

Librarians in Action: The COVID-19 Evidence Based Medicine Rapid Response Team

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During the current COVID-19 pandemic, health care workers need not only ventilators, personal protective equipment (PPE), and tests, but also accurate and reliable information. Information is essential for flattening the curve, and ensuring that clinicians and public health workers act consistency and in-line with the best available evidence. As new information is released, best practices are rapidly evolving. This can lead to uncertainty and even disinformation. A recent paper argued that we are facing a global information crisis, and calls on information professionals to act.¹ Medical librarians, as health information professionals, have the skills to quickly find, appraise, and synthesize evidence-based information for use by clinicians. This paper will share how librarians at IUPUI, in collaboration with key state and academic health institutions, are providing rapid, evidence-based information to combat the COVID-19 pandemic.

Launching the COVID-19 Evidence Based Medicine Rapid Response Team

In mid-March 2020, the Indiana State Department of Health (ISDH) and the Family and Social Services Administration of Indiana (FSSA) collaborated with the Indiana Clinical & Translational Sciences Institute Monon Collaborative (Indiana CTSI) to create an Evidence Based Medicine Rapid Response Team (EBM RRT). Sarah Wiehe, Indiana CTSI director, Emily Hardwick, Operations Director for the Indiana CTSI, and Amy Gilbert, FSSA Chief Science Officer, partnered to coordinate and facilitate a network of statewide experts. Recognizing the need for research librarian support in finding literature, the team reached out to IUPUI Libraries for assistance. A team of librarians with searching expertise in medicine, public health, law, and ethics joined the EBM RRT under the leadership of Amy Blevins, Associate Director for Public Services at the Ruth Lilly Medical Library (RLML). The team of librarians includes Hannah Craven, Research & Scholarly Communications Librarian at RLML; Rachel Hinrichs, Health Sciences Librarian at University Library; Chelsea Misquith, Emerging Technologies Librarian at RLML; Caitlin Pike, Health Sciences Librarian at University Library; Sean Stone, Director at the Dentistry Library; and Miriam Murphy, Director & Senior Lecturer in Law at the Ruth Lilly Law Library. The result of this collaboration is the [COVID-19 Daily Digest](#), a website and daily newsletter for frontline responders in Indiana.²

COVID-19 Expert Responses to Key Questions & Expert Reviews of Relevant and Emerging Literature

The most significant task IUPUI librarians have been, and are currently, doing is providing evidence to answer urgent questions from Indiana health care workers and state leadership. New questions are assigned to one or two librarians who then collect evidence in the form of annotated bibliographies to answer the question. Once the annotated bibliographies are complete, they are sent to subject experts who review and summarize the evidence before the answers are delivered to state leadership. The [annotated bibliographies](#) with the expert review are made publicly available on the Indiana CTSI COVID-19 website.³ About a month into this project, we have completed over 40 questions, often with a 24-hour turnaround. The amount of time each question takes varies, but it is usually several hours.

In addition, the COVID-19 EBM RRT has begun a [Daily Digest](#) and an [Expert Review of Relevant and Emerging Literature](#).^{4,5} For the Expert Review, a group of academic experts are reviewing literature daily, and then posting 3-5 blog posts outlining their summaries of the literature. The librarian team is working with those experts to develop search strategies, auto-alerts, and RSS feeds to increase the efficiency of work being done.

COVID-19 Resources and Search Strategies

Searching for evidence-based information on COVID-19 is a challenge. Much of the information is spread across different sources, and what is considered the “best evidence” could change overnight. Librarians often search multiple types of sources, including scholarly articles, news, pre-prints, and government websites. Some of our most used resources are found in Table 1. Other collections of COVID-19 resources include the COVID-19 guide from the Ruth Lilly Medical Library,⁶ and the Medical Library Association’s COVID-19 resource page.⁷ We share our search strategies related to the annotated bibliographies and auto-alerts internally. Librarians around the world have also been sharing search strategies on listservs and on the MLA website.⁷

Table 1: Resources for Finding COVID-19 Information

Source Type	Resources
Scholarly articles	<ul style="list-style-type: none"> • Lit-COVID: https://www.ncbi.nlm.nih.gov/research/coronavirus/ • PubMed: pubmed.gov • WHO COVID-19 database: https://search.bvsalud.org/global-research-on-novel-coronavirus-2019-ncov/ • Google Scholar: scholar.google.com
Pre-Prints	<ul style="list-style-type: none"> • medRxiv: https://connect.medrxiv.org/relate/content/181 • Outbreak Science: https://outbreaksci.prereview.org/ • Google Scholar: scholar.google.com

Grey Literature/Websites	<ul style="list-style-type: none"> • DisasterLit: https://disasterinfo.nlm.nih.gov/ • USA Government response: https://www.usa.gov/coronavirus • CDC: https://www.cdc.gov/coronavirus • Google (use a domain search: site:gov or site:org)
News	<ul style="list-style-type: none"> • LexisAdvance • Newspaper Source Plus • Google

Process and Data Management

With many people involved on the EBM RRT, we needed to establish a data management process for tracking, compiling, and delivering evidence. Hannah Craven, Research & Scholarly Communications Librarian at RLML, started several documents to standardize the process. A “read me” file was created detailing the process flow, procedures for key members of the team, and file naming conventions. A spreadsheet is used to track where each question is in the process, and who is working on what. Amy Blevins worked with Emily Hardwick to finalize a template for the annotated bibliographies and expert responses was created to standardize the layout and ensure important metadata was included. Caitlin Pike and Hannah Craven added a Creative Commons Attribution-NonCommercial 4.0 International License (creativecommons.org/licenses/by-nc/4.0/) to the template, which would allow others to re-use and modify the content as needed. Hannah Craven realized early on that Zotero would be a useful tool for the project since it saves snapshots of websites. She created a Zotero group library, shared by all members of the team, to efficiently store and share articles. Ms. Craven even managed to get unlimited storage space for our project by sending a tweet to Zotero. In collaboration with the IUPUI Ruth Lilly Collections and Archives, we are considering additional ways to preserve and archive the documents and websites created for future use and study.

Conclusion

Our experience with the EBM RRT has shown how critical interdisciplinary collaboration is for responding to a crisis. Different disciplines and professions bring unique skills and perspectives to develop solutions for dealing with this global crisis that touches close to home. Medical librarians, as members of an interdisciplinary team, can leverage their skills to deliver timely and high-quality information to health care workers, as well as provide support for data management and preservation. As the EBM RRT is an on-going project, we imagine our roles will continue to evolve.

References

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