Galter Health Sciences Library & Learning Center

Systematic Reviews: How Involving a Librarian Might be Your Best Move

The number of published systematic reviews has risen exponentially in the last decade as physicians and researchers try to distill masses of biomedical literature into more readily-accessible content. Rather than read fifty articles with conflicting views on a topic, finding a well-done systematic review to give you the bottom line has become a key part of the decision-making process. As more researchers recognize the value of systematic reviews, they are also discovering topics that lack coverage and are stepping in to fill the gap.

So you want to write a systematic review. Where do you start? How many databases should you search? How do you come up with the different search strategies in unfamiliar databases? What tools should you use to screen the articles? What's a systematic review protocol? What are PRISMA guidelines?

If you have questions like this, you might want to consult with a systematic review expert such as a Galter librarian. In 2017, we collaborated with Northwestern Medicine researchers on over 30 reviews and meta-analyses. We know what it takes to produce a high-quality review and we're ready to share our wisdom with the Northwestern Medicine community.

Before you embark on a systematic review, think about your answers to these questions.

Do you have a protocol?

Like any well-designed research study, a systematic review should begin with the development of a protocol (a detailed description of the rationale, objectives, and methods of the review). Galter librarians can recommend resources on developing protocols, including existing standards and examples. We can also assist in developing the section of the protocol that describes the literature search methodology.

Do you have a team?

Many tasks in the systematic review process should be performed by more than one individual (e.g. screening search results) or require individuals with specialized skills. Sharing tasks also increases efficiency and reduces risk of bias. Do you have appropriate expertise in all the required domains for completing a rigorous review? Ideally, your team should include subject specialists, a systematic review methods expert, a librarian or information specialist with training in systematic review methods, and a quantitative methods/meta-analysis specialist.

Do you have a plan for managing search results?

Literature searches for systematic reviews may produce thousands of records. Your ability to organize and manage these results will impact your ability to complete the systematic review efficiently and in a timely manner. Librarians can guide you

Do you have time to screen the results of comprehensive literature searches?

The records retrieved during a systematic review search must be systematically and independently screened by research team members. Be prepared to document and report decisions made during the initial screening and full-text review. Librarians can recommend tools and software designed to help you streamline workflows associated with several of these tasks.

What is your timetable for the systematic review?

Like other study types, systematic reviews require substantial time to complete (one year or longer is a realistic expectation, though motivated reviewers can complete a review in a shorter time frame). Establishing a timetable for your project will help the librarian develop a reasonable schedule for conducting searches and delivering results. Getting a librarian on board sooner than later is key!

To recap, Galter librarians can collaborate with you to:

- Formulate your research question.
- Investigate whether there is already a published systematic review on your topic or whether there is one currently under development.
- Plan the search and write the search methods for your review protocol.
- Determine which sources to search and develop sensitive search strategies for each source.
- Identify appropriate search filters for the searches.
- Deliver de-duplicated search results in a mutually agreed upon format (e.g. EndNote, XML, RIS).
- Advise you on systematic review screening platforms like Covidence or Rayyan.
- Identify tools and strategies to capture the data for the PRISMA flow diagram.
- Document the search process for reporting purposes.
- · Write the search methods of the review.

Librarians collaborating on systematic reviews commonly satisfy the criteria for authorship set forth by ICMJE. Co-authorship is expected when a librarian serves as collaborator rather than a consultant.

Are you ready to begin a systematic review? Contact your liaison librarian at Galter to get started.

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