Lifting the fog of confusion: The development of a new workshop on demystifying systematic reviews

Lucy Kiester – Liaison librarian for undergraduate medical education
lucy.kiester@mcgill.ca

Andrea Quaiattini – Liaison librarian for postgraduate medical education
andrea.quaiattini@mcgill.ca
What we will cover today

• Definition (real quick) of a systematic and scoping review
• The need for a workshop
• The rationale and frameworks informing the workshop
• Content of the workshop – what it is and what it isn’t
• Development of the workshop
What is a systematic review?

- Asks a focused research question with narrow parameters, and usually fits into the Patient, Intervention, Comparison, Outcome (PICO) question format

Other key characteristics are

- A clearly stated set of objectives with pre-defined eligibility criteria for studies
- An explicit, reproducible methodology;
- A systematic search that attempts to identify all studies that would meet the eligibility criteria
- An assessment of the validity of the findings of the included studies, for example through the assessment of risk of bias
- A systematic presentation, and synthesis, of the characteristics and findings of the included studies
What is a scoping review?

- Asks a broad question that looks at answering larger, more complex, exploratory research questions and often does not fit into the PICO question format

- Arksey and O'Malley (2005) identify reasons for conducting a scoping review
  - To examine the extent, range, and nature of research activity
  - To summarize and disseminate research findings
  - To identify research gaps in the existing literature

- Scoping reviews can also enable us to
  - Map key concepts and main sources/types of evidence in a particular subject area
  - Provide a “preliminary assessment of potential size and scope of research literature”
  - Contextualize knowledge and set this within policy and practice contexts
Systematic vs scoping review questions

Systematic review
- In people with multiple sclerosis, what is the extent to which a walking intervention, compared to no intervention, improves self-reported fatigue?

Scoping review
- What rehabilitation interventions are used to reduce fatigue in adults with multiple sclerosis?
Why? As of 24 April...

...19 406 in 2018 alone...
In the immortal words of Inigo Montoya...

YOU KEEP USING THAT WORD

I DO NOT THINK IT MEANS WHAT YOU THINK IT MEANS
What have we done so far at McGill?

• Prior to 2016, requests were dealt with on an individual basis
• 2016 start of formalized systematic review service - https://www.mcgill.ca/library/services/systematic-review-service
Systematic Reviews, Scoping Reviews, and other Knowledge Syntheses

Purpose of this guide

**PROCESS**

**QUESTION**  **PROTOCOL**  **SEARCH**  **SCREENING**  **APPRAISAL**  **SYNTHESIS**  **WRITING**

This guide was created to help students and faculty learn more about types of knowledge syntheses and the process of conducting them.

*CHIR defines knowledge synthesis* as "the contextualization and integration of research findings of individual research studies within the larger body of knowledge on the topic. A synthesis must be reproducible and transparent in its methods, using quantitative and/or qualitative methods." Systematic reviews, scoping reviews, realist syntheses, narrative syntheses, meta-analyses, meta-syntheses and practice guidelines are all forms of synthesis.

For more information about librarian assistance in conducting a knowledge synthesis, please visit our [systematic review services](#) page.

Types of knowledge syntheses covered in this guide

**Information covered in this guide**

- Resources for an overview on knowledge synthesis methods can be found on [this page of our guide](#). Start here if you do not know where to begin.

- A systematic review is designed to answer precisely defined, narrow questions and may be limited to specific study designs. More information on this type of review can be found on [this page of our guide](#).
Not a completely new thing...

• University of Toronto Gerstein Science Information Center
  • 9 hour workshop that covers ALL THE THINGS!
• University of Alberta
  • 3 hour that focuses on searching

Our immediate concern:
• Users need an introduction to the process (you keep using that word)
• Users need clear differentiation between Systematic and Scoping reviews
Informing our process

• Association of College and Research Libraries (ACRL) Framework for Information Literacy
• CanMEDS Physician Competency Framework
• McGill UGME Competency Framework
• CanMEDS Milestones
The Workshop

• 12-15 students or faculty
• 2 (maybe 2.5 – we’ll see) hours long
• Launch in June 2019
• For health sciences students
• Co-teaching
• Made to compliment existing systematic review libguide
Structure of the workshop

- Question
- Protocol
- Search
- Screening
- Appraisal
- Synthesis
- Writing
Today

- What is a systematic review vs. a scoping review?
- What are the steps in each?
- Asking a good question
- A protocol for your Protocol
- Searching comprehensively, search translation, database selection
- Other steps involved
**Not today** (or what we aren’t doing)

- Have a complete protocol
- Have a completed systematic review search
  - NOR are we teaching you how to make one
- Have a final question
- Be versed in the use of Endnote, screening software, etc.
Learning outcomes

- Identify the differences between a systematic and a scoping review
- Formulate a research question that is appropriate for a systematic or a scoping review
- Recognize the parts necessary for a well-developed protocol (and all that it entails)
- Convert a research question into component parts of a search strategy
- Describe the techniques needed to build a comprehensive search
- Select databases and other sources of information to search based on the research question
- Outline the process of a systematic/scoping review post-search
Skills and tools - Advanced searching

• The guide as always has advanced tools
  http://libraryguides.mcgill.ca/knowledge-syntheses/search-tools

• Searching how to
  • Search Basics
    http://libraryguides.mcgill.ca/healthscibasics/search-tips
  • Subject Headings vs Keywords
    http://libraryguides.mcgill.ca/healthscibasics/headings-keywords
  • Combining search terms effectively (AND, OR, mind your brackets)
    http://libraryguides.mcgill.ca/healthscibasics/boolean
Active learning

• Scoping vs systematic Jeopardy
• Workshopping your question
• Inclusion and exclusion brainstorming
• Breaking an existing systematic review search into concepts
• Keyword brainstorming by concept
The Packet

• Table of different review types

• Keyword brainstorm table

• Information sheets on advanced searching and database navigation

• Complete systematic review search strategy
Developing the Contents of this Workshop

- Identification of need and initial development
- Center for Medical Education Presentation
- Development of content and activities
- Feedback from colleagues
- Development of content and activities
- Break My Workshop
- Refinement of content and activities
- Launch of workshop to students (projected in June 2019)
- FURTHER refinement (probable)
In Sum:

• Building a workshop like this really depends on YOUR users and what is needed
  • Both by librarians and by students
• Language is *hard* – leave lots of time to try and figure out what you are wanting to say, and how you are going to say it
  • Translation between “library” and “discipline” speak
• Iterations and input will be crucial
• Make it fun for yourselves – you have to teach this
Questions?