Systematic Reviews: Opportunities for Librarians

By Cynthia Reynolds

The Taubman Health Sciences Library at the University of Michigan in Ann Arbor offers a Systematic Review (SR) workshop once or twice a year. This SR course was originally developed with funding from the National Library of Medicine’s Greater Midwest Region, and Taubman Library offered its first workshop in 2013. It has been offered several times since then and is very popular, with the registration consistently filling up within the first hour after opening; I was able to register for the course on my second attempt. There is an eight person systematic reviews team involved in creating and teaching this workshop. They are involved in everything from building the course website to editing videos to coordinating the delivery and set up of meals and snacks. The team continually strives to improve the workshop using feedback from participants to assist in the process.

The overarching goal of the workshop is to provide participants with the knowledge to conduct a search for a systematic review and strategies for approaching and educating researchers and administrators about ways that the librarian can improve the efficiency and quality of their research. The course objectives for meeting this goal are that participants will become familiar with the following: best practice standards for conducting and reporting systematic reviews, core resources and grey literature sources, the role of protocols in systematic reviews, data management techniques and strategies, writing methodologies suitable for publication, critical appraisal of systematic reviews, and perspectives and roles for involvement in systematic reviews. The workshop includes the basics of a systematic review – study types and methodologies, selecting databases and developing search strategies, data management and writing for publication, and strategies to establish participants’ presence and expertise. The course follows a flipped classroom model of instruction. The first two weeks take place in an online asynchronous format, and the course wraps up with a two day in-person workshop at Taubman Library. Participants completing both the online and in-person sessions of the workshop earn 20 Medical Library Association continuing education credits.

Online and In-Person Experiences

In the most recent systematic reviews workshop which I attended, Taubman Library began using Canvas, an online content management system for online classes. Canvas is user-friendly and works much the same as other content management systems. The online portion of the workshop consists of eight modules, which include video presentations created by the instructors. The modules include introduction to systematic reviews, roles and teams, starting and refining the search, bias and systematic reviews, and writing methods and authorship. Participants are able to download slides and view the transcripts for each module. Presented in the modules are interviews with the Associate Dean for Medical Student Education and an assistant professor in the Departments of Epidemiology and Orthopedic Surgery at the University of Michigan speaking about the role of
systematic reviews in health care and the importance of having a librarian on the systematic review team. There are assignments for each module consisting mostly of reading, reflecting and commenting. While the assignments are not graded, they must be completed prior to the in-person session. A new component introduced in this workshop is a search strategy assignment, where participants are given a topic and three relevant articles and tasked with creating a replicable search strategy using PubMed. One disappointing aspect of the online course is that there is no interaction among the participants; all discussion takes place during the in-person session. I had no idea who the other participants were or how many there were until I arrived at Taubman Library.

There were 19 participants at the in-person workshop, including two from the UK and one from Canada. The participants from the UK teach systematic reviews at their institution and received a grant to travel to Michigan to observe how Taubman Library teaches Systematic Reviews. Participants could bring their own laptops or use those provided by the library. This part of the course consisted of lecture, discussion, and some practical exercises. The sessions included roles and teams, search strategy peer review, filters and limits, supplemental strategies, data management and deliverables, protocols, writing the methods, critical appraisals of systematic reviews, and writing an action plan. We sat at tables of three or four and were given scenarios to discuss amongst ourselves, come up with a solution on how to resolve them, and present it to the class. During the search strategy peer review there was an activity in which participants were given the opportunity to review another’s search strategy. Both author and reviewer of the search strategy were anonymous. While this was a little intimidating, I discovered that the search strategy I turned in was actually quite thorough. Copies of all of the search strategies were then placed along the side of the room and we were to make comments on three of them using adhesive notes. The reviews and notes were to be shared with the participants via Canvas sometime after the course ended.

**Systematic Review Tools**

One of the sessions compared different systematic review tools. Covidence is one of these tools that used to be free but now has a cost. While Covidence allows unlimited users for a review, the cost comes from the number of reviews conducted. It has the following features: importing and screening citations, full-text review, study selection, quality assessment, data extraction, and data exporting. DistillerSR is the software used by the University of Michigan. This is web based and accessible using any browser on any computer. One user can have multiple accounts. DistillerSR requires an account administrator and articles can be assigned for review. It includes chat support, as well. While DistillerSR offers an educational discount, it still costs $100 per month per user. Users can be deactivated if they are not currently working on a review. Abstrackr is a free, open-source, semi-automated online screening tool. It is used for title/abstract screening. The participants from the UK use EndNote as a tool for title/abstract screening and provided an impromptu session on using it during lunch one day.
The sessions I enjoyed the most were those that allowed us to practice. The peer review exercise was valuable as we were able to review a search strategy using the PRESS (Peer Review of Electronic Search Strategies) Guideline. While beneficial in discovering errors in the search strategy I was reviewing, it also made me realize gaps in my own search strategy. The critical appraisal exercise enabled us to read and evaluate published systematic reviews for validity and precision.

Overall, the systematic reviews course was worthwhile. I learned that it is important that the SR team is educated on all that is entailed in conducting a systematic review; it is not a short process. It is not practical to participate on a team of less than five people. Including a memorandum of understanding is essential so that all roles are clear and the librarian is not recruited for something that falls outside of that role. Reaching out to other librarians to peer review the search strategy is also a good idea and this workshop has provided me with a network of librarians who are willing to assist.

During my time at the University of Michigan I learned some interesting facts about Taubman Library. The librarians are referred to as informationists. There are no stacks in the library; they are all remote. There are employees who work with the remote stacks to fill requests, but the library does not receive many requests for physical items. When the library removed the stacks, they gave two floors of the library to the College of Medicine, who in return paid for the remodel of the library. The patron side of the library consists of a reference desk, computers, and an anatomage table that can be scheduled for class use.

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