COLUMN / CHRONIQUE

Current Research

Compiled by Heather Ganshorn

Dudden RF, Protzko SL. The systematic review team: Contributions of the health sciences librarian. *Med Ref Serv Q.* 2011;30(3):301–315. doi: 10.1080/02763869.2011. 590425. PMID: 21800987.

While the role of the librarian as an expert searcher in the systematic review process is widely recognized, librarians also can be enlisted to help systematic review teams with other challenges. This article reviews the contributions of librarians to systematic reviews, including communicating methods of the review process, collaboratively formulating the research question and exclusion criteria, formulating the search strategy on a variety of databases, documenting the searches, record keeping, and writing the search methodology. It also discusses challenges encountered such as irregular timelines, providing education, communication, and learning new technologies for record keeping. Rewards include building relationships with researchers, expanding professional expertise, and receiving recognition for contributions to health care outcomes.

Shurtz S. Developing and using a rubric for evaluating evidence-based medicine point-of-care tools. *J Med Libr Assoc.* 2011;99(3):247–254. doi: 10.3163/1536-5050.99.3.012. PMID: 21753917. Free full text http:// www.ncbi.nlm.nih.gov/pmc/articles/PMC3133902/?tool= pubmed.

Objective: The research sought to establish a rubric for evaluating evidence-based medicine (EBM) point-of-care tools in a health sciences library. Methods: The authors searched the literature for EBM tool evaluations and found that most previous reviews were designed to evaluate the ability of an EBM tool to answer a clinical question. The researchers' goal was to develop and complete rubrics for assessing these tools based on criteria for a general evaluation of tools (reviewing content, search options, quality control, and grading) and criteria for an evaluation of clinical summaries (searching tools for treatments of common diagnoses and evaluating summaries for quality control). Results: Differences among EBM tools' options, content coverage, and usability were minimal. However, the products' methods for locating and grading evidence varied widely in transparency and process. Conclusions: As EBM tools are constantly updating and evolving, evaluation of these tools needs to be conducted frequently. Standards for evaluating EBM tools need to be established, with one method being the use of objective rubrics.

In addition, EBM tools need to provide more information about authorship, reviewers, methods for evidence collection, and grading system employed.

Pappas C, Williams I. Grey literature: Its emerging importance. *J Hosp Librarian*. 2011;11(3):228–234. doi: 10.1080/15323269.2011.587100.

This article emphasizes the importance of grey literature in the arsenal of search tools available to medical researchers. Because of the delay between research and publication, and because of the potential that some important research may never be published, access to innovative information is challenging. Grey literature is a tool to fill that void. The authors define grey literature, explore its sources, and identify its major users and uses. The authors identify the range of grey literature, its advantages and disadvantages, the various outlets that produce it, and where it may be found.

Gardois P, Calabrese R, Colombi N, Deplano A, Lingua C, Longo F, Villanacci MC, Miniero R, and Piga, A. Effectiveness of bibliographic searches performed by paediatric residents and interns assisted by librarians. A randomised controlled trial. *Health Info Libr J.* 2011; Dec;28(4):273–84. doi: 10.1111/j.1471-1842.2011.00957.x. PMID: 22051126.

Background: Considerable barriers still prevent paediatricians from successfully using information retrieval technology. **Objectives:** To verify whether the assistance of biomedical librarians significantly improves the outcomes of searches performed by paediatricians in biomedical databases using real-life clinical scenarios. Methods: In a controlled trial at a paediatric teaching hospital, nine residents and interns were randomly allocated to an assisted search group and nine to a nonassisted (control) group. Each participant searched PubMed and other online sources, performing predetermined tasks including the formulation of a clinical question and retrieval and selection of bibliographic records. In the assisted group, participants were supported by a librarian with ≥ 5 years of experience. The primary outcome was the success of search sessions, scored against a specific assessment tool. Results: The median score of the assisted group was 73.6 points interquartile range (IQR = 13.4) versus 50.4 (IQR = 17.1) of the control group. The difference between median values in the results was 23.2 points (95%)

CI 4.8–33.2), in favour of the assisted group (*P*-value, Mann–Whitney U test: 0.013). **Conclusions:** The study has found quantitative evidence of a significant difference in search performance between paediatric residents or interns assisted by a librarian and those searching the literature alone.

Kingsley K, Galbraith GM, Herring M, Stowers E, Stewart T, Kingsley KV. Why not just Google it? An assessment of information literacy skills in a biomedical science curriculum. *BMC Med Educ.* 2011;11(17). doi: 10.1186/1472-6920-11-17. PMID: 21518448. Free full text http://www.biomedcentral.com/1472-6920/11/17/ abstract.

Background: Few issues in higher education are as fundamental as the ability to search for, evaluate, and synthesize information. The need to develop information literacy and the process of finding, retrieving, organizing, and evaluating the ever-expanding collection of online information has precipitated the need for training in skillbased competencies in higher education, as well as medical and dental education. Methods: The current study evaluated the information literacy skills of first-year dental students, consisting of two consecutive dental student cohorts (n = 160). An assignment designed to evaluate information literacy skills was conducted. In addition, a survey of student online search engine or database preferences was conducted to identify any significant associations. Subsequently, an intervention was developed based upon the results of the assessment and survey to address any deficiencies in information literacy. Results: Nearly half of students (n = 70/160 or 43%) missed one or more question components that required finding an evidence-based citation. Analysis of the survey revealed a significantly higher percentage of students who provided incorrect responses (n = 53/70 or 75.7%) reported using Google as their preferred online search method (p < 0.01). In contrast, a significantly higher percentage of students who reported using PubMed (n = 39/45 or 86.7%) were able to provide correct responses (p < 0.01). Following a onehour intervention by a health science librarian, virtually all students were able to find and retrieve evidencebased materials for subsequent coursework. Conclusions: This study confirmed that information literacy among this student population was lacking and integration of modules within the curriculum can help students to filter and establish the quality of online information, a critical component in the training of new health care professionals. Furthermore, incorporation of these modules early in the curriculum may be of significant value to other dental, medical, health care, and professional schools with similar goals of incorporating the evidence base into teaching and learning activities.

Doing-Harris KM. Computer-assisted update of a consumer health vocabulary through mining of social network data. *J Med Internet Res.* 2011;13(2):e37. doi: 10.2196/jmir.1636. PMID: 21586386.

Background: Consumer health vocabularies (CHVs) have been developed to aid consumer health informatics applications. This purpose is best served if the vocabulary evolves with consumers' language. Objective: Our objective was to create a computer-assisted update (CAU) system that works with live corpora to identify new candidate terms for inclusion in the open access and collaborative (OAC) CHV. **Methods:** The CAU system consisted of three main parts: a Web crawler and an HTML parser, a candidate term filter that utilizes natural language processing tools including term recognition methods, and a human review interface. In evaluation, the CAU system was applied to the healthrelated social network website PatientsLikeMe.com. The system's utility was assessed by comparing the candidate term list it generated to a list of valid terms hand extracted from the text of the crawled webpages. Results: The CAU system identified 88994 unique terms 1- to 7-grams ("*n*-grams" are *n* consecutive words within a sentence) in 300 crawled PatientsLikeMe.com webpages. The manual review of the crawled webpages identified 651 valid terms not yet included in the OAC CHV or the Unified Medical Language System (UMLS) Metathesaurus, a collection of vocabularies amalgamated to form an ontology of medical terms, (i.e., 1 valid term per 136.7 candidate n-grams). The term filter selected 774 candidate terms, of which 237 were valid terms; that is, 1 valid term among every 3 or 4 candidates reviewed. Conclusion: The CAU system is effective for generating a list of candidate terms for human review during CHV development.