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

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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

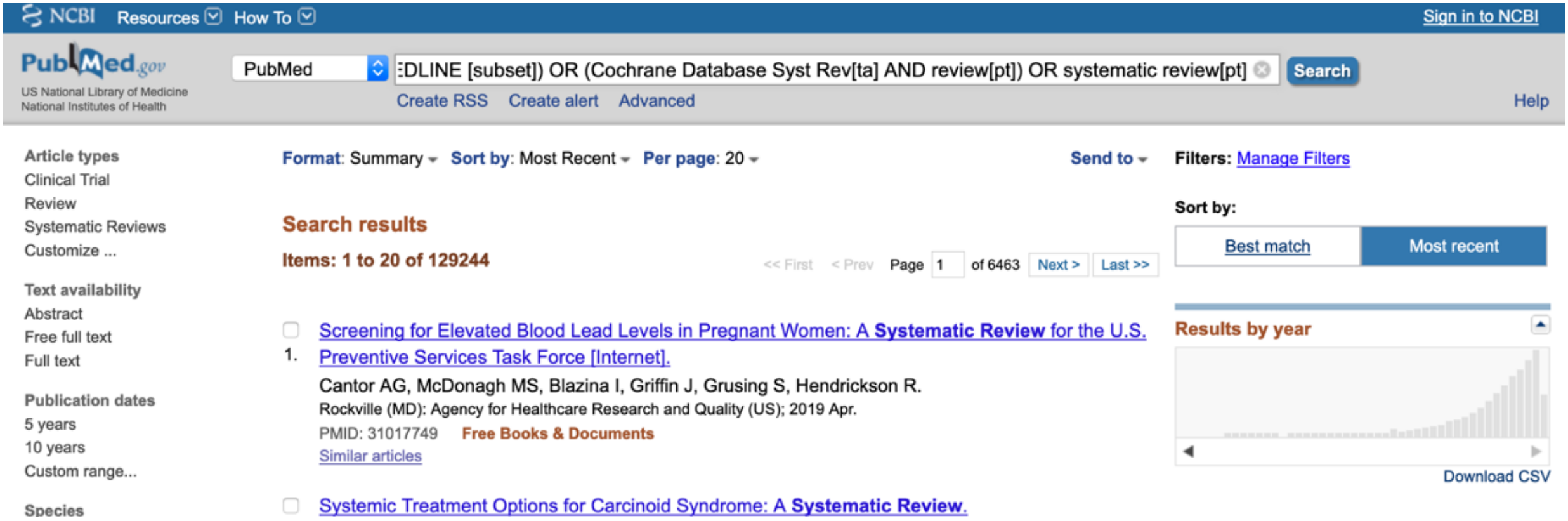
Systematic review

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

Scoping review

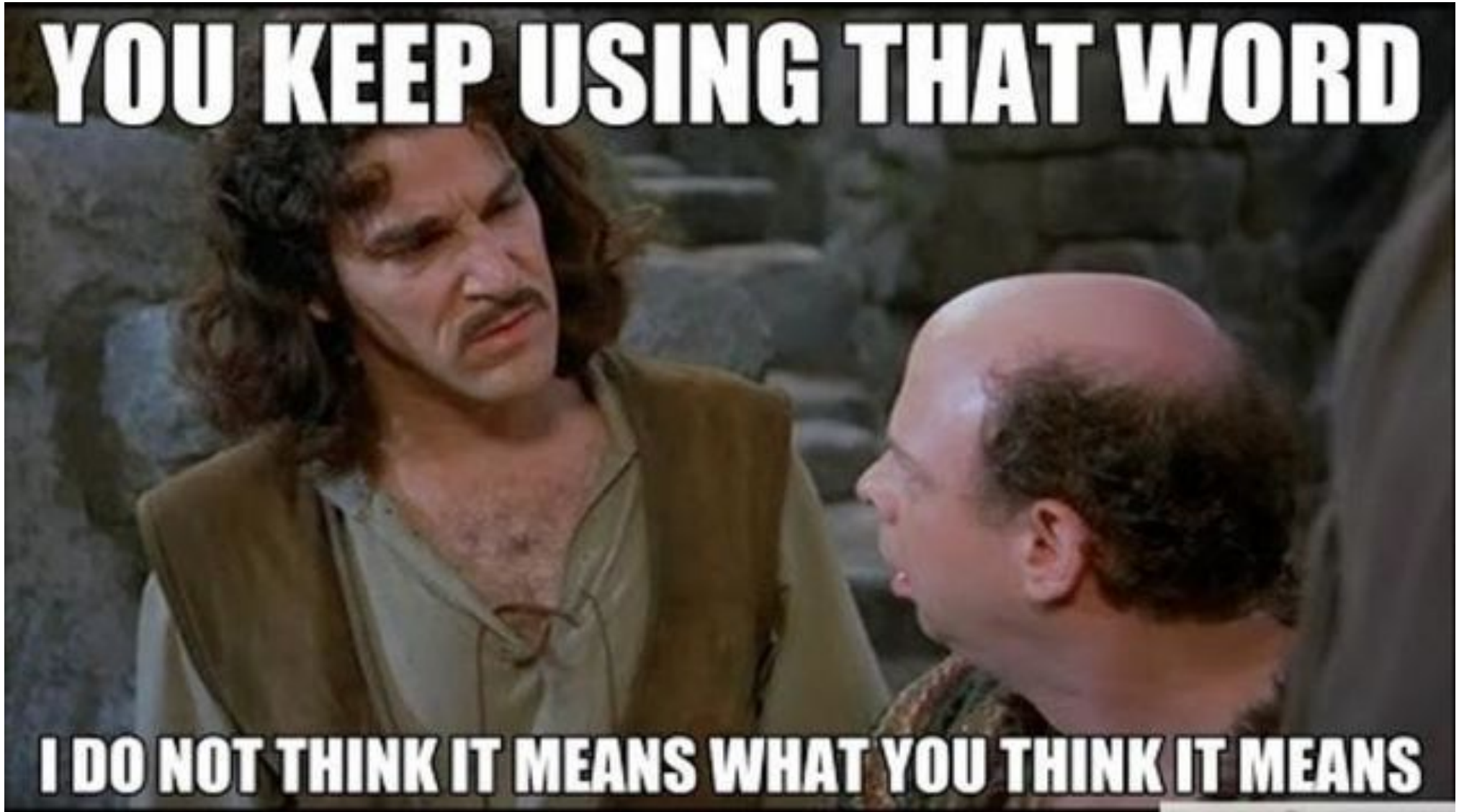
- What rehabilitation interventions are used to reduce fatigue in adults with multiple sclerosis?

Why? As of 24 April...



...19 406 in 2018 alone...

In the immortal words of Inigo Montoya…



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
- 2017 creation of comprehensive knowledge synthesis guide - http://libraryguides.mcgill.ca/knowledge-syntheses/home

Systematic Reviews, Scoping Reviews, and other Knowledge Syntheses

Search | Search

- Home
  - Purpose of this guide
  - Types of knowledge syntheses covered in this guide
- Types of knowledge syntheses
- How to conduct a knowledge synthesis
- Identifying the research question
- Developing the protocol
- Searching for studies
  - Advanced tools for building the search
  - Grey literature and supplemental searching
  - Documenting the search methods
  - Exporting search results to EndNote
  - Deduplicating in EndNote
  - Updating the database searches
- Tools for screening, appraisal, and synthesis
- Writing the review

Purpose of this guide

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

CIHR 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.

Contact us

Find a librarian in your subject area to help you with your knowledge synthesis project.

Or contact the librarians at the **Schulich Library of Physical Sciences, Life Sciences, and Engineering**
schulich.library@mcgill.ca
514-398-4769

Need help? Ask us!

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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

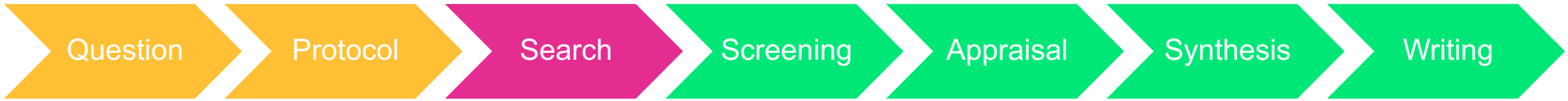
Informing our process

- 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



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
  - Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. Health Info Libr J. 2009;26(2):91-108
- Keyword brainstorm table
- Information sheets on advanced searching and database navigation
- Complete systematic review search strategy
  - Roseman M, Kloda LA, Saadat N, Riehm KE, Ickowicz A, Baltzer F, et al. Accuracy of depression screening tools to detect major depression in children and adolescents: a systematic review. The Canadian Journal of Psychiatry. 2016;61(12):746-57.

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?