PCORI Methodology Standards: Academic Curriculum

Overview of Modules

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2	Learning Objectives		
3	Step 1: Choose and Define a Question for a Systematic Review	9	Putting it All Together: Appraising a Systematic Review
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5	Step 3: Search the Literature		
6	Step 4: Extract Data		
7	Step 5: Evaluate Study Quality and Applicability	I	Interview between Dr. Eric Bass and Ellen Tambor: engaging stakeholders in systematic reviews and comparative effectiveness research

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What Is a Systematic Review?

Define question

Establish eligibility criteria

Search literature and review citations

Extract data

Evaluate study quality and applicability

Summarize and synthesize
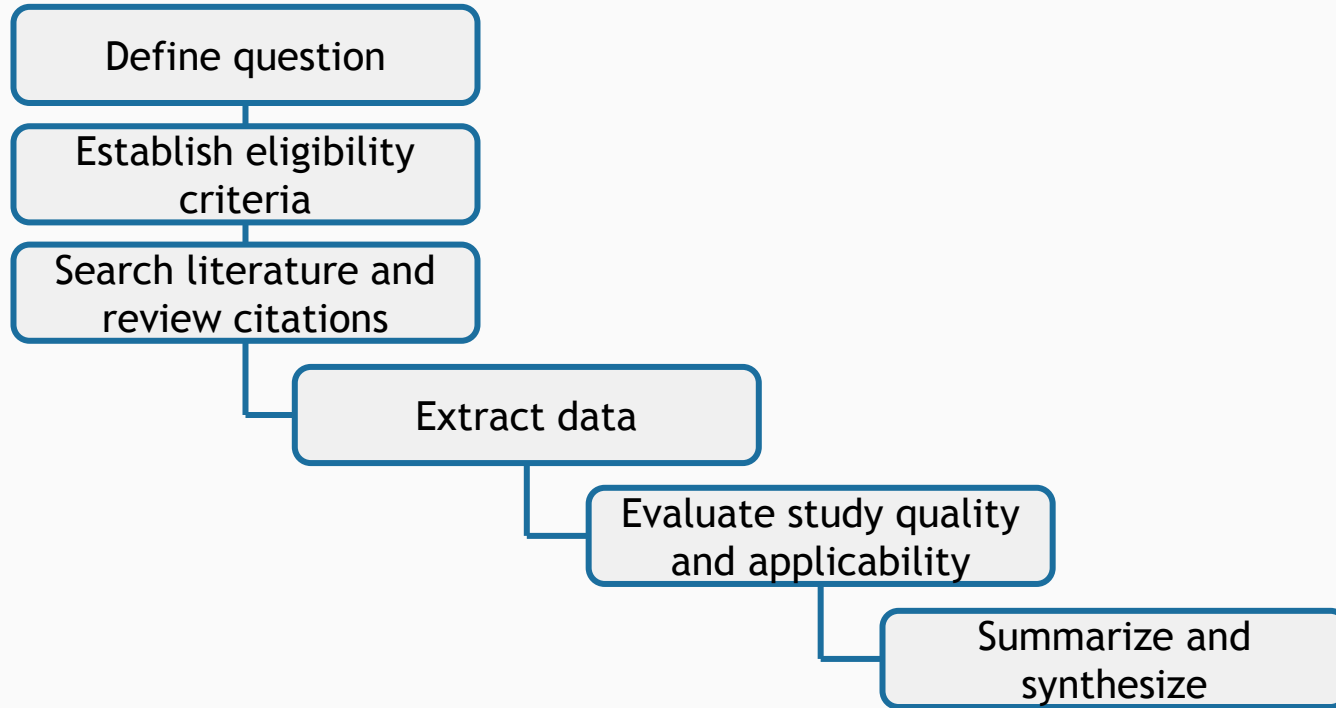
# Who Needs to Know About Standards for Systematic Reviews?

- Anyone who wants to use a systematic review of evidence to guide decisions about clinical practice, health education, medical research, or health policy—e.g.:
  - ▶ Clinicians
  - ▶ Educators
  - ▶ Investigators
  - ▶ Policy makers

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For Whom Are These Modules Designed?

■ Mainly for those who want to perform a systematic review as part of a program of patient-centered research

■ Also for:
- ▶ New systematic reviewers
- ▶ Readers and reviewers of systematic reviews
- ▶ PCORI grant reviewers

What Is an Appropriate Source of Up-to-Date Standards for Systematic Reviews?

- Evidence-Based Practice Center Program (AHRQ)

- The Cochrane Collaboration

- Institute of Medicine (U.S.). (2011). *Finding What Works in Health Care: Standards for Systematic Reviews*. Washington, D.C.: National Academies Press.

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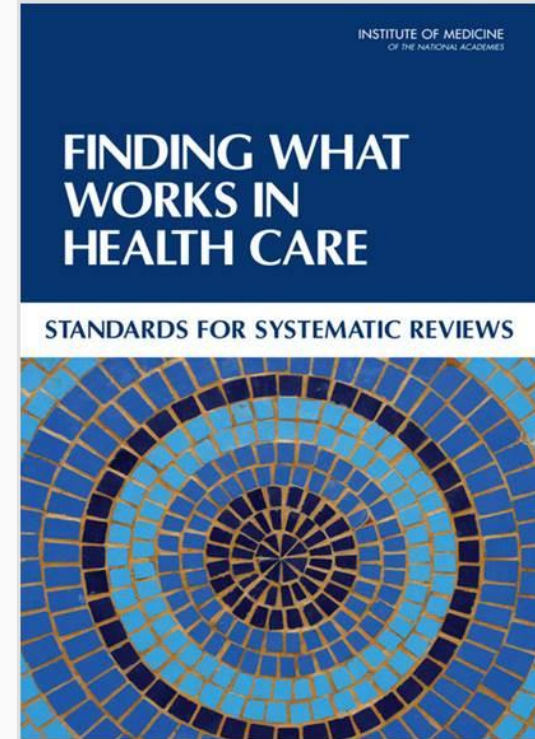
What Are the Institute of Medicine (IOM) Standards for Systematic Reviews?

Initiating a systematic review	Finding and assessing studies	Synthesizing evidence	Reporting
▪ Establish team with appropriate expertise ▪ Ensure user and stakeholder input ▪ Manage bias and conflict of interest	▪ Conduct and document comprehensive search ▪ Screen and select studies ▪ Consider biased reporting ▪ Manage data collection ▪ Critically appraise each study	▪ Use prespecified method to evaluate evidence ▪ Conduct qualitative and quantitative synthesis	▪ Use structured format and peer review ▪ Ensure free public access

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Is PCORI Flexible or Rigid About Application of the IOM Standards?

- PCORI is flexible about some standards:
  - ▶ Searches for studies reported in non-English languages may be appropriate for some topics but are not routinely recommended
  - ▶ Dual screening and data abstraction are desirable, but fact-checking may be sufficient, and quality control procedures are more important than dual review per se
  - ▶ Independent librarian peer review of the search strategy is not required if internal review is done by experienced researchers

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