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## Quiz 1 - Evidence Synthesis Methods

**Evidence Synthesis** - Determining what has been discovered and what has yet to be discovered by gathering and examining existing information about a specific topic.

### Helps with ....

- (1) Managing information overload
- (2) Identifying research gaps
- (3) Eliminating irrelevant/poorly designed studies
- (4) Examining variations by combining results
- (5) Creating more compelling evidence by compiling the findings of multiple small studies.

### Types of Evidence Synthesis -

Time and extensive research needed: Narrative Review, Systematic Review, Meta-Analysis

Short on time, use these: Rapid-Review, Scoping Review, Evidence Mapping

### Types of Questions for Systematic Reviews...

- (1) Effectiveness of Interventions
- (2) Etiology / Risks
- (3) Diagnosis
- (4) Prognosis / Predictions
- (5) Methodological
- (6) Qualitative

### Steps of a Systematic Review -

1. Prepare Topic: Question should include [Population, Intervention, Comparators, Outcome, Design]
2. Search for Studies: Be wary of publication or reporting biased; ensure the study is relevant and meets your inclusion criteria
3. Extract Data: organize and categorize information using data extraction; inconsistencies may be found
4. Analyze and Synthesize: Describe the study's characteristics [quality, rigor, scope, inconsistencies]
5. Share your Findings: define the steps you took and your results. Levels of detail differ from different types of reports.

### Systematic Review Limitations -

Sufficient research on your topic and question must already exist.

[ Takes lots of time

Avoid systematic reviews if your question is philosophical or historical.

42 - 58 wks ]

### Team Needed -

Project Lead/Method Expert: 2 people may fill this role; Has experience conducting systematic reviews

Statistician/Quantitative Expert: Analyzes the data collected; May be the Method Expert

Librarian: Searches databases and determines which databases/sources to use; May be the Method Expert

Clinical/Subject Expert: Expert on the topic; helps frame research questions and interpret findings

Research Assistants: Handle data extraction, literature screening, data analysis, risk of bias assessments

Stakeholders: Community members interested in your research topic; help form a research question

Data Visualization Experts: Arrange data in a simple, clear format

Dissemination Partners: 'Advertise' your research

**Cost of a Systematic Review:** \$250,000 - \$500,000 \*lower price by recruiting volunteers or interns