Evidence map of studies evaluating methods for conducting, interpreting, and reporting overviews of systematic reviews – Stage I

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We have no actual or potential conflicts of interest in relation to this presentation.
Background

- Overviews of systematic reviews attempt to retrieve and summarise the results of reviews
- Steps for undertaking an overview mirror those of a systematic review, but with unique considerations
- Methods for conducting, interpreting, and reporting overviews of reviews are in their infancy
- To date, there has been no review mapping the evidence underpinning the methods used in overviews
Why do we need to evaluate methods?

- Conclusions of overviews rest on the methods used
- The choice of methods has implications in terms of bias, efficiency, usability, and resource use
- Evaluation of methods allow us to make informed choices about the most appropriate methods
Objectives

- Develop and populate a framework of methods that have, or may be used in conducting, interpreting, and reporting overviews (Stage I)
- Create an evidence map of studies that have evaluated these methods (Stage II)
- Identify and describe unique methodological challenges of overviews
Stages of the research: Stage I

- **Stage I**
  - Develop and populate the framework

- **Eligibility criteria**
  - Studies that describe methods used in overviews

- **Sources**
  - Studies examining a cohort or cross section of overviews
    - Editorial
    - Expert opinion
    - Guidance documents

- **Search Methods**
  - Methods collections
  - Reference checking
  - Citation searching
  - Expert consultation
  - Methods papers identified from overviews search strategy

- **Analysis and Output**
  - Qualitative analysis to identify and describe unique methods; and
  - Populate the framework with identified methods

**Stage II**
Stages of the research: Stage II

- **Stage II** Populate the evidence map
- **Eligibility criteria**
  - Studies evaluating methods used in overviews
- **Sources**
  - Systematic reviews of studies evaluating methods
  - Methods studies evaluating methods
- **Search methods**
  - Methods collections
  - Reference checking
  - Citation searching
  - Expert consultation
  - Methods papers identified from overviews
- **Analysis and Output**
  - Populate the evidence map with evaluations of methods and identify gaps

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Framework Stage I

A framework was piloted

The coding framework comprised codes that represent the steps in conducting an overview

- Methods
- Description, rationale and considerations

Additional codes were generated inductively from three articles
Results - Stage I

- Preliminary results for stage I presented here
Records identified through database searching (n = 1267)

Additional records identified through other sources (n = 76)

Records after duplicates removed (n = 1167)

Records screened (n = 1167)

Excluded (n = 1126)
- Studies not examining methods used in a cross-section or cohort of overviews (n = 1104)
- Network meta-analysis (n = 11)
- Non-English (n = 11)

Included (n = 41)
- Studies that describe methods used in overviews
Search methods for overviews

- Methods for identifying studies to be included in the overview
- The approach to searching may largely be the same as in systematic reviews
- However, there may be additional considerations specific to overviews
Search Methods ➡️ Select sources

- **Limit to systematic review-specific sources**
  - Bibliographic systematic review databases (e.g. Cochrane, Campbell, Epistemonikos, DARE, ...)
  - Prospective systematic review registers (e.g. PROSPERO)

- **Limit to general bibliographic sources**
  - (e.g. EMBASE, PubMed, CINAHL, PsycINFO, ...)

- **Use both systematic review-specific sources and general bibliographic sources**
Search Methods → Select sources → Limit to systematic review-specific

Options

- Bibliographic systematic review databases
- Prospective systematic review registers

Description, rationale and considerations

- Description: Inclusion of sources specific to systematic reviews, such as bibliographic databases, or prospective review registers
- Rationale and considerations: May increase the efficiency of production of the overview, and the coverage
Search Methods ➔ Select sources

**Methods**
- Limit to systematic review-specific sources
- Limit to general bibliographic sources
- Use both systematic review-specific sources and general bibliographic sources

**Options**
- Bibliographic systematic review databases
  - (e.g. Cochrane, Campbell, Epistemonikos, DARE, ...)
- Prospective systematic review registers
  - (e.g. PROSPERO)
- (e.g. EMBASE, PubMed, CINAHL, PsycINFO, ...)
Search Methods → Select sources → Limit to general bibliographic sources

Options

- General bibliographic databases
- (e.g. EMBASE, PubMed, CINAHL, PsycINFO, ...)

Description, rationale and considerations

- Description: Selection of sources that are broad, such as general bibliographic databases
- Rationale and considerations: Using general sources may increase coverage. Authors may have limited access to bibliographic databases or search interfaces
Search Methods ➔ Select sources

Methods

- Limit to systematic review-specific sources
- Limit to general bibliographic sources

Options

- Bibliographic systematic review databases
  (e.g. Cochrane, Campbell, Epistemonikos, DARE, ...)
- Prospective systematic review registers
  (e.g. PROSPERO)
- (e.g. EMBASE, PubMed, CINAHL, PsycINFO, ...)

Use both systematic review-specific sources and general bibliographic sources
**Methods**

- **Select sources to search**
  - Limit to systematic review-specific sources
  - Limit to general bibliographic sources
  - Use both systematic review-specific sources and general bibliographic sources

**Search strategies for systematic reviews**

- Use a systematic review filter
- Use text mining
- Use an ad hoc approach
- Limit based on date

**Options**

- Bibliographic review databases (e.g., Epistemikos, DARE, Cochrane, Campbell, EPPI-Evidence)
- Prospective SR registers (e.g., PROSPERO)
- General bibliographic databases (e.g., EMBASE, PubMed, CINAHL)

**Search methods for additional primary evidence**

- Rerun strategies of included systematic reviews
- Rerun a strategy specifically tailored to the overview question
- Use pragmatic/selective approaches

**Reporting**

- Report a PRISMA flow diagram
- Report a strategy in full
- Report reasons for not updating the strategies of the included systematic reviews
- Limit to reviews that are assessed as being out-of-date
- Limit to reviews that are assessed as being out-of-date regardless of date
- Limit to circumstances where the body of evidence is weak
- Limit search to aspects of the overview question not covered by existing reviews
- Expert consultation, citation screening, etc.
Search methods for additional primary studies

**Methods**

- Rerun strategies of included systematic reviews
- Rerun a strategy specifically tailored to the overview question
- Use pragmatic/selective approaches

**Options**

- Limit to systematic reviews that are assessed as being out-of-date
- Rerun strategies of all included systematic reviews regardless of date
- Run the overview strategy to retrieve recent primary studies
- Limit to circumstances where the body of evidence is weak
- Limit search to aspects of the overview question not covered by existing reviews
- Expert consultation, citation screening, etc...
Searching for additional primary studies
Rerunning strategies of included reviews

Options

- Limit to systematic reviews that are assessed as being out-of-date
- Rerun strategies of all included systematic reviews regardless of date

Description, rationale and considerations

Description: Rerun strategies of included reviews to retrieve recent primary studies

Rationale and considerations: Could increase the currency of the overview, and comprehensiveness. However, it may decrease efficiency of production, and search strategies of the included reviews would need to have been reported
Search methods for additional primary studies

Methods

- Rerun strategies of included systematic reviews
- Rerun strategies of all included systematic reviews regardless of date
- Rerun a strategy specifically tailored to the overview question

Options

- Limit to systematic reviews that are assessed as being out-of-date
- Run the overview strategy to retrieve recent primary studies
- Limit to circumstances where the body of evidence is weak
- Limit search to aspects of the overview question not covered by existing reviews
- Use pragmatic/selective approaches
- Expert consultation, citation screening, etc...
Searching for additional primary studies
Rerun a strategy specifically tailored to the overview question

Options

- Run the overview strategy to retrieve recent primary studies
- Limit to circumstances where the body of evidence is weak
- Limit search to aspects of the overview question not covered by existing reviews

Description, rationale and considerations

- Description: Run a strategy specifically tailored to identify primary studies related to the overview question
- Rationale and considerations: Could increase the currency of the overview, and increase comprehensiveness
Search methods for additional primary studies

**Methods**

- Rerun strategies of included systematic reviews
- Rerun a strategy specifically tailored to the overview question

**Options**

- Limit to systematic reviews that are assessed as being out-of-date
- Rerun strategies of all included systematic reviews regardless of date
- Run the overview strategy to retrieve recent primary studies
- Limit to circumstances where the body of evidence is weak
- Limit search to aspects of the overview question not covered by existing reviews
- Use pragmatic/selective approaches
- Expert consultation, citation screening, etc...

[Diagram showing the flow of search methods and options]
Searching for additional primary studies
Use pragmatic or selective approaches to searching for primary evidence

Options

Use pragmatic/selective approaches

Description, rationale and considerations

Description: Use alternative approaches to systematic searching

Rationale: May deal with gaps in coverage

Expert consultation, citation screening, etc.
Next steps

- Complete Stage I by populating the framework with all identified methods for conducting an overview
- Map empirical evaluations of methods to the framework (Stage II)
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Stages of the research

- **DESIGN:** Two stage methodological evidence mapping study of reports of overviews of reviews
  - Stage I identifies the methods from studies
  - Stage II that evaluate those methods

- **DATA SOURCES:** Cochrane Methodology Register, Meth4ReSyn library, the Scientific Resource Center Methods library of the AHRQ Effective Health Care Program, Cochrane Colloquium abstracts, and Medline. Expert opinion and reference checking and citation searching were also conducted.

- **STUDY SELECTION:** All descriptive methods studies and studies evaluating methods, with overviews of reviews as the main unity of analysis were included, excluding network meta-analyses and non-English language.