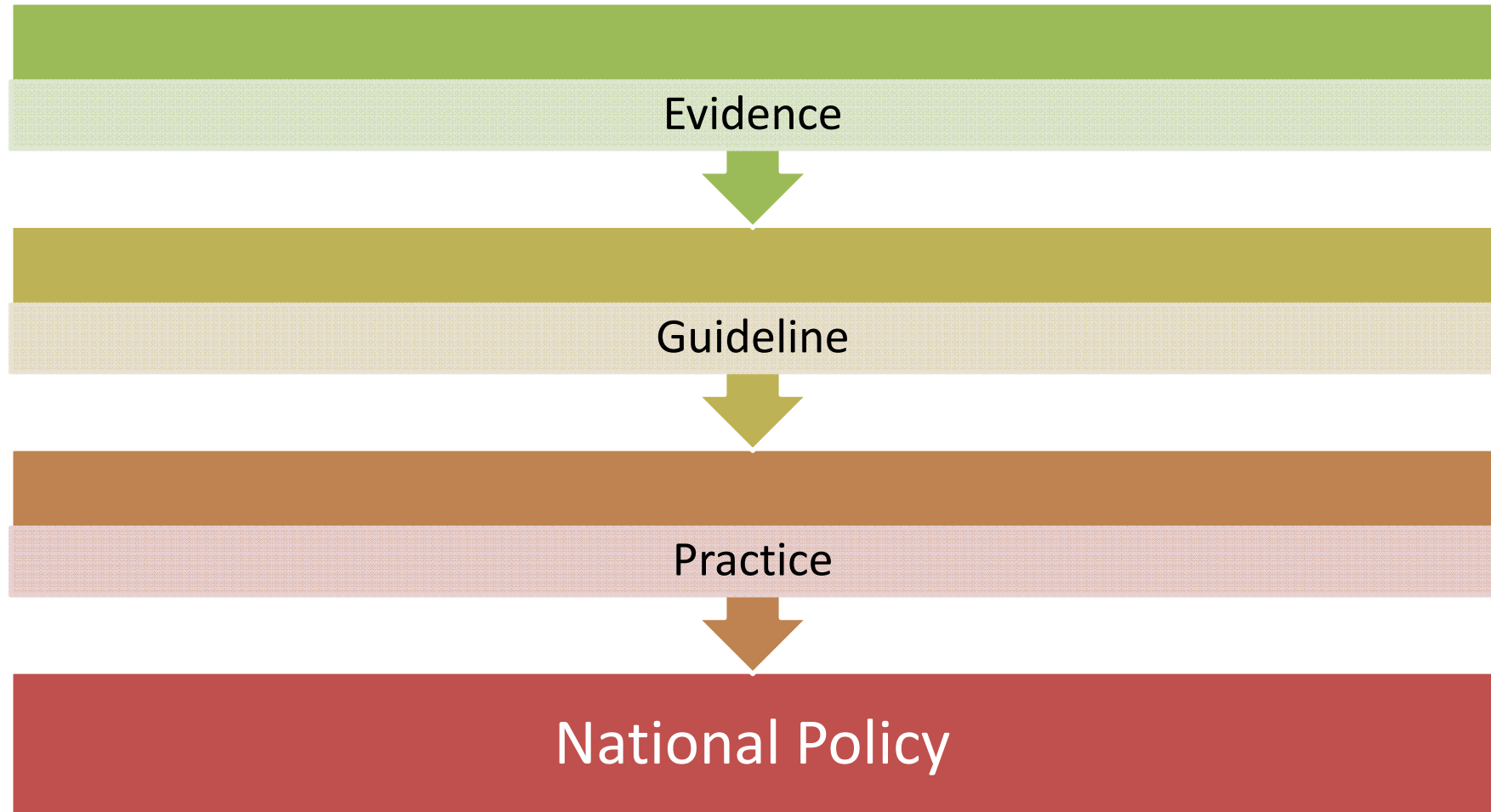
EBM and Health Policy



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**
- **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



- 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>