



QUEEN'S UNIVERSITY LIBRARY



Bracken Health Sciences Library's Knowledge Synthesis Service

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Definitions: Synthesis



CIHR defines **synthesis** as the contextualization and integration of findings from individual research studies within the larger body of knowledge on the topic. It must be reproducible and transparent in its methods and may synthesize qualitative or quantitative results.

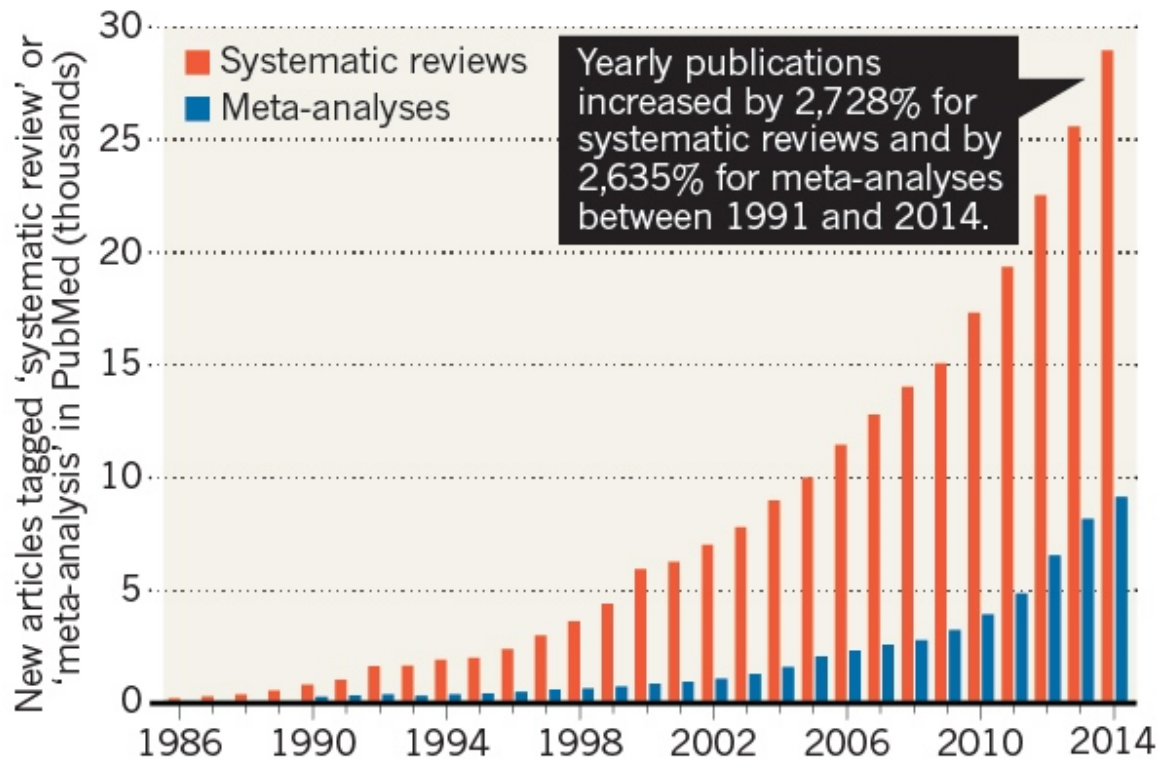
CIHR uses “knowledge syntheses” as an umbrella term for:

- Systematic reviews/Meta-analyses (Cochrane or other)
- Practice guidelines
- Meta-syntheses
- Narrative syntheses
- Realist syntheses
- Results from a consensus conference or expert panel

Increase in SR/MA Activities

META MASS PRODUCTION

The number of systematic reviews and meta-analyses published each year has proliferated since 1986.



A systematic review analyses and compiles all papers, and sometimes unpublished work, on a topic. A meta-analysis is a systematic review that combines data from multiple papers.



Best Practice is to Involve a Librarian



Standard 3.1.1 in *Finding what works in health care: standards for systematic reviews* from the Institute of Medicine:

“Work with a librarian or other information specialist trained in performing systematic reviews to plan the search strategy.”

Cochrane handbook for systematic reviews of interventions:

“...[A]uthors should seek the guidance of a local healthcare librarian or information specialist, where possible one with experience of conducting searches for systematic reviews.”



Reasons for Developing a Formalized Knowledge Synthesis Service



- Stimulate thoughtful and purposeful service provision
- Support institutional priorities: strengthening our research prominence
- Standardize (best) practices
- Provide more consistent user-experiences
- Coordinate library team efforts
- Build capacity
- Facilitate marketing and promotion
- Improve the quality of systematic reviews!



Developing a Formal Knowledge Synthesis Service at Bracken Library



Steps:

- Conducting an environmental scan and SWOT analysis
- Reviewing the literature and researching other service models
- Defining Bracken Library's role and service model
- Developing documentation to guide librarians and patrons
- Developing librarian expertise
- Marketing and promotion

Next steps...



Formal Library Support for Knowledge Syntheses

Two-tiered model for librarian support:

1. Collaboration
2. Advisory consultation

Library guide:

- [Systematic Reviews & Other Syntheses](#)



Librarian Support: A Two-Tier Model



Collaboration

- Available to faculty (or research teams that include a faculty member)
- The intent is usually formal publication
- A librarian can work as part of the research team to plan and execute the search methods

Main objectives:

1. Save research teams time and improve efficiency
2. Increase the quality of syntheses!



Collaboration



- Conduct a preliminary search to determine if a synthesis on the topic already exists
- Develop and execute database/resource-specific search strategies
- Setup search alerts for new publications
- Document formal, comprehensive search strategies for reproducibility
- Send search results in desired format (Excel spreadsheet, txt or RIS file etc.)
- Import search results to citation management software
- Assist with search methods for locating grey-literature
- Assist with additional methods for locating studies (trials registries, hand-searching, cited reference searching etc.)
- De-duplication of search results
- Assist with obtaining full-text articles
- Explain how to produce a PRISMA flow diagram
- Write up the search methods according to PRISMA or other appropriate guidelines
- Format references for the manuscript submission according to the journal's author guidelines



Librarian Support: A Two-Tier Model



Advisory consultation

- Available to faculty and students
- The intent may or may not be formal publication
- A librarian can provide advisory consultation or instruction on the synthesis process

Main objectives:

1. Teach/transfer *some* of the skills necessary to complete a synthesis
2. Increase the quality of syntheses!



Advisory Consultation:



Advise on a preliminary search to determine if a synthesis on the topic already exists

Advise on review question formulation

Provide guidance with synthesis steps

Advise on database/resource selection for specific topics

Instruct or advise on database/resource-specific searching methods and techniques

Review and advise on database/resource-specific search strategies

Advise on setting up search alerts for new publications

Advise on citation management

Advise on search methods for locating grey literature

Advise on additional methods for locating studies (hand-searching, cited reference searching etc.)

Advise on how to obtain full-text articles via Queen's University Library and inter-library loan (ILL)

Review and advise on how the search strategy is reported in the methods section

Advise on how to share full-text articles in compliance with Canadian Copyright law



Next steps



- Formal service evaluation
 - Obtain feedback from users and non-users

- Continue monitoring service uptake and librarian workloads in order to plan for increases in demand
 - Stats recorded for consultations and collaboration time

- Meet with other stakeholders as necessary such as:
 - Research Services Working Group
 - Other librarians that may be involved in syntheses at Queen's University (in health studies, psychology, engineering, education etc.)

Systematic Reviews & Other Syntheses

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Welcome!

The purpose of this guide is to connect you with useful resources for embarking on a systematic review or other type of synthesis, with a particular focus on searching for studies and managing your results.

Please note: some hyperlinked resources are provided by Queen's University Library and may not be available to non-affiliates. Queen's affiliates viewing this guide from off-site may need to login to the library's off-campus access to view the full contents of certain electronic books and articles.

Types of Syntheses

Knowledge syntheses, also known as syntheses, are rigorously conducted literature reviews of the research evidence. When systematic reviews were the first type of synthesis to appear in the health care literature back in the 1970s, the main objective was to synthesize *quantitative* research studies. Limitations of traditional systematic reviews and meta-analyses have led to the adaptation of syntheses to include: qualitative systematic reviews, mixed-methods reviews, rapid reviews, network meta-analyses, scoping reviews and realist reviews. While many syntheses begin with a clear question, their methodologies and the types of research evidence synthesized to answer the question can be quite different.

Thank you for listening!



Amanda Ross-White and I teaching an accredited CE course on *Developing a Formal Systematic Review Service* at the Medical Library Association in Seattle last May.

Presenting an oral presentation on the same topic at the EAHIL/ICML conference in Dublin last June.

