Guidance for Evidence-based Practice Centers conducting comparative effectiveness reviews

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October 26, 2009

Guide chapters

- **Principles**
- **Topic nomination development**
- Searching for relevant studies
- *Avoiding bias in selecting studies*
- *Using previous reviews in SRs*
- Nonrandomized studies
- **Adverse effects**
- **Grading a body of evidence**
- Applicability
- Pooling
- *Updating*

Bold published
Blue submitted
***Italics* draft completed**

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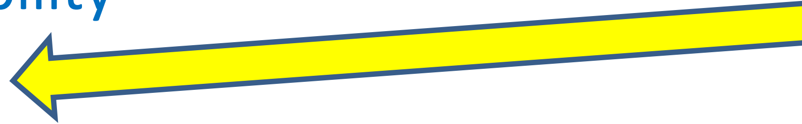

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Pooling topics

- **When to pool and when not to**
  - **Clinical diversity**
  - **Methodological diversity**
  - **Statistical heterogeneity**

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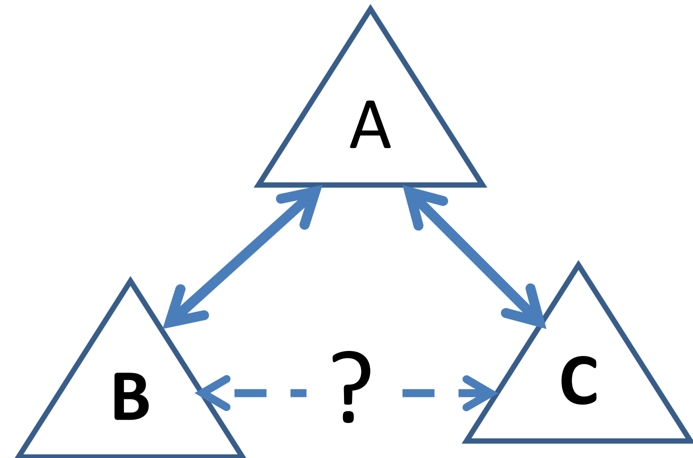

Pooling topics

- When to pool and when not to
  - Clinical diversity
  - Methodological diversity
  - Statistical heterogeneity
- Indirect comparisons
- **Fixed vs. random effects**
- **Rare events**
- **Using different kinds of evidence in a meta-analysis**

Focus on

- Transparency for the user
- Understanding variability in conclusions
- Reducing the risk of “mischief”

AHRQ Guidance: The underlying principles

mh19

1. Approach the evidence from a clinical, patient-centered perspective.
2. Fully explore the clinical logic underlying the rationale for a service
3. Cast a broad net with respect to evidence
4. Present benefits and harms in a consistent way that is useful for decision-makers

Slide 8

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mh19 for getting the questions right and responsive to the needs of d-ms
helfand, 10/25/2009

The best evidence

mh20

- addresses <u>health outcomes</u> and not just intermediate outcomes
- is from “real” patients
- considers harms and benefits
- fits the circumstances
- comes from well-designed, well-conducted studies

Slide 9

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mh20 principles about what is the best evdience
helfand, 10/25/2009

Selecting questions for the *Guide*

- 1996 Underlying Principles for EPC program
- 2002 Oregon Health Plan reviews
- 2003 Barcelona meeting—methods needs
- 2005 *Annals supplement*
- **2006 Review AHRQ Evidence reports(Atkins)**
- 2006 First AHRQ CERs

Conclusions

- Variability in terminology, inclusion criteria, quality assessment and synthesis
- Rationale for including nonrandomized studies not consistent or transparent
- Need to improve use of quality assessment for effectiveness and harms

Atkins

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Approach to developing guidance

- When there is an evidence base, develop evidence-based standards
- When there isn't, use structural approaches and support methodologic research

Examples of structural approaches

- General
  - High standards regarding conflicts of interest
- Getting the questions right
  - Technical experts help in topic refinement*
  - Public review of key questions*
  - Publish the protocol
- Searching
  - Centralize searching of certain databases*
- Determining eligibility of studies
  - Dual review
  - Oversight by SRC and AHRQ*
- Reporting
  - Search for appropriate use of certain terms
  - Use reporting standards
- Extensive, *external* peer review*
  - Publish comments and responses
  - Independent editorial oversight process
- Products are publicly available, and free, without a subscription

Timeline for *EPC Guide*

2005

Using evidence reports: progress and challenges in evidence-based decision making. **Health Aff**. Jan 2005;24:123-127.

2006

Prepared preliminary table of contents

Assembled a library of methodological articles relevant to each potential topic.

Invited background papers

Timeline for *EPC Guide*

2007

- Workgroups met
- Draft guidance in October
- Public comment

2008

- Revised manuscripts
- Peer review
- New workgroups

2009

- Appointment of 3 EPCs to lead methods research

Center Qualifications

- Can assist in constructing an evidence-based process using systematic reviews
- High standards regarding conflicts
- Experience producing reports that have been used to make clinical recommendations, coverage decisions, and policy
- Contract mechanism, timelines, budgets

Center Qualifications

- Able to produce different types of reports, depending on the purpose

Relationship to other Guidance

- USPSTF Methods (2001)
  - *Robust quality criteria for randomized and observational epidemiological study designs*
  - *Strength of evidence vs. magnitude of effect*
- Cochrane Handbook (2007)
  - *Heterogeneity*
  - *Risk of bias vs. study limitations*
- AMSTAR, PRISMA
- GRADE (ongoing)
  - *Minimum set of domains for a body of evidence*
  - *Different concept of quality of evidence*

Highlights

- Hierarchy emphasizing *effectiveness* and *meaningful comparisons*, incorporating IOM principles
- Strong rationale for use of observational studies and pooling methods for adverse events
- Guidance on indirect comparisons
- Better grading and reporting

Gaps

- No guidance on several important topics
- Guidance but *no training, textbook (with problem sets), certification, or recertification*
- *G*aps in the evidence base for conducting SRs (methodological research)

What we’re working on now..

- **Methods research**
  - Defining the role of different types of evidence in decision-making.
  - incorporating individual differences into methods for systematic reviews
  - Limitations of individual studies
  - Going from evidence to decisions about future research
- **Improving the guidance development process**
- **Better editorial processes**

What are we after?

- Systematic reviews of effectiveness should address questions that reflect clinicians’ and patients’ concerns.
- Decision-makers should begin to wrestle with the idea of what is good evidence.