PROGRAM DESCRIPTION / DESCRIPTION DU PROGRAMME

Research-Embedded Health Librarians as Facilitators of a Multidisciplinary Scoping Review

Gina Brander and Colleen Pawliuk[1]

Abstract: Program objective: To advance the methodology and improve the data management of the scoping review through the integration of two health librarians onto the clinical research team. **Participants and setting:** Two librarians were embedded on a multidisciplinary, geographically dispersed pediatric palliative and end-of-life research team conducting a scoping review headquartered at the British Columbia Children's Hospital Research Institute. **Program:** The team's embedded librarians guided and facilitated all stages of a scoping review of 180 Q3 conditions and 10 symptoms. **Outcomes:** The scoping review was enhanced in quality and efficiency through the integration of librarians onto the team. **Conclusions:** Health librarians embedded on clinical research teams can help guide and facilitate the scoping review process to improve workflow management and overall methodology. Librarians are particularly well equipped to solve challenges arising from large data sets, broad research questions with a high level of specificity, and geographically dispersed team members. Knowledge of emerging and established citation-screening and bibliographic software and review tools can help librarians to address these challenges and provide efficient workflow management.

Introduction

The scoping review is increasingly being used as an alternative method to synthesize the literature on a particular topic. Librarians' contributions to knowledge synthesis on these types of reviews can dramatically influence search question and strategy development, methodology, and workflow management [1]. Unlike the more commonly recognized systematic review, the scoping review aims to provide a broad picture of a particular topic's existing scientific literature. This method of knowledge synthesis is often used to guide future research by mapping available evidence to offer a general picture of the potential size and scope of the literature, and is defined by the broad nature of the review's research question [2]. Best steps for conducting scoping reviews have been discussed [1], as have the multiple roles of the medical research librarian in the systematic review [3] and academic

librarian in the scoping review [2]; however a detailed program description chronicling the roles and processes of the research-embedded health librarian (REHL) in the scoping review remains absent from the literature.

This program description aims to fill that gap by examining the experiences of two health librarians participating in a scoping review project as embedded members of a multi-disciplinary, geographically dispersed pediatric palliative and end-of -life research team. By defining and describing their roles and functions throughout all stages of the review, the authors hope to provide a useful prototype for clinical research teams looking to integrate librarians into their research practice as embedded team members. Similar to emerging models of academic librarian collaborations with researchers [2], REHLs are well positioned to move from supporting to partnership roles by participating in large-scale knowledge synthesis projects with researchers [4]. Moreover, unlike their academic counterparts, REHLs do not face

Gina Brander. Faculty Librarian, Saskatchewan Polytechnic Library, Saskatoon SK
Colleen Pawliuk. Librarian, BC Children's Hospital Research Institute, Vancouver BC
[1]Corresponding author (email: cpawliuk@bcchr.ca)

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the same time constraints frequently reported by academic librarians as barriers to participating in large review projects [5]. In a 2013 mixed-method study, REHLs reported "traditional" library tasks as the least commonly performed or never performed out of thirteen categories of research librarian tasks, while the most commonly performed involved "information-related elements of the research process" [6]. The movement of REHLs away from traditional library management and service support has created opportunities for librarians to expand their roles beyond expert searching to include information and workflow management support [2]. Through the provision of customized, comprehensive information services, embedded librarians can open avenues for more prominent and active participation as members of the research team [6].

Description

A Network for Accessible, Sustainable and Collaborative Research in Pediatric Palliative Care (PedPalASCNET) is a multidisciplinary pediatric palliative and end-of-life research team with members dispersed across Canada. Two recent MLIS graduates, with supervision from experienced librarians at the head health library, were brought onto a project headquartered at the British Columbia Children's Hospital Research Institute after an initial systematic review project being conducted by some members of PedPalASCNET was reframed as a scoping review. The team decided to conduct a scoping review, determining it would better fit the broad scope of the project and allow for a flexible inclusion and exclusion criteria The ongoing scoping review began in 2015 with the purpose of providing a preliminary assessment of the size and scope of available literature on 180 Quadrant 3 (Q3) conditions and 10 symptoms associated with those conditions. Q3 conditions are progressive, metabolic, neurological, or chromosomal childhood conditions with no cure. Since Q3 conditions are not a stable group, conditions can move into the second and first quadrants as new treatments and cures are discovered. The paucity of published research on symptom management of these rare conditions negatively affects quality of life for children living with Q3 conditions.

Librarians guided and facilitated all stages of the reframed scoping review project, including the design, search, screening, and review phases. A disease and symptom list was developed by conducting a Pilot MeSH literature search and the Charting the Territory study, a longitudinal study looking at the bio-psychosocial-physical experiences of children with life-threatening conditions and their families [7], and by reviewing lists by experts in the field [8,9]. Search strategies were developed by one of the team's librarians and run in several biomedical databases. The rarity of these conditions meant that many either had no defined MeSH term, or that the term had a very recent entry date with little indexed literature available. As a result, broader MeSH terms from the Previous Indexing of the Scope Note were used to include these conditions that had only recently been added (see Appendix for the full search strategy).

Contrary to the known lack of evidence on these conditions, the initial test search retrieved over 50,000 results. As this number was deemed unmanageable to screen, a symptom management search facet was suggested and created by one of the librarians to exclude symptoms discussed in the context of diagnosis and pure description. To reduce noise, broad and ambiguous search terms were either deleted, or keywords with adjacency were added. Relevant articles initially excluded as a result of the reduced search sensitivity were identified through hand and grey literature searching and citation chaining.

The broadness of the search led to over 27,000 results returned from MEDLINE, Embase, and CINAHL after duplicates were removed. As a team of busy clinical investigators, members decided that a double-blind screening each of the results would not be feasible. As an alternative, the librarians and research coordinator manually pre-screened the results using Endnote based on an explicit inclusion and exclusion criteria developed by the team. The Endnote search function was used to more efficiently group together articles that dealt with each disease, and to identify exclusion criteria through keywords such as "mouse model." The function provided an efficient method for the team's non-experts (i.e. the librarians and research coordinator) to identify themes and vocabulary pertaining to each disease. Any indecision by the librarians was discussed with experts on the team. The pre-screening left 996 results, excluding much of the literature that dealt with diagnosis or genetic screening.

Due to the large number of geographically dispersed screeners, the librarians determined that an alternative tool to Endnote would be required. After evaluating the options, the librarians recommended a

free, open-source, semi-automated tool called abstrackr [10] to facilitate the screening process. Abstrackr allows for double-blind screening, and the results can be exported into an Excel spreadsheet for analysis. The semi-automated screening was not used by the team, as there was concern that this could result in mistaken exclusions due to the relatively complex process of screening for 180 conditions and 10 symptoms; however the team would consider making use of this feature for use on future projects to increase efficiency. The tool saved the librarians substantial menial work by automatically recording the comparison between screeners' decisions. The high number of conflicts generated during the screening process demonstrated the importance of pilot testing future project phases to ensure inclusion and exclusion criteria were well defined and understood among all screeners. Conflicts were resolved through group discussions, resulting in a remaining count of 681 results.

For the review phase, it was clear that using Excel worksheets would again create substantial work for the librarians as they coordinated and compared the decisions of the seven reviewers. Abstrackr was favoured by the research team but was retired for the review process because it does not offer a PDF full-text upload feature. Rayyan [11] was instead recommended by the librarians and utilized as a suitable alternative. Rayyan had initially been considered for use in the screening phases but was sidelined because it does not offer a way to double-blind decisions when there are two or more reviewers. In order to avoid the high number of conflicts from the screening phase, team members individually reviewed 10 articles to test the inclusion and exclusion criteria. All conflicts were discussed in meeting updates, and additional clarifications were added to the inclusion and exclusion criteria. The pilot test and the discussion greatly reduced the number of conflicts for the review phase.

Excel worksheets had previously been used by the team to extract data in systematic and scoping reviews. Due to large data sets involved, the librarians alternatively recommended REDCap [12], a web application for surveys and databases which is supported by the research institute of one of the investigators. Although the librarians were not familiar with the use of REDCap for data extraction in other systematic or scoping reviews, the team was satisfied with the tool because it allowed them to access the data extraction instruments from all locations. As well,

the tool offered a method for uploading full-text PDFs to individual records. Most impressively, once completed, the results of the review could be manipulated and analysed using REDCap, including generating reports and graphs for publication. Table 1 shows the characteristic of the tools used for each phase of the review, and recommends tools for future scoping reviews.

Outcomes

The scoping review was enhanced in quality and efficiency through the integration of librarians onto the team. The development and execution of the search, data selection, extraction and management, and overall methodological approach were largely facilitated and guided by the team's librarians. The quality of search developed and executed in this scoping review contrasted from similar past projects completed by the team, which had not combined controlled vocabularies with keywords for each search concept, and had not used previous indexing for recent controlled vocabulary additions. The librarians were also able to identify and suggest strategies to increase search specificity through the creation of a new search facet to identify "symptom management" articles.

The clinician-researchers on the team initially expressed hesitation about using abstackr, Rayyan, and REDCap because of the time requirement involved in learning new technologies. With the assistance of the team's librarians, however, all members were able to adopt these tools with relative ease, with members commenting that their use ultimately reduced and simplified many stages of the review. Team members also commented that the librarians' involvement on the team and advocacy for best practices during team decisions had methodologically improved the review. Additionally, feedback was received stating that the librarians' presence had provided much needed workflow and data management support. The team members expressed that in future scoping and systematic reviews, a librarian should be integrated as a member of the review team from the earliest stages.

The added value of embedded librarians to this project was further demonstrated by the permanent hire of one of the librarians, whose current role involves extensive collaborations with several research teams alongside PedPalASCNET. The permanent librarian and the supervising librarians were included as authors on a poster detailing the process and some

Table 1. Comparison of the features of Endnote, abstackr, and Rayyan

	Endnote	abstrackr	Rayyan	Tool to be used in Future Reviews
Pre-Screening (Single)	**STRENGTHS**			
	• Small amount of setup needed (i.e. creating folders for inclusion and exclusion) • Advanced search feature helps group articles together for easy exclusion (i.e. "mouse model)	• No mistakes made from mis-dragging citations into folders • Option for single-screening	• No mistakes made from mis-dragging citations into folders • Option for single-screening through turning off blind mode • Able to detect and delete duplicates not found by reference manager • Able to export results directly to reference manager	**Endnote / Rayyan**
	WEAKNESSES			
	• Some mistakes made by dragging into wrong folder	• Significant learning curve needed to import results (danger of creating duplicates) • No ability to detect and delete duplicates not found by reference manager • Only able to export results as Excel sheet	• Minimal learning curve needed to import results • Lack of advanced search feature to group results	
Screening (double)	**STRENGTHS**			
	• No learning curve required to learn new software	• Simple setup for multiple screeners • Double blind screening for teams larger than two	• Able to deleted and delete duplicates not found by reference manager • Able to export results directly to reference manager	**abstrackr** (teams with more than two reviewers) **Rayyan** (teams with only two reviewers)
	WEAKNESSES			
	• Complex setup for large number of screeners • Large amount of work for librarians and research staff to manage and compare screening results	• Significant learning curve needed to import results (danger of creating duplicates) • No ability to detect and delete duplicates not found by reference manager • Only able to export results as Excel sheet	• Does not support double blind screening for teams larger than two	
Review (double)	**STRENGTHS**			
		• Double blind screening for teams larger than two	• Supports upload of full text • Able to export results directly to reference manager	**Rayyan**
	WEAKNESSES			
		• Does not support upload of full text • Only able to export results as Excel sheet	• Does not support double blind reviewing for teams larger than two	

initial results, which was presented at a palliative care conference [13]. The same librarians will be also included as authors in the final publication when it is prepared.

Discussion

This scoping review presented a specific set of challenges well suited to the expertise of librarians. The librarians' success finding workable solutions speaks to the value of this embedded model for future research teams. Embedded librarians can overcome issues arising from large data sets and geographically dispersed team members by integrating innovative tools and technologies into various stages of a project. They can also help to ensure that systematic, rigorous methodologies are followed throughout all stages of a review. Lastly, librarians are particularly well-equipped to assist teams engaged in new research, or who are exploring areas not well defined in the literature. As expert searchers, librarians can work alongside their clinical counterparts to develop the most efficient and effective approaches to comprehensively search the established and grey literature.

The embedded model discussed in this paper is currently being applied within another geographically dispersed research group based out of the BC Children's Hospital Research Institute. Minor modifications have been made to the model based on some of the lessons learned during the scoping review discussed in this paper. One such change is the involvement of the librarian in the initial planning stages of the review. This early involvement provides the librarian with the opportunity to map the field of study prior to completing the review protocol, which involves making suggested changes in scope and methodology, and aiding in the creation of explicit inclusion and exclusion criteria. Future programs will also incorporate more extensive pilot tests for each of the phases to ensure the suitability of new technologies based on the abilities and experience of team members, as well as to resolve ambiguities related to inclusion and exclusion criteria.

The high number of conflicts during the screening phase indicates that this phase is integral for reviews that explore broad research questions with a high level of specificity. Future reviews will evaluate the strengths and weaknesses of using abstrackr rather than Rayyan for the screening phase depending on the characteristics of the review team. Duplicates were introduced into the set in abstrackr due to the more complicated requirements to upload citations. Using both abstrackr and Rayyan also requires team members to learn two new tools. However, as Rayyan does not currently support automatic double-blind screening, the librarians must spend time to break up the articles into manageable groups for each reviewer and then assign and manage multiple reviews. For this reason, future decisions to use either abstrackr over Rayyan will depend on the number of screeners on the team.

This model offers librarians with a roadmap for providing on-site and distance support to clinical team members located at multiple research-based satellite sites. The role of the librarian is largely created, defined, and funded by their research team; therefore, the success of this type of program hinges on the level to which researchers value collaboration with, and utilize the support of, librarians. Collaborations with research teams like PedPalASCNET provide opportunities for librarians to gain greater insights into the operations of research teams, to develop closer professional relationships and connections with researchers, and to make significant contributions to research projects which may or may not be acknowledged through co-authorship [14].

Conclusion

Health librarians embedded on clinical research teams can help guide and facilitate the scoping review process to improve workflow management and overall methodology. Librarians are particularly well equipped to solve challenges arising from large data sets, broad research questions with a high level of specificity, and geographically dispersed team members. Knowledge of emerging and established citation-screening and bibliographic software and review tools can help librarians to address these challenges and provide efficient workflow management.

Statement of Competing Interests

No competing interests declared.

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PROGRAM DESCRIPTION / DESCRIPTION DU PROGRAMME

Bibliotherapy-based Wellness Program for Healthcare Providers: Using Books and Reading to Create a Healthy Workplace

Natalia Tukhareli[1]

Abstract: Within the context of benefits of a healthy workplace, bibliotherapy is seen as an effective way of promoting health and wellness to hospital employees. The paper will present a detailed description of an innovative informational and recreational bibliotherapy-based reading program for healthcare providers developed and implemented by a Health Sciences library, in collaboration with the Occupational Health department. The methodology involved an extensive review of the bibliotherapy research and best practices in the UK and North America. The mechanics, benefits, and challenges of the program will be discussed. The program evaluation included an internal survey to the hospital employees. The evaluation results show that the bibliotherapy program has provided a new venue to address work-related stress and promote health, well-being, and resilience within the organization. Moreover, it helped to expand opportunities for collaborative projects and partnerships for the library as well as increase visibility of the library within the organization.

Introduction

In the light of increased stress and work-related burnout of healthcare providers, employers strive to create and maintain the psychologically healthy workplace. Hospitals have been looking for effective ways to address psychological distress, job burnout, mental health, and compassion fatigue. Research shows that employer-sponsored wellness programs contribute to the overall health and well-being of their employees, improve employee productivity and retention, and reduce absenteeism and health care costs [1-2]. Studies explore various ways of promoting positive strategies for coping and building individual and organizational resilience, which are considered important factors that influence the health and productivity of healthcare workers [3-8]. Resilience is defined as "the process of effectively negotiating, adapting to, or managing significant sources of stress or trauma" [9]. As Robertson et al. [7] note, resilience is "increasingly necessary to maintain an effective, adaptive, and sustainable workforce." Jackson, Firtko

and Edenborough [8] have identified effective resilience-building strategies, such as building positive and nurturing professional relationships, maintaining positivity, developing emotional insight, achieving life balance and spirituality, and becoming more reflective. Within this context, bibliotherapy is seen as an effective strategy of strengthening healthy thinking and resilience in healthcare providers.

"Bibliotherapy" is an umbrella term that covers a wide variety of clinical (therapeutic) and non-clinical (developmental, creative, social) interventions involving books, reading, and communication around texts. In the broadest sense of the term, bibliotherapy is the systematic use of books to assist individuals in dealing with mental, physical, emotional, developmental, or social problems [10]. It has been also widely recognized as an effective tool of promoting health, well-being, and resilience, which reflects the view of literature as "being health-promoting in the widest human sense" [11]. Today, bibliotherapy offers a variety of successful applications that range from one-on-one and group

Natalia Tukhareli. Librarian, Health Sciences Library, Scarborough and Rouge Hospital, Scarborough ON
[1]Corresponding author (email: ntukhareli@rougevalley.ca)

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sessions run by psychologists and psychiatrists in medical clinics and hospitals [12-13], to collaborative "Books on Prescription" programs offered by public libraries partnering with healthcare organizations [14-15], to "shared reading" groups facilitated in a variety of settings, including libraries, schools, retirement homes, hospitals, drug rehabilitation units, shelters, community centers, and prisons [11, 16-17].

Literature, in a variety of its genres, can provide a broad variety of fictional and non-fictional accounts that individuals face in their lives, both at work and at home. While exploring these stories from a safe distance, readers have always a chance to reflect on their personal situations and get insight into life's challenges. Given that, it has been suggested that the integration of books and reading into a workplace wellness program can expand the 'therapeutic' space for reflection and emotional insight for the hospital employees as well as educate them on evidence-based strategies of managing occupational stress and enhancing personal well-being and resilience. This assumption is supported by the findings of the author's previous review of the scholarly research and best practices in bibliotherapy [10] as well as the recent analysis of the research studies exploring the potential of bibliotherapy-based interventions in addressing workplace health and well-being [18-22]. The paper will present a detailed description of an innovative, informational, and recreational reading program for healthcare providers developed and implemented by a librarian from the Health Sciences Library, in collaboration with the Occupational Health department at Scarborough and Rouge Hospital (formerly Rouge Valley Health System, a medium-sized community hospital in the Greater Toronto Area in Ontario). It involves thematic compilations of readings for the hospital employees to promote a healthy workplace. The targeted population included both clinical and non-clinical groups, including nurses, physicians, allied health professionals, the hospital administration, the management, volunteers, etc. The hospital patients have not participated in the program.

Program Description

The "Bibliotherapy for Staff" program provides an example of an innovative application of bibliotherapy in a medical library setting. The conceptual idea was developed by the author in 2011. After reviewing principal features, delivery methods, and benefits and limitations of existing clinical and non-clinical bibliotherapy-based programs in the UK and North America, the author suggested a new way of using books and reading to promote individual and community health, well-being, and resilience. The approach involves addressing existential, or "living problems," through thematic compilations of readings of various genres. It was initially featured in the program "Read to Connect" that the author developed for the clients of St. John the Compassionate Mission, a non-profit organization supporting disadvantaged community members in Toronto, ON. The program participants included individuals coping with difficult transitions and challenges in their lives, such as homelessness, relocation, loss and bereavement, family issues, and parenting challenges. Delivered in 2011-2012, the program involved reading and communication around texts in small groups. The author identified specific themes relevant to the targeted client group and developed compilations of fictional and non-fictional reading materials to address these themes. The topics addressed throughout the program included "loneliness," "dealing with adversity," "loss and grief," "forgiveness," "gratitude," "positive attitude," "meaning in life," "compassion," "love and giving," "self-acceptance," "responsibility," "parenting," and more. The innovative content of the "Read to Connect" program was delivered within a "shared reading" model (a read-aloud session in a group setting) developed by the Reader organization in the UK [17]. The "Bibliotherapy for Staff" program described in this paper presents a modified version of the author's original program adjusted to a new client group.

The idea was first introduced to the staff of the Rouge Valley Health System (RVHS) in December 2014, when the author, the librarian at the Health Sciences Library, put together a compilation of reading materials (excerpts from fictional and non-fictional texts and poems) to address the holiday stress. The compilation received a good feedback from the hospital staff including the senior management team. During consultations with the Occupational Health department in January 2015, it has been suggested that the program may provide a new venue to address wellness and healthy workplace themes at the RVHS. The Occupational Health Manager has suggested the first two topics to be addressed through the library program, such as healthy living and resilience. This put a start for the "Bibliotherapy for Staff" program,

an innovative bibliotherapy-based informational and recreational library program.

When introducing and promoting the new library service within the organization, we identified the program objectives. It was suggested that the program will

- provide an additional venue to address wellness and healthy workplace topics within the organization;
- contribute to improved health and well-being of the hospital staff by promoting healthy lifestyle, healthy thinking, and resilience;
- educate staff on new approaches in stress management (positive psychology interventions, mindfulness techniques, music therapy, horticultural therapy, etc.);
- expand opportunities for collaborative projects and partnerships for the library;
- increase visibility of the library within the organization and traffic on the library's website.

Since the launch of the program, we have developed twelve compilations of readings covering a variety of health and wellness topics, such as healthy living, positive thinking, gratitude, resilience, life-work balance, meaning and purpose in life, change management, and more. The reading materials were selected from a broad variety of both fiction and non-fiction texts, including parables, short stories, novels, poetry, biographies, autobiographies, self-help books and websites, academic manuscripts, and research articles in the health sciences, humanities, and social sciences. It has been suggested that while fictional materials and poetry would provide a chance for reflection and observation, non-fiction materials would educate staff on resilience-building strategies supported by recent developments in the fields of positive psychology, neuroplasticity, and complimentary therapies. Each compilation included a brief introduction with the librarian's personal reflections on the topic. The length of the compilations varied between 4 and 8 pages.

Specific criteria for selecting materials included relevance of materials to the topics addressed, high literary quality of fiction and poetry, and a strong evidence-based support for non-fictional materials. We have ensured the high quality of reading materials by selecting fiction and poetry by prominent classical and contemporary authors, such as Charles Dickens, Paul Bowles, Paolo Coelho, Antoine De Saint-Exupery,

Ernest Hemingway, Alistair MacLeod, Alice Munro, Rainer Maria Rilke, Emily Dickinson, Mary Oliver, etc. When selecting non-fictional materials (e.g. works in psychology, philosophy, the environmental science, neuroscience, etc.), we would consider the author's expertise in a particular filed. The compilations included excerpts from groundbreaking works by Victor Frankl, Erich Fromm, Dalai Lama, David Suzuki, Jean Vanier, Elizabeth Kübler-Ross, Norman Doidge, and other renowned authors in different fields of the humanities, social sciences, and health sciences.

It should be also mentioned that taking into account the workplace diversity at RVHS, we aimed at selecting materials that would speak to individuals representing different cultural and spiritual traditions. The following materials included into the "Healing Garden" compilation show the variety and diversity of the program content: poems by Emily Dickinson, Chief Dan George, and Japanese haikus; excerpts from the novel "The Old Man and the Sea," by Ernest Hemingway; excerpts from the environmental works by David Suzuki and Thomas Berry; excerpts from writings by Dalai Lama; and abstracts from research studies on horticultural therapy and nature-based rehabilitation, including recent studies of Shinrin-yoku ("forest bathing").

When selecting specific materials for thematic compilations, the librarian ensured that the use of materials stayed within the boundaries of fair dealing in Canadian copyright law or sought permission from copyright holders. The amount to be used was determined using the organization's fair dealing guidelines around what is considered a short excerpt for non-commercial use for the purpose of education. In cases where selections included copyrighted materials published on institutional websites, the librarian submitted formal requests and was granted permission to use specific materials for the purpose of the reading program. Some works in the public domain were also used, and proper citations were provided for all materials.

We used different delivery methods to distribute the compilations of readings to the hospital staff. These included a weekly hospital electronic newsletter (a direct link to a PDF file); a web page on the Library Intranet; displays with print copies of compilations in the Library and the Occupational Health department; and print copies added to the Library's training packages for staff. In addition, the Manager of the Occupational Health department would send

customized emails to specific clinical groups and the management.

Outcomes

The program evaluation included an internal survey to the hospital employees, which was open for a period of 8 weeks (March-April 2016). The survey was distributed online through the Library's web page, group emails, and the hospital electronic newsletter. Print copies of the survey were displayed in the library. The staff was asked to share their feedback on past compilations of readings as well as suggest ideas for future topics that could be addressed through the program; please see Appendix for a complete list of the survey questions.

Overall, a small sample of 32 responses was received. However, the participants of the survey represented both clinical and non-clinical groups in the hospital, including nurses, physicians, Human Resources, Health Records, Occupational Health, and the management.

We were particularly interested in the participants' input in regards to the following statements: *"Readings contributed to improved well-being (provided relaxation and/or reduced stress)"* and *"Readings provided insights or a new perspective on my current situation in life and/or at work."* 81.3% (n=26) of respondents rated both statements between 7 and 10 (on the scale from 1 to 10, with 10 being the highest). Respondents have also expressed their overall satisfaction with the variety and quality of materials selected (87.5%, n=28) and the length of compilations (84.4%, n=27). It should be also noted that one of the first respondents to the survey, the physician affiliated with the RVHS, asked to add the listserv option under delivery methods. He wrote, *"Have a mailing list so that those who are genuinely interested, as I am, can be assured of receiving the publication regularly."* After we added this option, 15 people have provided their email addresses.

We also received 23 comments from the survey participants. Respondents have suggested specific topics to be addressed in the future: 1) "learning to slow down in the present "crazy-pace" life"; "the value of solitude"; 2) "care of the elderly (parents), care of seriously ill or injured children"; 3) "bullying (being bullied in the workplace by coworkers)"; 4) "fear/uncertainty/anxiety of the unknown at work and in life"; and 5) "love for what one is doing." Two participants suggested including "more real stories about healthcare workers' experiences" and "stories related to working in a healthcare environment" into compilations.

The testimonies below reflect the participants' appreciation of the library's program:

"A truly relatable and meaningful grouping of compilations that have impacted me far more than I ever could have realized. I am grateful for how they encourage me to dig deep within myself and allow myself to feel and understand things that I've otherwise pushed aside either consciously or unconsciously."

"I never thought about how useful this could be in my life and work. Thank you for bringing it to the forefront."

"Thanks very much!! I enjoyed the readings and found them to be insightful and relaxing. A great way to escape during a hectic and busy day."

Overall, the survey data showed that the topics addressed through thematic compilations of readings were relevant to the needs of healthcare providers and non-clinical staff. The "Bibliotherapy for Staff" program was viewed as a valuable stress-management intervention and an effective strategy to improve individual and organizational resilience.

Discussion

Within the context of traditional workplace wellness programs and services, this informational and recreational library program has provided a new venue to address workplace wellness and promote healthy lifestyle to hospital employees. The thematic compilations of readings facilitated reflection on core existential themes (i.e. adversity, loss, forgiveness, gratitude, purpose in life) and more specific work-related issues (life-work balance, meaningful work, work stress), thus providing individuals with an opportunity to get insight into their own situations in life and at work. The readings also educated staff on new approaches in stress management that can help activate one's personal resources, strengthen healthy thinking and positive professional relationships, and develop an individual strategy to respond on work pressures and constant change. The informational component of reading compilations, with its focus on healthy living tools and resilience-building strategies supported by research findings in positive psychology and neuroplasticity, has been considered an important

factor of the program's success. The program participants have acknowledged high quality of self-help resources on "healthy lifestyle" (eating, exercise, outdoor activities, community engagement) and "healthy thinking" (positive psychology and mindfulness techniques) into reading compilations.

From the library's perspective, the program proved to be a simple, cost-effective, and easy to implement library service. The only barrier identified during the implementation of the program was the librarian's time. Selection of materials is a time-consuming task, which involves extensive searching, reading, critical evaluation of the quality of materials (particularly self-help books), as well as a creative process of compiling readings under a certain theme. The average time required to develop and administer one monthly compilation was 16 hours (4 hours per week). It became obvious that monthly compilations were not sustainable given the rest of the librarian's workload. As a result, the program delivery frequency has been adjusted from monthly to quarterly.

Another question addressed at the early stage of the program's implementation was around the skills needed to facilitate the initiative. Librarians do have proper skills and qualifications to develop and run the program, including literary knowledge and expertise, literature search skills, and the ability to find trustworthy information sources and critically evaluate information. In this particular case, the librarian's previous experience delivering bibliotherapy-based reading programs and thorough knowledge of the classical and contemporary literature were considered important assets. Also, due to the collaborative nature of the program, the librarian had an opportunity to discuss the relevance of the proposed themes for reading compilations and selected materials with the staff of the Occupational Health department and get the final approval from the department's manager.

From a library marketing perspective, the program has significantly increased the visibility and the perceived value of the library within the hospital and outside the organization. In 2016, the RVHS was named one of the GTA's Top employers. In the Memorandum circulated to the hospital employees, bibliotherapy service was listed among other workplace wellness initiatives contributed to the award: "providing a healthy workplace series of seminars and supports, as well as offering bibliotherapy (a systematic use of reading materials to help people cope with mental, physical, emotional, developmental or social problems)" [23].

The success of the program led to other new collaborative projects for the library. For example, compilations on healthy thinking and gratitude were expanded into an Interdisciplinary Lunch & Learn session "Benefits of positive thinking: How to improve health and well-being through fostering optimism and gratitude" co-facilitated by the Librarian and the Ability Case Management Specialist. This session was repeated three times for specific hospital groups, including human resources, operating room staff, and the nursing department. Moreover, the possible expansion of the reading program into group workshops with clinicians to address compassion fatigue and stress has been discussed.

In conclusion, the "Bibliotherapy for Staff" program shows a creative way of integrating books and reading into library services to promote health, well-being, resilience, and personal growth at workplace. Overall, the program has demonstrated the value of books and communication around texts in addressing workplace wellness within a hospital environment. This suggests that creative bibliotherapy can be further explored within the context of traditional support services offered in the workplace. Librarians are encouraged to develop similar collaborative initiatives at their organizations as well as look for new ways of applying books and reading into everyday life.

Statement of Competing Interests

No competing interests declared.

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Appendix: Evaluation Survey Form

Your feedback is important to us!

Thank you for participating in the evaluation of "Bibliotherapy for Staff" library program. Please take a moment to tell us what you thought of the published compilations of 'therapeutic readings' and your ideas for future topics.

1.	Name (optional):	
	Title or Department:	
2.	**Please rate your agreement with each of the following statements on a scale from 1 -10, with 10 being the highest:**	**Rating**
	Topics addressed were relevant to my informational and recreational needs.	
	Readings contributed to improved well-being (provided relaxation and/or reduced stress).	
	Readings provided insights or a new perspective on my current situation in life and/or at work.	
	I like the variety and quality of materials selected.	
	I find the length of published compilations appropriate.	
	Delivery methods (e-Echo; Library website; Library displays) are effective.	
3.	What additional topics would you like to be addressed?	
4.	Please provide your e-mail address if you would like to receive our future compilations by e-mail.	
5.	Are any other comments or thoughts that you would like to share?	

Thank you for your valuable time and input!

BOOK REVIEW / CRITIQUE DE LIVRE

Gorman SE, Gorman JM. **Denying to the grave: why we ignore the facts that will save us.** New York: Oxford University Press; 2017. Hardcover: 312 p. ISBN 978-0-19-939-660-3. Price: USD $29.95. Available from: https://global.oup.com/academic.

As librarians, we tend to view medical decision-making through the framework of health literacy, which the Canadian Public Health Association's Expert Panel on Health Literacy defines as "the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life-course" [1]. For some time, I have felt that health literacy does not fully explain many individual healthcare decisions. Why are some of my highly educated friends so keen on cleanses and fad diets? How can a family member with an advanced science degree express skepticism about vaccines? Why, in my home province of Alberta, did a toddler die of meningitis after his parents refused to seek appropriate medical care [2]?

Research also suggests that factors other than health literacy may be at play; a recent Israeli study found that parents with higher levels of communicative and critical health literacy were actually *less* likely to vaccinate their children [3].

With the above examples in mind, I picked up Sara and Jack Gorman's *Denying to the Grave: Why We Ignore the Facts that Will Save Us*, which delves into some of the cognitive science behind false health beliefs. The authors are well positioned for the task: Sara is a public health expert and writer whose work focuses on health communication, global public health, mental health, and psychology; her father and co-author, Jack, is a former academic psychiatrist.

The authors begin with the premise that people who hold anti-scientific health beliefs are not stupid or uneducated. They also emphasize that the problem is not simply a lack of information or of the basic skills to critically appraise it. Instead, they argue that these beliefs are shaped by cognitive and psychological tendencies that are generally *adaptive* from the perspective of evolutionary psychology (the tendency

to find community among like-minded people and to follow charismatic leaders, for example), but in the case of certain health belief systems, are being applied in a *maladaptive* way. They also look at some common sources of cognitive error and bias.

Individual chapters are devoted to the psychology behind conspiracy theories and charismatic leaders, as well as common sources of cognitive error related to confirmation bias; difficulties with understanding causality, probability and risk; and our tendency to avoid complexity. Examples drawn from various health beliefs help to illustrate these concepts in action. The authors conclude with several suggestions for addressing these problems.

I found the book provided an accessible and compelling overview of the complex reasons why people embrace false health beliefs. Beyond healthcare, I found that the chapters on conspiracy theories and charismatic leaders were highly relevant to recent political developments around the world, such as Brexit and the U.S. election.

For anyone who has studied cognitive biases, some of the later chapters might be a bit redundant, but I appreciated how the authors emphasized the adaptive nature of these biases in our evolutionary history; discussed why these biases work well for simple decisions, but fail us in the face of complexity; and made the case that simply accusing people of wrong thinking will not eliminate these biases. For medical librarians, this book offers a useful complementary framework to health literacy for understanding how people assess health information and make decisions.

The authors employ several examples of false health beliefs, some of which work better than others. The anti-vaccine examples provided new insight into a familiar issue, while the authors' introduction to the AIDS denialism movement provided a parallel example on a topic where I was not previously knowledgeable. However, other examples, such as their contention that there is a movement opposed to the use of electroconvulsive therapy to treat depression, were not really fleshed out; they seemed to assume a level of knowledge that readers might not possess. Their use of the anti-GMO and anti-nuclear

movements as examples of anti-science beliefs seemed to me one-sided; while much of the opposition to GMOs and nuclear power may be driven by emotion rather than science, there are legitimate scientific concerns about the safety of nuclear power plants and the ethics of genetically modified organisms, which the authors did not really acknowledge.

The authors' concluding recommendations are a bit of a mixed bag. I agreed with their call for scientists to engage more with the public, and to communicate scientific findings and debunk false claims in a way that resonates better with the public. Their suggestion that the media provide better training in scientific reporting to their staff seems quaint in the era of self-curated "fake news," and while it's a worthy goal, it may be out of reach for many establishment news outlets that are facing deep cuts and laying off senior staff. However, journalism schools could certainly do better at educating their students in scientific reporting.

The authors also suggest a complete overhaul of how science is taught, beginning in elementary school, so that the focus is not on dry facts and formulas, but rather on engagement with science and a deep understanding of the scientific process. This appears to be already happening to some extent, with the rise of science, technology, engineering and mathematics (STEM) education initiatives across North America, but there are challenges to implementation in a fragmented system where so much of the curriculum is controlled by provincial and state governments.

Given Sara Gorman's expertise in public health, the book is surprisingly lacking in suggestions for patient education or other public health interventions. Perhaps this reflects a larger weakness in the evidence base in this area.

Given the strong overview of the problems around false health beliefs, the weakness or vagueness of the proposed solutions leads to a bit of a deflating conclusion to an otherwise compelling book. However, when society at large is grappling with anti-science ideologies, fake news, and declining trust in traditional sources of authority, it is perhaps expecting too much to ask that this book provide strong recommendations on a way forward. Despite this drawback, this is an excellent guide to the landscape of irrational health beliefs and decisions.

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Statement of Competing Interests

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Heather Ganshorn
Associate Librarian
University of Calgary
Calgary AB
Email: Heather.Ganshorn@ucalgary.ca

BOOK REVIEW / CRITIQUE DE LIVRE

Buchanan, HE and McDonough, BA. **The one-shot library instruction survival guide.** 2nd ed. Chicago: ALA Editions; 2017. Softcover: 168 p. ISBN: 978-0-8389-1486-1. Price: USD$50.00. Available from: http://www.alastore.ala.org/detail.aspx?ID=11856.

Instructional librarians are very familiar with a one-shot instruction session, a "single-session, generally only 50 to 75 minutes in length" (p. 2). Research and instructional librarians at Hunter College, Western Carolina University, Buchanan and McDonough present some of the challenges and more importantly, ways to succeed when confronted with teaching this type of session. One-shots have a short length which results in them being more about bibliographic teaching (showing or demonstrating library resources) rather than information literacy instruction, reaching higher-level learning outcomes. This second edition integrates the *Framework for Information Literacy for Higher Education (FILHE)* by the Association of College & Research Libraries (ACRL), as it presents everything from initial communication through to assessment. Each of the seven chapters presents key concepts, highlights relevant questions, and summarizes the topic at end. The chapters are organized to present sections with additional resources, comparison tables, lesson learned, and vignettes that highlight examples from other librarians, providing real-life context to the ideas being presented. *The One-Shot Library Instruction Survival Guide* is a great overview for new librarians and can invigorate established academic librarians looking to approach their instruction sessions in an innovative way. It is important to note that the book is focused on higher education settings; while the ACRL *FILHE* does have overarching themes that could apply to any library setting, some of the examples may only work in a university or college environment.

Active learning, tied to objectives that are relevant to the learner, allows for better knowledge retention and a more thorough understanding. Buchanan and McDonough present an understanding of this as they note, "In order to create a learner-centered environment, you have to stop talking and demonstrating, give up some control, and invest time and thought in planning and designing instruction" (p. 49). Chapter Four, *How do I get them to pay attention?*, presents many different active learning techniques that can easily be integrated into one-shots, such as one-minute papers, think-pair-share, gallery walks, and concept mapping. There is also a useful table that lays out options for gathering student input instantly, using clickers, polls, index cards and even social media (p. 92). By allowing students to reflect on the topic and discuss it with others in engaging ways, they become more immersed, rather than simply watching a demonstration of a pre-prepared search in a database. These types of activities also allow for student learning to connect with the *FILHE*, such as an example that stood out under the "Information as Value" frame (p. 37-38): a librarian showed pictures of medieval libraries, with books in chains which turned into a discussion on access to information and why information is so valuable. This theme connects to today's libraries and the services offered to students, making it is a perfect segue to the value of information and libraries. There are also instructional strategies provided for different types of settings, including online, large lectures, rooms without computers, and not even having a room available at all (where they suggest trying teaching right inside the library to show rather than tell). Since one-shot sessions can be "all types of classes, at all levels, all subjects, and in a variety of settings" (p. 79), this book gives readers potential solutions for active learning techniques no matter where you are instructing.

One of the ideas the authors dismiss is creating learning objectives for one-shot sessions, as they state, "don't get sucked into spending too much time and energy crafting them" (p. 46). However, in their chapter on assessment, they mention that assessing students can help address learning goals. While teaching to larger concepts is a valuable approach, specific outcomes need to be defined from the beginning to assess whether or not learning has taken place. In relation to assessment, the authors do give some simple techniques for one-shots, including asking students to describe the session in a word,

writing it down on an index card, and creating a word cloud for an overall picture of the impact of the class. Buchanan and McDonough also strongly suggest following up with course instructors post-session and assessing your own presentation skills. That being said, starting with learning objects can help set the stage for the assessment process, whether assessing our students or assessing ourselves.

The greatest strength of this book is that it emphasizes that one-shots should not be a first step to building relationships; instruction should be strategic and whenever possible, integrated into the learning outcomes of the course or the program. There is definitely a challenge to this, as the authors note that often faculty do not understand the full range of library services or resources (in Chapter 2: *The teaching faculty won't/don't _____: Communicating and collaborating with instructors*). Yet holding our own

instruction to a higher standard allows for stronger information literacy for both students and potentially for faculty as well. Librarians need to look at their library's and their institution's strategic priorities and recognize that they do not have to say yes to every one-shot request that comes their way; "if you allow information literacy to be trivialized at your institution, you won't be helping anyone. It's okay to say no" (p. 25).

I would recommend purchasing *The One-Shot Library Instruction Survival Guide.* It is straightforward, practical, and provides ideas that can be easily incorporated into one-shots. While the focus is on universities/colleges, health librarians provide one-shots in all types of settings and can use the information in this book to rethink their approach to short, standalone sessions.

Statement of Competing Interests

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Rachel Sandieson
Clinical Librarian
Health Sciences Library
London Health Sciences Centre
London ON
Email: rachel.sandieson@lhsc.on.ca

BOOK REVIEW / CRITIQUE DE LIVRE

Bent, MJ. **Practical tips for facilitating research.** London: Facet Publishing; 2016. Softcover: 236p. (Blanchett H, editor. Practical tips for library and information professionals series). ISBN 978-1-78330-017-4. Price CAD $128.27. Available from http://www.facetpublishing.co.uk/title.php?id=300174 #.WNxfAVXyt0w.

Starry eyes. That's what I had when I first read over the table of contents of *Practical Tips for Facilitating Research* by Moira Bent. I currently oversee a small university-affiliated satellite library within a hospital. Liaising with my researchers is no simple task. They're busy people, often juggling clinical and academic duties in addition to their research work, so I was very excited by the variety of topics in the book's contents list and the prospect of numerous ideas on how to better connect with and support my researchers. This book did not disappoint!

Practical Tips was written for librarians and library staff, particularly those working in academic libraries, who support researchers in any field. Health sciences librarians however will recognize their work in particular in all the topics and strategies covered in this book. Before taking her retirement last summer, Moira Bent was a longstanding Faculty Liaison Librarian at Newcastle University in England and has done extensive work in information literacy.

Bent covers a lot of territory in this book, starting with an overview of the book's purpose (Section 1) and contents (Section 2), theories and models around researcher career stages, the research cycle, and information literacy (Section 3), and moving quickly into more applied chapters dedicated to the library's role in organizational structures (Section 4), its use of space and place (Section 5), staff roles (Section 6), collections (Section 7), interventions by phase of the research lifecycle (Section 8), teaching approaches (Section 9), and workshop ideas (Section 10). Interestingly, Bent makes a conscious choice to largely skip over undergraduate students as a population of interest, focusing more on support that can be delivered to masters and doctoral students, as well as early-career and established researchers.

A shining strength of this book is the number of ideas and tips provided. Bent makes a point of including real-world examples whenever possible, with testimonials and lessons learned from librarians all over the world who have implemented the proposed ideas. Bent also accompanies examples with thoughtful "To Think About" sections, prompting readers to consider potential pitfalls and additional considerations before committing themselves or their staff to new projects.

I've already applied some *Practical Tips* in my own work. I was inspired to approach my hospital's organizing committee about an upcoming Research Day after reading Section 5.5 "Get involved with local research conferences and events". I pitched the idea of a library display to the organizing committee, along with several activities suggested in *Practical Tips* to attract conference goers, such as an ORCID sign up and information station and the provision of goodies and a raffle (in my case, for 3D printed swag). My proposal was instantly accepted, and will surely garner good exposure for the library at my institution.

Bent's decision to focus more specifically on services and delivery to researchers at the masters level and onwards was another strength of this book. This allowed for a focused, detailed, and practical examination of what implementation of the ideas and tips would look like by target audience group. For example, teaching masters students—who may not yet have published anything—how to calculate their h-index may not be the best use of finite training time, whereas established researchers would certainly get more benefit from that type of activity.

In addition to the practical tips, and to the book's approach to catering to various research groups, the provision of further reading material for every section of the book is another benefit, and enables readers to discover additional material as their interests or needs require.

To be honest, I cannot think of any true weaknesses of this book. It is exactly what it promises to be, "an attempt to bridge the gap between theory and practice, grounding the very practical ideas garnered from library and information staff around the world in

current research in the library and information science discipline in order to assist LIS staff in developing and managing their role in the research environment" (p. 3). While Bent does tend to prioritize the practical over published research, providing only a few key references for each subsection, this book is not intended to be an exhaustive resource of library and information science research, and is explicit in its design and purpose: to provide librarians and library staff with a wide range of ideas for how to help and connect with their researchers.

I would highly recommend this book to any librarian working with researchers in the health sciences, and to many of our colleagues working in other disciplines, for that matter. The book is short, realistic, practical, easy to read, and extremely useful for generating ideas. As for me, I am still starry eyed. I know I will be referring back to this book and my copious marginalia for the foreseeable future—that is of course until my colleagues start asking to borrow my copy!

Statement of Competing Interests

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Sarah May Visintini
Replacement Librarian, Berkman Library
University of Ottawa Heart Institute
Ottawa ON
Email: svisinti@uottawa.ca

PRODUCT REVIEW / CRITIQUE

Product: RxTx and Micromedex

Purpose: Web-based point of care clinical decision-making drug information tools

URLs: http://www.pharmacists.ca/products-services/ and http://truvenhealth.com/products/micromedex

Introduction

Drug information tools are an integral part of medical education and health care practice. Although Western University does not have a pharmacy program, students in the Schulich School of Medicine & Dentistry and the Faculty of Health Sciences regularly require access to drug information to prepare for their professional careers. It is quite common for academic libraries, especially those with medical and pharmacy programs, to subscribe to one or more drug tool. However, frozen or reduced acquisitions budgets across many Canadian institutions are creating challenges for subscribing to more than one drug resource. This product review will compare two common drug information tools: RxTx and Micromedex Solutions (Micromedex).

Production Description

RxTx is the rebranded name for the suite of evidence-based, point of care products available from the Canadian Pharmacists Association (CPhA). RxTx includes the Compendium of Pharmaceuticals and Specialties (CPS), Compendium of Products for Minor Aliments (CPMA), Compendium of Therapeutic Choices (CTC), Compendium of Therapeutics for Minor Ailments (CTMA), Clin-Info tool, and Lexi Drug Interaction and Product Identification tool. RxTx offers several subscription packages, including the full suite of CPhA products or the specific content of drug and therapeutic modules. This is a significant change, with budgetary implications for institutions, as previously individual products were purchased. RxTx has an editorial staff that includes expert physicians and pharmacists, who seek out and review the best available evidence.

Micromedex (a Truven Health Analytics product) is an evidence-based, point of care clinical decision-making drug information tool. Its features include drug searching, drug interactions, IV compatibility, drug IV, drug comparison, CareNotes, NeoFax Pediatrics, Red Book, calculators, and toxicology and drug product look up. Micromedex employs in-house editorial staff to evaluate and synthesize the literature across multiple content areas.

The intended audience for RxTx and Micromedex is very similar and include pharmacists, physicians, nurses, and other health care providers. Micromedex also identifies emergency department clinicians, medical librarians, and students and residents as its intended users. Both RxTx and Micromedex are subscription-based resources, with pricing dependent upon institutional needs and user groups.

Usability

RxTx and Micromedex are browser-based applications compatible with all common web browsers, and mobile applications are available as part of the subscription. RxTx keeps users within one browser tab as they navigate the resource, and internal tabs below the search bar keep track of visited pages. This tab feature is helpful for backtracking. Micromedex in comparison does not create tabs and like RxTx does not allow users to open new windows. Printing is simple for both products, including selected sections.

Both products have a search bar to enter general search queries, with the option to restrict results to drugs or disease/condition. Micromedex also gives users the choice to restrict to toxicology. Search results in RxTx are displayed in order of keyword occurrence. Micromedex displays three tabs: Quick Answers, In-depth Answers, and All Results. Quick Answers is the first page shown, which is helpful for users seeking general information. Users are still able to browse all the results if they so choose. Both RxTx and Micromedex can filter results, but RxTx allows for

specific keyword filters whereas Micromedex provides links to related results.

Both products offer support in various formats. RxTx provides Quick Tip Videos, FAQs, and a downloadable user guide. The Micromedex Training Centre makes available web seminars, video demos, and hands-on tutorials. While both provide customer service during regular business hours via telephone and online forms, Micromedex also offers 24-hour technical support.

Product Features

Both resources provide monograph information including dosing, contraindications, precautions, adverse effects, warning, toxicology, pharmacology, pharmacokinetics, and patient information. RxTx does not provide a monograph reference list but does include a revision date. In comparison, Micromedex includes a reference list at the end of each monograph as well as a last modified date. The chart below lists additional features in both products.

RxTx includes the Compendium of Pharmaceuticals and Specialties (CPS), a well-known drug information tool containing primarily Canadian drug information supplied by pharmaceutical manufacturers and approved by Health Canada. Micromedex recently introduced Canadian approved drugs and dosing, Canadian specific labelling, and brand names for generic drugs. This feature in Micromedex is a welcome addition but keep in mind the following. The Regulatory Authority automatically defaults to the Food and Drug Administration (USA) but by selecting Health Canada, the change remains effective for the duration of the session. The display of the American or Canadian flag provides a visual reminder of which regulatory authority's information one is viewing.

Both RxTx and Micromedex offer comprehensive drug information, but they are only two of a number of tools available. Deciding which product best meets your education and research needs is dependent upon curriculum and collections budget priorities.

RxTx	Micromedex
Shared Features	
Product Identification Tool	Product Identification Tool
Condition Information (Therapeutic Choices)	Condition Information (in search results)
Drug Interactions (Lexi-Interactions)	Drug Interactions
Patient Information	Patient Information (CareNotes)
Drug Cost (CAD in Therapeutic Choices)	Drug Cost (USD in Red Book)
Calculators and Dosing	Calculators and Dosing
Unique Features	
Clin-Info Topics	Alternative Medicine Monographs
Products for Minor Ailments	IV Compatibility
Public Drug Programs	Drug Comparison
Minor Ailments	Pediatrics and NeoFax
Minor Ailments: Information for Patients	

Statement of Competing Interests

No competing interests declared.

Kelly Hatch
Research & Instructional Services Librarian
Allyn & Betty Taylor Library, Western Libraries
Western University
London ON
Email: khatch@uwo.ca

Shawn Hendrikx
Research & Instructional Services Librarian
Allyn & Betty Taylor Library, Western Libraries
Western University
London ON
Email: shendri4@uwo.ca

Fake Publishing, Alternative Facts and Truthiness: Observations from a Conversation Café Held at CHLA/ABSC 2017

Janice Yu Chen Kung[1]**, Maria C. Tan, and Sandy Campbell**

Introduction

Issues of fake information are buffeting all libraries. In health libraries, where the quality of evidence is critical to the care of individuals, understanding the extent and nature of fake information and how to manage it is paramount. However, the area is volatile, the challenges change frequently, and librarian practices for managing fake information are in constant flux as everyone attempts to keep up. This session was designed to give health librarians an opportunity to spend an intensive hour discussing issues related to fake information, to learn about new developments in the field, and to network with colleagues.

Methods

Seventy-eight participants in the CHLA/ABSC 2017 Conference met in La Ronde Restaurant at the Chateau Lacombe in Edmonton, Alberta. Individuals were randomly distributed to 15 tables of 6 participants. One participant at each table was designated to record notes. Each table had copies of the same 5 questions and secondary prompt questions. Recorders prompted participants at their table to address the questions, and reported 1 prominent theme to the large group at the end of the session.

The authors of this abstract collated all of the notes by question. Each author independently reviewed 1 or 2 of the questions, identified prominent themes. The authors grouped comments under broad themes and came to consensus on the number of major themes to be reported.

Results

Nine prominent themes were identified across all 5 questions. These included: i) fake publishing as a growing problem; ii) fake publishing being more prominent in academic libraries, while fake "cures" or quackery are more prominent in hospital libraries; iii) libraries and librarians being viewed as trusted sources; iv) teaching critical appraisal and evaluation of resources having always been a part of information literacy; v) early career researchers being more at risk of falling prey to fake publishers and fake conferences; vi) researchers confusing "open access" with "predatory publishing"; vii) librarians looking for support from many resources; viii) no single tool available that is foolproof; ix) and a listing of many different tools and techniques for identifying fake information.

Janice Yu Chen Kung, Public Services Librarian, John W. Scott Health Sciences Library, Walter C. Mackenzie Health Sciences Centre, University of Alberta, Edmonton AB
Maria C. Tan, Public Services Librarian, John W. Scott Health Sciences Library, Walter C. Mackenzie Health Sciences Centre, University of Alberta, Edmonton AB
Sandy Campbell, Public Services Librarian, John W. Scott Health Sciences Library, Walter C. Mackenzie Health Sciences Centre, University of Alberta, Edmonton AB
[1]Corresponding author (email: janice.kung@ualberta.ca)

Observations

1. Fake publishing is a growing problem/ business manifesting itself as fake journals (inviting papers, reviewers and editors to add validity to the fake journal), fake conferences, fake impact assessment services and fake news. Health librarians have seen an increase in work related to fake information. Some participants reported being approached frequently to determine if a journal is real or fake. Participants reported that researchers who are aware of the fake journal/conference phenomena are "suspicious," "wary," "sceptical," "afraid," and "not confident" in determining whether or not they should publish in a particular journal or edit or review for it. Librarians have the skills to offer validation of good journals and reassurance for the researchers.

2. There are more fake journal and conference questions coming to academic health libraries than to hospital libraries. Activity in hospital libraries centres more around quack treatments and patients reading fake medical news.

3. Libraries/librarians are viewed as "authoritative" or "trusted" sources. While librarians certainly have the skill to determine whether or not a title or conference is fake, the simple existence of a title in a library's collection, which some people use as a standard, is not necessarily a mark of legitimacy. For example, many academic libraries rely on aggregator journal and e-book packages, which include publications that the library has not selected. In some aggregator packages, there is limited ability to suppress access to content that does not meet the library's criteria for selection. Even in librarian-selected collections, fake journals and books may creep in.

4. In health libraries, teaching evaluation/critical appraisal has always been a part of information literacy and is currently a responsibility. However, the problem has become more prominent because the fake publishers market aggressively and are becoming more sophisticated and hence harder to identify.

a. While participants agreed that teaching critical appraisal skills is part of the role of health librarians, there was disagreement about the extent to which librarians should be involved in investigating the legitimacy of journals, conferences, and news. Some participants thought that while it is "our job to train people to assess and evaluate information critically," librarians "are not responsible for doing the critical thinking for end users." Other participants argued that

librarians have unique skill sets that allow them to undertake these investigations efficiently and effectively. However, not all libraries are sufficiently well-staffed that librarians have time to take on extensive investigations.

b. Critical appraisal of information is fundamental to health education. Many librarians are incorporating the existence of and identification of fake sources into curriculum based information literacy programs. Several academic libraries have produced library guides dedicated to tips and techniques for identifying fake news, fake journals and fake information.

5. Fake journals and fake conferences only exist because of the "publish or perish" imperative of academia. Graduate students and junior faculty are most at risk because, as newcomers, they have more difficulty getting their work published and may not have the experience to identify fake venues. Some participants are targeting instruction about fake information to early career researchers.

6. Many participants reported a high level of confusion among their users, about open access (OA) and predatory publications. "There were misconceptions that all OA publications are predatory, and [researchers] were afraid to publish with open access because they did not know how to identify if a publisher was predatory or not." Meanwhile granting agencies require researchers to publish in open access publications.

7. A number of participants expressed a desire for support from among their colleagues or networks. Several either had access to, or wished for, a "Scholarly Publishing Office/Librarian" to take care of these challenges. Similarly, some participants thought there was a role for CHLA/ABSC in helping them to cope with fake information. The role of CHLA/ABSC was expressed as both making information available (e.g., checklists) and in offering continuing education around this subject.

8. Participants reiterated that while there are many trusted resources, nothing is foolproof. Participants cited predatory journals being listed in the Directory of Open Access Journals (DOAJ) and SCOPUS, as well as articles published in a predatory journal being indexed in PubMed although the journal was not. Google Scholar searches may also retrieve publications from predatory journals. In contrast, small, new, high quality journals often have difficulty being indexed until they have become well-established. "Quite a few significant Canadian journals

are not in Medline, so checking for indexing is only one step." Libraries can point to resources, but the user still has to apply their judgment to the journal.

9.   Participants used a number of tools and techniques for identifying fake information sources. The resources included: Publons, Quackwatch.org, Beall's List, SNOPES.com, Think.Check.Submit., Retraction Watch, Scholarly Kitchen blog, CARL primer and How to Assess a Journal infographic, and the CRAP Test.

Participants reported applying a variety of techniques for identifying fakes. Most obviously, librarians check the journal or conference website. Indicators include: domain names from unusual sources or that are incongruous with the content, poor quality of the site (e.g., spelling mistakes, poor grammar, poor quality images and multiple colours and sizes of font), vague information or unlikely names in the "About Us" section, lack of an authoritative source or editorial board, quality of previously published articles and authors of previous articles, peer review and publication policies, and contact information. Other red flags include: very fast turnaround for publication, relatively low pricing for publication or tiered pricing for fast turnaround, and requirements that payment be sent to an address in a country other than that of the journal or conference office mailing address.

Participants also reported checking to see that journals are indexed in a major index (e.g., MEDLINE) and also to determine whether or not they are indexed where they claim to be indexed. Participants contact editorial board members to ask about the quality of the journal. Sometimes the board members are not aware that they are listed as being affiliated with the journal. Participants also check the Internet Archive Wayback Machine to track the evolution of the website, and use Google Street View to view the physical location of the publisher or conference organizer's offices.

Limitations

The content of this abstract is restricted to the opinions of the participants who attended, filtered through the note-taking of the recorders. A different group of health librarians may have raised different issues. Some groups did not answer all of the questions because of the time limitation in the session. In collating the themes from the notes, the authors may have missed significant themes that were not frequently mentioned. Further, the brief nature of an extended abstract requires that much detail be excluded.

Conclusions

Fake information is perceived by librarians and health practitioners as a growing problem in which there is uncertainty. The large number of participants in this session is an indication of professional interest in this subject. Librarians and libraries are viewed by practitioners and researchers as trusted and authoritative sources of information to address these concerns. The uncertainty, fluidity and frequency of change in fake information, challenges librarians to constantly build awareness and expertise to meet users' needs and librarians are looking for support in this. This session indicates a need for more continuing education in this area and that a more thorough study of these issues is warranted.

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Statement of Competing Interests

No competing interests declared.

CHLA 2017 CONFERENCE CONTRIBUTED PAPERS / ABSC CONGRÈS 2017 COMMUNICATIONS LIBRES

CP = Contributed Paper

CP1. Show Me the Money! Meeting Researcher Needs Through a Fee-based Pilot Project

Janice Yu Chen Kung, Thane Chambers
University of Alberta, Edmonton AB

Introduction: In 2015, a fee for service program was piloted at the University of Alberta's Health Sciences Library to provide in-depth librarian support to the Faculty of Nursing (FON). Other examples of cost-recovery and fee-based services have been provided by other academic libraries for document delivery and searches for literature and patents. However, this fee for service pilot focused specifically on meeting the needs of FON researchers. **Description:** An administrative structure was developed for this program, including a fee structure. Mediated searches, systematic review searches, research support, and research impact services were offered to FON at the University of Alberta for a fee. **Outcomes:** During the pilot year, Sept 2015-Aug 2016, $41,500 of revenue has been generated. Ten review searches, faculty-wide research impact analysis, and a program of research support to a national research program have been contracted. Major challenges of the service include: competing priorities with core librarian work, communication, and time required to complete the work. **Discussion:** This program allowed us to provide an in-depth level of librarian support to researchers. An assessment revealed that researchers and administrators were very pleased and felt that it was an essential service. Based upon unsolicited requests for specialized fee-based services, there appears to be a demand and a service potential to continue the service and expand to other health sciences faculties, in particular the Faculty of Medicine & Dentistry.

CP2. A National Survey on the Research Support Needs of Health Information Professionals

Nazi Torabi[1], Sandy Campbell[2], Kelly Hatch[3]
[1]McGill University, Montreal QC; [2]University of Alberta, Edmonton AB; [3]Western University, London ON

Purpose: A national survey will be administered electronically to health information professionals to identify the extent to which they would like to undertake research, their barriers to their undertaking research activities, and the supports that they would require to be able to successfully conduct research. **Methods:** The survey, which will include a variety of question types (Checklists, Likert Scale, Open Ended, etc.), will be delivered electronically to members of CHLA/ABSC. The results will be tallied. Open ended questions will be analyzed for themes related to barriers and desired supports. Follow-up one-on-one conversations, focus group discussions and/or large group discussions (possibly at the CHLA/ABSC annual meeting) will be used to clarify and prioritize a list of desired research supports. This project will receive ethics approval from a Canadian academic institution. **Outcomes:** Outcomes of the survey will be ready for presentation at the CHLA/ABSC Conference in Edmonton in 2017. Planned outcomes include a list of barriers to research and a list of desired supports. Where geography, type of work environment or level of education are elements of the kind of support, results will be subsorted by those characteristics. **Conclusions:** This study will supply a clearer picture of the barriers to research activities and the research support requirement of health information professionals in Canada. This information will provide the Canadian health library community with an opportunity to move forward with developing targeted and effective research supports.

CP3. Research Support in Health Sciences Libraries: A Scoping Review

Sarah Visintini[1], Mish Boutet[2], Melissa Helwig[3], Alison Manley[4]
[1]University of Ottawa Heart Institute, Ottawa ON; [2]University of Ottawa, Ottawa ON; [3]Dalhousie University, Halifax NS; [4]Horizon Health Network, Miramichi NB

Introduction: Health sciences libraries in both academic and clinical contexts are becoming more involved in furthering their institutions' research mandates, and librarians are increasingly called upon to support their patrons' research needs. A literature scan revealed many libraries are writing about their research support initiatives and the changing roles of librarians, but no syntheses exist on library research support services in health sciences contexts. We conducted a scoping review to map the academic literature on this topic and to assist libraries as they continue to adapt to researchers' evolving needs. **Methods:** We searched Medline, Embase, ERIC, LISTA, LISS, Scopus and Web of Science to identify reports of research support services provided in health sciences libraries. An advanced Google search for grey literature was also conducted. Articles describing development, implementation, or evaluation of research support initiatives provided in a health sciences library were included. Data extraction will focus on library context, user characteristics, and services implemented. Findings will be summarized using evidence maps in order to facilitate knowledge translation. **Results:** The database searches returned 6336 results, and after removing duplicates, 3545 records remained for title/abstract screening. Full-text screening was conducted on 277 articles. Preliminary results show a predominance for systematic review support and the emergence of data management support. **Discussion:** This scoping review maps out the existing literature on research support practices in the health sciences context. It provides health sciences libraries with a benchmark from which they can assess and develop their own research services.

CP4. Innovations, Challenges and Opportunities within Regional Health Libraries in British Columbia

Elisheba Muturi-Kihara[1], Shannon Long[2], Chantalle Jack[3]
[1]Vancouver BC; [2]Vancouver Coastal Health, Richmond BC; [3]Vancouver Coastal Health, North Vancouver BC

Introduction: Faced with continual change, British Columbia regional health and ministry libraries must innovate in order to survive. To understand how these libraries are evolving, this study: 1) describes and compares the libraries, 2) analyzes how they are changing and innovating in order to deliver value, and 3) identifies gaps and opportunities in the current landscape. **Methods:** Librarians from seven health authorities and one ministry library completed online surveys and telephone interviews regarding eight themes drawn from the literature: library environment, research services, instruction, service delivery models, prioritization, evaluation, innovation, and the provincial landscape. The librarians later participated in a focus group to explore key findings in greater depth. **Results:** Libraries range considerably in role of the library in supporting open and connected research and researchers' size and staffing levels. Both centralized and distributed service delivery models are in practice. Reaching library patrons from geographically remote areas is a common challenge, as is leveraging technologies needed to advance services. Reference is identified as the most valuable service provided, and all libraries recognize the importance of measuring and demonstrating the impact of this and other services. Ongoing needs assessment and evaluation activities are taking place. There is some interest in standardizing assessment procedures in the future, using similar outcome indicators to inform marketing and advocacy endeavors. **Discussion:** In a landscape of library closures, service consolidation and technological limitations, innovative non-traditional activities are required to improve delivery of information and resources. This project's findings promote information sharing on best practices and highlight collaborative opportunities to address existing gaps within the library systems.

CP5. Transforming a Library Service within a Provincial Healthcare Organization - Forging a New Path

Carol A. Connolly, Morgan Truax, Connie Winther
Alberta Health Services, Edmonton AB

Introduction: Prior to 2011, libraries within a provincial health service operated using a variety of self-determining service models across 24 locations. Evaluation of library services demonstrated significant gaps in service delivery and access to resources, cost inefficiencies, and variation in library service standards across the province. National and international trends reflected ongoing library closures and challenges to demonstrate library contributions to organizational goals and improvements in health information literacy. **Description:** In January 2011, all library services were aligned under one department to capitalize on the natural fit between libraries as conduits to evidence and knowledge management practices that support the use of evidence in practice. The mandate was to develop enterprise-wide library resources and services to support clinical decision-making and quality patient care. **Outcome:** This department is now a focal point for access to and expertise in healthcare information resources and services through the virtual library, 7 full service libraries, and 2 office locations. Organization-wide evaluations conducted in 2011 and 2014 show increased client satisfaction, while utilization analytics reflect continued growth. **Discussion:** The Optimization Initiative was a proactive, internally driven effort to extend library services and resources beyond the traditional library space, streamline "back-office" functions and allow library staff to contribute to organizational initiatives. The path has been winding, yet lessons learnt include the value of dedicated staff, teamwork, and maintaining a focus on equitable access and service for the organization's staff and clinicians.

CP6. Navigating the Sea of Free: Supporting Clinician Use of High-quality Point-of-care Mobile Applications

Pamela Harrison, Rachel Zhao, Marcus Vaska
Alberta Health Services, Calgary AB

Introduction: The Alberta Health Service's Knowledge Resource Service (KRS) supports clinicians and staff in evidence-informed decision-making, in part, by licensing point-of-care mobile applications. While the KRS team supports use of these resources with self-based education guides and education sessions, clients also ask KRS to recommend free mobile apps to supplement KRS subscriptions. The literature shows that mobile apps vary in their use of evidence, clinical relevance, and usability. Consequently, KRS is launching a monthly review of a free mobile app, to be posted on the KRS website. **Description:** Drawing on current literature, the program leads will identify evaluation criteria for point-of-care apps. Our first selections have been recommended by residents and clinicians; subsequent point-of-care apps will be identified via survey during resident orientations, occurring at hospital sites each summer. The resulting lists, together with ongoing reviews of the literature, will determine which apps are appraised. **Outcomes:** In April, KRS will launch a 'Free App of the Month' feature, providing an overview of the resource's strengths and weaknesses, information on accessibility, and links to additional literature where available. We will present 2 free 'App of the Month' overviews at the conference, as well as our plan to evaluate this program. **Discussion:** The KRS 'App of the Month' project will connect us with residents, who are native to mobile app technology, and support a wider pool of AHS clinicians considering free mobile apps to complement their practice.

CP7. Assessing Online Systematic Review Training: Updated Findings from an Environmental Scan and Evaluation

Leah Boulos[1], Sarah Visintini[2], Robin Parker[3], Krista Ritchie[4], Jill Hayden[3]
[1]Maritime SPOR SUPPORT Unit, Halifax, NS; [2]University of Ottawa Heart Institute, Ottawa ON; [3]Dalhousie University, Halifax NS; [4]Mount Saint Vincent University, Halifax NS

Introduction: Online training for systematic review (SR) methodology has become an attractive option due to its flexibility and the limited availability of in-person instruction. Librarians often direct new reviewers to these online resources, so it is important that we are knowledgeable about the variety of training resources available that best fit our patrons' needs. **Methods:** We reviewed the published literature and conducted an environmental scan of online SR training resources. After screening for inclusion, scores were assigned using a previously published evaluation rubric for online instruction modules. Resources were evaluated in the following areas: 1) content; 2) design; 3) interactivity; 4) usability. Scores were analyzed using descriptive statistics to compare performance across the domains. **Results:** Twenty resources were evaluated. Overall score average was 61%. Online courses (n=7) averaged 73%, web modules (n=5) 64%, and videos (n=8) 48%. The top 5 highest scoring resources were in online course and web module format, featured high interactivity, and required a longer (>5hrs) time commitment from users. **Conclusion:** Score analysis suggests that resources include appropriate content, but are less likely to adhere to principles of web-based training design and interactivity. Just-in-time, quick resources like videos could benefit from such principles. Awareness of these resources has benefited team members and enabled them to make informed recommendations for training based on patrons' needs. Future online SR training resources should pay greater attention to established best practices for online instruction in order to provide high quality resources regardless of format or user time commitment.

CP8. Untangling What Information Specialists Should Document and Report: A Review of the Evidence

Dagmara Chojecki, Lisa Tjosvold
Institute of Health Economics/University of Alberta, Edmonton AB

Introduction: Thorough documentation and clear reporting are essential when conducting a comprehensive literature search for a health technology assessment (HTA) or systematic review (SR). The ultimate goal of the reporting process is transparency and reproducibility with the added benefit of increasing the reader's confidence in the research. As part of the SuRe Info Project, we conducted a review of all current reporting standards relevant to HTAs and SRs in addition to looking at the published literature on this topic in order to synthesize the evidence in this area and create a standard set of agreed upon recommendations. **Methods:** We conducted a comprehensive search of Medline, Embase, and LISA databases in addition to the Equator Network website. Reference lists of included studies and reporting guidelines were also consulted. 11 reporting guidelines and 8 studies were included in the review by two independent reviewers. Anything published before 2006, that was not a research article, and/or did not provide new recommendations were excluded. **Results:** After collecting data on the suggested reporting elements described in the literature, we pooled our results to create an overarching list of the most commonly recommended elements to report and methods to use when documenting a comprehensive search. These elements pertained to documenting the search strategy for the final report, the protocol, and/or the abstract of a review. **Conclusions:** This review of the evidence aims to clarify the confusion over adequate documenting and reporting of searches with the hope that search descriptions will improve in future research literature.

CP9. Standards for Literature Searching: Research and Development.

Susan Baer[1], Brooke Ballantyne-Scott[2], Jackie MacDonald[3], Lori Leger[4], Ashley Farrell[5], Marcus Vaska[6], Pat Lee[7]
[1]Regina Qu'Appelle Health Region, Regina SK; [2]Fraser Health Authority, Vancouver BC; [3]Quality, System Performance and Legal Services, Bridgewater, NS; [4]Horizon Health Network, Moncton NB; [5]Cancer Care Ontario, Toronto ON; [6]Alberta Health Services, Calgary AB; [7]Halifax NS

Objectives: Library services managers, professional searchers and search instructors lack a standard to support mediated search service instruction and accountable search service delivery. A standard is needed to establish a consistent approach to executing different types of searches, and to provide a framework against which a search service performance may be measured. **Methods:** Two approaches were used to inform the work. The first was an environmental scan using several listservs to identify current search-related researchers and practice leaders. The second was an iterative literature review of research and other literature on mediated searching. Content analysis of all documents gathered identified a variety of search types and methods. We compiled and defined the search types, methods and related terms in a comprehensive search glossary, which we organized in a matrix and then validated through a Delphi study with search researchers, authors publishing on search topics, and professional searchers. **Results:** Results included identification of essential and optional steps in recommended approaches for different types of searches. We will be validating these steps and approaches using an "elite" group of search researchers, authors publishing on search topics, and professional searchers. The first draft of this work will be shared as a consensus-building step in standard development. **Conclusions:** The research literature on search methods is sparse and fragmented, lacking in currency and a shared vocabulary. A standard would provide clarity in terminology, approach and methods.

CP10. Decoding the Disciplines and Threshold Concepts in a Blended Learning EBM Project for Preclerkship Students

Tania Gottschalk, University of Manitoba, Winnipeg MB

Introduction: Teaching evidence based medicine (EBM) theory is challenging, as there are transformations of understanding that must occur without which students cannot progress. "Decoding the Disciplines," a model developed at Indiana University, is a process for increasing student learning that recognizes differences in thinking in disciplines and facilitates narrowing the gap, or threshold, between novice and expert thinking. The analysis distinguishes between core concepts, those that build layers upon learning foundations already possessed, and threshold concepts, those that lead learners to new realms of understanding. **Description:** Clinical Reasoning (CR), a longitudinal course in pre-clerkship, is a small group course in which clinicians help students explore clinical cases and in the process learn diagnostic, prognostic, therapeutic, and EBM techniques. The Decoding the Disciplines model was used in conjunction with the ACRL Framework for Information Literacy to identify bottlenecks in students' understanding of EBM and information literacy threshold concepts. The analysis was then used to create supporting instructional materials and a series of four assignments were delivered through blended learning in the curriculum management system. **Outcomes:** A pre-test assessing student understanding of threshold concept was given to students prior to delivery of the blended learning content. Feedback was given to students upon completion of each assignment, and each component built to a final written project. A post-test was given upon submission of the final written assignment. **Discussion:** Using the model was helpful in collaborating with medical faculty. Student scores improved on post-test, and the quality of final written submissions was high.

CP11. Development of a Multimodal, Virtual Curriculum: Targeting Province-wide Learners' Information Literacy Learning Needs

Brettany Johnson, Jorden Habib, Pamela Harrison, Simone Graw
Alberta Health Services, Calgary and Edmonton AB

Introduction: Our organization provides library services to over 100,000 staff in Canada's largest province-wide healthcare delivery system. The delivery of accessible, equitable, and sustainable library services to this diverse and geographically dispersed staff presents both challenges and opportunities, particularly with regard to skill development. Our multimodal, virtual curriculum targets learners' information literacy learning needs in this unique provincial context. **Description:** The curriculum includes 3 components: 1) Evidence at Your Fingertips (EAYF), a program of eight synchronous online courses open to all staff; 2) a series of microlearning video tutorials; and 3) a collection of online how-to guides. The focus of our paper is the EAYF program, which has seen approximately 1500 participants register for 200+ sessions since October 2015. In the past year, we have developed standardized processes for course development, marketing, registration management, session delivery, and evaluation. **Outcomes:** Three methods are used to assess program outcomes: standardized post-session evaluation of learner satisfaction with key program aspects and confidence performing identified tasks; and, after action reviews and whole team retrospective reviews to identify and share lessons learned and opportunities for quality improvement. **Discussion:** The evolution of the EAYF program has prompted us to think innovatively about how to design, develop, promote, deliver, and evaluate virtual education programming. Successes include positive feedback on the short, focused nature of the sessions and the ease with which they can be accessed.

CP12. Creating a Blended Outreach Service Model for a Province-wide Health Care Information Service

Yongtao Lin, Jorden Habib, Jeanette Blanchard
Alberta Health Services, Calgary and Edmonton AB

Introduction: In the past 5 years we transformed library services to a single online service that provides information services for all health care workers across the province and consolidated library locations from 24 to 9 in 3 urban centres. Strategizing for consistent and sustainable outreach services is essential to meet health care professionals' information needs. While the literature on the fundamental goals of outreach programs in libraries has been prevalent, there is a gap in how to provide an effective outreach program for health care professionals working from geographically distributed sites. **Description:** A literature review and an internal audit of health library outreach practices were completed in the Spring/Summer of 2016. A combined subject and geographic liaison outreach service model was developed with the primary goal of ensuring all clients across the province receive the same high quality information service. **Outcomes:** Pilot testing of the program began in Fall 2016 and will be ongoing. The lessons learned continue to inform how to best engage library staff and evaluate the impact of the service. **Discussion:** A blended outreach model will streamline the processes in delivering and implementing the service, as well as enable health care professionals throughout the region to access the same level of services.

CP13. Reading for Resilience: Bibliotherapy Lights the Road to Recovery for Mental Health Patients

Sandy Iverson[1], Sharon Bailey[2], Carolyn Ziegler[1]
[1]St Michael's Hospital, Toronto ON; [2]Centre for Addiction and Mental Health, Toronto ON

Introduction: Bibliotherapy can be defined as the use of literature to help deal with the challenges of life. The authors will situate this paper within the greater body of literature on bibliotherapy, providing an overview of the practice and a detailed exploration of the use of a particular form of bibliotherapy with 2 different groups of mental health patients. **Description:** Librarians at an academic hospital partnered with their psychiatry department to deliver a read-aloud bibliotherapy program to mental health patients. Programs were delivered to both in-patients and members of a community based recovery program based at the hospital. **Outcomes:** Basic written evaluations were collected from participants, and interviews were conducted with the peer support workers who also attended the groups. Participants, peer-support workers, and decision makers in the mental health programs all found the projects successful and rewarding, and as a result spin-off programs have been developed and/or proposed. **Discussion:** Each program ran for a minimum of 6 weeks and engaged between 3 and 8 clients in each group. Peer-support workers also participated in the group sessions. Readings from literature (poetry, fiction and non-fiction) were selected and used to introduce and discuss topics such as loneliness, compassion, forgiveness, gratitude, etc. The sessions were facilitated by a librarian and a librarian/psychotherapist. The authors will describe the structure of the reading sessions, group dynamics, and the materials used to address specific topics, as well as methods for selecting materials. Suggestions and recommendations for delivering similar programs will be discussed.

CP14. Crafting Effective Heart Disease Messages for Women

Tami Oliphant, Tanya Berry, Colleen Norris
University of Alberta, Edmonton AB

Introduction: Heart disease is one of the leading causes of death in women in Canada, yet women are less likely to be treated for it than men. Consequently, the Heart and Stroke Foundation of Canada (HSFC) developed the Heart Truth campaign to provide heart disease information for women. The purpose of this project is to assist in creating effective messages about heart disease by exploring women's information behaviour as it pertains to information related to heart disease and their perceptions of the Heart Truth campaign. **Methods:** Two focus groups (with 3 and 7 participants, respectively) and 3 interviews with women who have coronary heart disease (recruited from the APPROACH (Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease)) were completed. Packages containing information about the Heart Truth campaign were sent to participants in advance of the focus groups. Focus groups and individual interviews were transcribed and individually read and analyzed. **Results:** Preliminary results indicate that a diagnosis of heart disease was perceived as surprising and shocking. While participants understood and received messages about heart health, often the information presented was irrelevant to them because they had already made the recommended lifestyle adjustments. Furthermore, many identified the conundrum of being told to "deal with stress," for example, but struggled with how to put this into practice. This research may assist health librarians and the people they serve in developing effective information sources and heart health messages.

CP15. Conducting a Citation Management Software Evaluation for Systematic Reviews: A Librarian's Guide

Aleksandra Grobelna, Danielle Rabb, Sarah McGill
Canadian Agency for Drugs and Technologies in Health, Ottawa ON

Objectives: We outline criteria and methods and describe librarian's leading role in the evaluation of the citation management software (CMS) for conducting a systematic review (SR). **Methods:** One challenge in conducting SR is the magnitude of information to navigate. A librarian can determine how to best manage information using CMS. Based on CADTH's CMS evaluation project we present the key steps in selecting CMS. These steps include: forming a committee, developing criteria, finding options, investigating and documenting how the CMS meets your criteria, and establishing return on investment (ROI). **Results/Discussion:** We determined that any of the reviewed CMS such as Endnote, Mendeley, Zotero, or RefWorks would be suitable as a bibliographic tool. The challenge is in integrating these programs to fit the systematic review process. The CMS has to be able to manage very large sets of results for multiple reviewers who might work on multiple projects simultaneously. The CMS needs to be able to work well with screening and ILL software, or it should be adaptable to assist with these. Implementation of a new CMS requires a change in research processes as well as training and support for end users. As an integral part of SR, well-chosen CMS can speed the review process. It can also ensure the accuracy and integrity of information acquired. Librarians can play a leading role in evaluating and choosing the right CMS for SR.

CP16. Parent Information Needs and Experience Regarding Acute Otitis Media in Children: A Systematic Review

Salima Meherali, Shannon Scott, Lisa Hartling
University of Alberta, Edmonton AB

Introduction: Acute otitis media (AOM) —inflammation of the middle ear— is the most common pediatric bacterial ear infection, affecting up to 75% of children at some time before age 5 years. Despite the high incidence of AOM in children, it presents diverse challenges to parents who did not have accurate information regarding what causes AOM and its management. Further, a lack of parental knowledge regarding symptom recognition, medications, and prevention and treatment of AOM have been associated with poor health outcomes (middle ear effusion, hearing loss), which emphasizes the need for adequate educational provision for parents. To respond to this paucity of information in Canada and to inform future practices, we sought to synthesize the literature to provide a more comprehensive perspective of parental information needs and experiences relating to AOM management. **Method:** Four electronic databases were searched and articles were screened according to pre-established inclusion criteria. Articles were included in the review if they were examining parental information needs for AOM, and we used language (English) and date (January 2000 to date) restrictions. **Results:** Out of 851 articles retrieved, 13 articles met the inclusion criteria. We completed a descriptive (narrative) analysis and identified 4 potential and common patterns including: parents' beliefs and knowledge about AOM; parents' attitude and knowledge about AOM treatment; information seeking behaviour; and burden of AOM on family and child quality of life. **Discussion:** Incorporating parental information needs into health care assessment and educational planning are essential steps toward improving parental competency in AOM management and enhancing health outcomes.

CP17. Online Interventions for Family Caregivers: Employing Patient Engagement Principles and Practice

Jennifer McKinnell[1], Jenny Ploeg[1], Wendy Duggleby[2], Maureen Markle-Reid[1], Carrie McAiney[1], Ruta Valaitis[1], Amy Bartholomew[1], John Ganann[1], Susan Kaufman[1], Dolores Radcliffe[1], Brenda Smith[1], Laurie Kennedy[1], Conrad Worrall[1]
[1]McMaster University, Hamilton ON; [2]University of Alberta, Edmonton, AB

Introduction: Health care professionals frequently partner with librarians when developing online tools for patients and their families. However, even with input from the most qualified of information professionals, these websites are often difficult to identify and can remain largely unused by those populations for which they were designed. The Online Interventions for Family Caregivers Study addresses this very issue. **Description:** Patient engagement (PE) principles and practice were utilized by inviting caregivers to participate as equal partners in all stages of the project. Their participation involved designing the internet search strategy and website review template, conducting searches for caregiver resources available on the internet, contributing to the analysis of findings, authoring the final report, and presenting results to the funding agency. **Outcomes:** The Canadian Strategy of Patient-Oriented Research (SPOR) promotes active collaboration with individuals using the health care system to bring about positive change. By including caregivers in all aspects of our study, we have strengthened both the quality of our final report and our skills as health professionals and librarians. Our caregiver partners taught us how personal hardships and successes influence information seeking behaviours and in turn, impact how we should consider presenting and organizing information to maximize relevance and ease of use. **Discussion:** The purpose of this presentation is to share the values underpinning PE and to provide an overview of how PE principles can be operationalised in both information seeking research and patient focused information service design.

CP18. Accuracy of Online Discussion Forums on Common Childhood Ailments

Alison Farrell, Memorial University of Newfoundland, St. John's NL

Introduction: Many parents go online to seek advice when dealing with common childhood ailments such as fever or rash. Among these parents are those with varying levels of information literacy, ranging from parents who trust everything they read online, with no critical appraisal, to parents who seek only the highest quality evidence and view the information with a high degree of scepticism. This presentation aims to answer the question: Is peer-to-peer advice being offered to parents of young children on common childhood ailments through online discussion forums accurate and in agreement with existing evidence on those same ailments? **Methods:** To determine which online forums to use, Google was searched using 5 common childhood ailments. Forums that appeared 5 or more times in the first 5 pages of the Google search for each question were considered. Of these forums, those that met the inclusion criteria were used. Data from a 6 month time period was collected and categorized from the discussion forums to analyze the advice being provided about common childhood ailments. Evidence based resources (Dynamed and UptoDate) were used to analyze the accuracy of the advice provided. **Results:** Data collection is complete. Analysis of data is forthcoming. **Discussion:** The hope is that through this research, areas for education to parents of young children will be identified. Family physicians, public health nurses and other program developers can then use these areas of need to inform the development or re-development of prenatal programming, and childhood/parenting support programs.

CP19. We Stand Corrected: Frequency, Usefulness, and Accessibility of Errata in Systematic Reviews

Kelly Farrah, Danielle Rabb
Canadian Agency for Drugs and Technologies in Health, Ottawa ON

Introduction: The prevalence and value of errata associated with studies included in systematic reviews is unknown. This project will estimate the frequency of errata for study publications included in systematic reviews, evaluate their usefulness to the review, and determine best practices for searching for errata. **Methods:** A retrospective review of included studies from 40 systematic reviews of drugs evaluated by CADTH in 2015 was conducted. For each journal article in the included studies lists, a search for associated errata was conducted using: 1) the drug manufacturer's submission; 2) linked errata searching in PubMed; and 3) the journal publisher's website. The frequency of errata for published articles included in the reviews was determined using the total number of errata identified. The usefulness of identified errata to the reviews was evaluated in consultation with clinical researchers using a 3-category scale: trivial, minor, or major. The accessibility of errata was determined by examining: how they are indexed in various databases, the costs of obtaining errata, and the time lag between article publication and erratum publication. **Results:** In total, 26 errata describing 38 errors were identified for 127 articles included in the systematic reviews. When classified by severity: 6 errors were major; 20 errors were minor; 12 errors were trivial. No single database indexed all the errata. On average, errata were published 211 days after the original article. All were freely available. **Discussion:** The results suggest that it can be worthwhile to identify errata associated with included studies for systematic reviews of drugs.

CP20. Keeping Up-to-date with Information Retrieval Research: Summarized Research in Information Retrieval for HTA (SuRe Info)

David Kaunelis[1], Julie Glanville[2], Jaana Isojärvi[2], Patrice Chalon[3], Carol Lefebvre[4], Kath Wright[5]
[1]Canadian Agency for Drugs and Technologies in Health, Ottawa ON; [2]York Health Economics Consortium, York, UK; [3]KCE, Brussels, Belgium; [4]Lefebvre Associates Ltd, UK; [5]Centre for Reviews and Dissemination, York, UK

Introduction: Increasing numbers of research papers about information retrieval for health technology assessments, systematic reviews and other evidence syntheses are being published. It is time-consuming and demanding for information specialists to keep up-to-date with the latest developments in the field. To help to meet these challenges, the Interest Group on Information Retrieval (IRG) of Health Technology Assessment International (HTAi) has created an open-access web resource entitled SuRe Info (http://www.sure-info.org). **Description:** Information retrieval methods publications are identified by running topic-specific search strategies in selected relevant databases. A structured appraisal is created for all publications fulfilling the SuRe Info inclusion criteria. The key messages from the appraisals are summarized into topic-specific chapters. **Outcomes:** Fourteen chapters are now available on SuRe Info, with others currently in development. SuRe Info chapters cover 2 types of categories: 1) general search methods used across all health technologies, such as strategy development and search filters, and 2) methods used when searching for specific aspects of health technologies, such as clinical effectiveness, safety and economic evaluations. References at the end of each chapter are linked to appraisals of included publications. Links to full-text are provided when freely available. **Discussion:** SuRe Info offers research-based advice for everyday searching issues. With updates every 6 months, SuRe Info seeks to help information specialists stay current in the latest developments in the field. It provides easy access to summaries of current methods papers and supports timely uptake of potential new efficiencies in information retrieval practice.

CP21. Fishing for Grey Literature: What Are We Catching in CADTH's Rapid Response Service?

Melissa Severn, Kelly Farrah, Caitlyn Ford, Suzanne McCormack, Aleksandra Grobelna, David Kaunelis
Canadian Agency for Drugs and Technologies in Health, Ottawa ON

Background: At CADTH, considerable effort is made to retrieve grey literature for rapid reviews published as part of the Rapid Response (RR) Service. The searching process to capture this information is guided by the RR checklist, which is a 46-item sub-set of CADTH's Grey Matters tool. The objective of this study is to measure the value of the RR checklist for finding relevant documents. **Methods:** We conducted a retrospective analysis of 71 rapid reviews published from April to September 2016. The number of grey literature documents captured by the RR checklist was compared with how frequently they were cited in these reports. The type of grey literature document cited was recorded as well as the publisher. **Results:** Of the 1893 documents found through the use of the RR checklist, 324 (17%) of those documents were cited in our sample of rapid reviews. Guidelines were the most frequently cited type of grey literature document (41%). The cited grey literature came from 192 publishers, 20 of which are on the RR checklist. Documents found using the RR checklist accounted for 23% of the total literature cited. **Discussion:** The grey literature search process as guided by the RR checklist identified additional relevant documents; however, there is opportunity for improvement in precision rates. The variety of grey literature publishers can make it difficult to rely on a checklist of individual websites to capture relevant grey literature. Strategies that focus on utilizing search engines and grey literature databases more effectively may need to be developed.

CP22. Visualizing History of Medicine Collections: Improving Discovery of Special Collections and Access to Full Text

Chelsea Ambler, University of Calgary, Calgary AB

Introduction: Five History of Medicine Collections (4625 titles), held at the Health Sciences Library and Special Collections (University of Calgary), are available for mediated in-library research use. Discovery is achieved through the OPAC and library orientation for the History of Medicine program. Many titles are available digitally. However, access is through multiple sources and their discoverability is limited. Through interactive visualization, this project aims to promote discovery at the collection level and to improve digital access. **Description:** Building from previous explorations of visualization tools, Tableau was selected to produce 3 interactive visualizations: a timeline, author ranking, and subject classification map. Each visualization allows exploration at the collection level while highlighting individual titles with connections to catalogue records and digital access. A Microsoft Access database created using MARC records underpins the Tableau visualizations. Digital access was supplemented with HathiTrust and other sources. **Outcomes:** We received positive feedback from faculty on preliminary visualizations. These were later introduced in the History of Medicine Program's Fall 2016 library orientation. Currently, select titles are being digitized to fill gaps in Full Text Access and additional visualizations have been planned for future implementation. Supplementation from HathiTrust and other sources increased digital access from approximately 67 to 1658 titles. **Discussion:** Visualization, and Tableau in particular, has been used in collection and service analysis. While research exists on visual interfaces to improve discovery, the application of Tableau for this purpose has not yet been documented. Tableau offers the ability to create custom visualizations for collection discovery and supplementation without visualization programming language experience or complex integration with other library systems.

CP23. Colour Our Collections: Using Adult Colouring as Outreach in a Health Science Library Rare Books Collection

Laura Hamonic, Liz Dennett
University of Alberta, Edmonton AB

Introduction: A simple, cost effective method for engaging students and promoting use of our health sciences library's rare books collection was sought. An environmental scan of other special collections libraries' programs resulted in our decision to capitalize on the adult colouring trend. **Description:** Colouring pages were created by a practicum student, who digitally traced images from special collection books using an Intuos tablet and MyPaint. These colouring pages were released both in the library and online. In the library, a reproduction of the original document was posted above a table containing copies of the colouring pages and colouring supplies. Patrons were encouraged to colour the page and post their artistic efforts beside the original. Patrons were also provided with information on visiting the special collection. **Outcomes:** We began releasing pages in March 2017 and as such do not have outcomes to report yet. We plan to use 4 metrics to evaluate the program: the number of pages distributed in library, number of pages downloaded, number of coloured pages posted, and the number of users of the special collection stating they became aware of it through the colouring pages display. We will also have a comments board and use social media to collect patron reactions to the project and will report on the total cost of the project.

CP24. A Mixed Methods Approach to Evaluating Point-of-Care Tools

Andrea McLellan, Stephanie Sanger
McMaster University, Hamilton ON

Introduction: Academic Health Sciences Libraries invest thousands of dollars to license point-of-care tools for the primary purpose of teaching students and residents how to utilize evidence-based resources in clinical practice. Though recent studies have compared product features, none have offered guidance on how to make localized collection decisions. This mixed methods study, situated at a large academic health sciences library, was designed to assess the value and sustainability of point-of-care tools using methods that were guided by the local needs of students and early career health professionals. **Methods:** Products were selected for inclusion if they were current institutional subscriptions. A rubric for the evaluation of breadth, editorial quality, evidence-based methodology, timeliness, and content presentation was developed using existing rubrics and modified through consultation with clinical faculty. The evaluation of "breadth" was tailored to local needs by conducting vertical analysis of sample query data, in which data were (1) categorized by type of information using UMLS taxonomy and (2) coded by topic using ICD-10. Data were analyzed for frequency and co-occurrence by using Spearman's rank correlation coefficient. Sustainability was assessed based on a longitudinal examination of inflation trends and the ease by which use data could be obtained. **Results:** The results analysis will be presented in terms of value and sustainability. **Discussion:** In this study we employed methodologies novel to the field of collection development. The results of our analyses will inform collection evaluation and decision-making for point-of-care tools for a library's specific user group.

CHLA 2017 CONFERENCE POSTERS / ABSC CONGRÈS 2017 AFFICHES

PP = Poster Presentation

PP1. The Importance of Interdisciplinary Literature Searching in Public Health Policy Reviews

Chris Vriesema-Magnuson[1], Devon Greyson[2]
[1]University of British Columbia, Vancouver BC; [2]British Columbia Children's Hospital Research Institute, Vancouver BC

Introduction: The push for evidence-informed public health policy has increased the need for systematic and scoping reviews, which require broad, thorough searching of the literature. Unlike more clinical reviews, health policy reviews may require integration of research from non-health disciplines. However, searching additional databases can be costly and time-consuming, and whether it is worthwhile to search non-medical databases to obtain comprehensive results for reviews is unclear. **Methods:** A case study examining the systematic literature search for a review of vaccination promotion interventions was conducted. Retrieved citations were labelled with their database of origin before screening. Quantity of articles included from each database after title and abstract screening was tracked. Full-text screening is in progress; after articles are chosen for inclusion in the review, these statistics will be redetermined. Specific note will be made of articles available only from one source. **Results:** The majority of articles remaining after the abstract screen were available from Embase (90%), Medline (59%), and CINAHL (28%). While EconLit, the Education Resources Information Center, the Public Affairs Information Service database, and Proquest Dissertations and Theses provided few results to the post-abstract screen pool, most of the articles from these sources were unique. **Discussion:** Databases from non-health disciplines appear to offer a small number of includable health policy articles that may not be available in health databases. Researchers conducting exhaustive reviews should consult relevant databases from other fields to ensure comprehensive coverage of the literature.

PP2. Social Media to Promote Evidence in Pediatric Emergency Medicine: Assessment of a Knowledge Dissemination Strategy

Robin Featherstone, Kassi Shave, Lisa Hartling
University of Alberta, Edmonton AB

Introduction: Translating Emergency Knowledge for Kids (TREKK) was established to address a knowledge-to-practice gap in the emergency care of children. An Evidence Repository (guidelines, Cochrane systematic reviews, key studies) and Bottom Line Recommendations (diagnosis and treatment guidance) were developed based on stakeholder feedback. In this study, we used blogs and Twitter to promote selected Cochrane Summaries, TREKK Evidence Repository and Bottom Line Recommendations. **Methods:** We selected and reproduced 12 Cochrane summaries using a blogging module on the TREKK website. Key points from the summaries were shared via Twitter messages containing hyperlinks to blog posts, topic areas in the Evidence Repository, Bottom Line Recommendations, and Cochrane Summaries or systematic reviews. We published 1 blog post and 21 Twitter messages per week for 12 weeks and collected related Twitter, web page and link analytics. Alternative social media metrics (altmetrics) for promoted Cochrane systematic reviews were tracked. **Results:** The TREKK Twitter account gained 69 new followers (15.3% increase), and its messages were re-tweeted 125 times. Fifty-eight traceable URLs in the Twitter messages were clicked 600 times. The 12

blog posts received 6428 page visits, 8 Bottom Line Recommendations were accessed 566 times, and 8 topic areas in the Evidence Repository were visited 2299 times. On average, the altmetrics' scores of Cochrane systematic reviews increased by an average of 10 points (46.2%). **Discussion:** The social media campaign grew TREKK's online followers and directed web traffic to trekk.ca. Quantitative evidence collected from a variety of web analytics support blogging and tweeting as effective knowledge dissemination strategies.

PP3. Evaluating Point of Care Tools: Dollars and Sense

Patty Fink, Michael McArthur, Penny Moody-Corbett
Northern Ontario School of Medicine, Sudbury and Thunder Bay ON

Meeting health information needs at the point of care is vital. However, selecting the point of care tool that meets those needs is increasingly complicated and expensive.
In order to ensure the clinical information needs of students and faculty at the Northern Ontario School of Medicine are met, while balancing a need for fiscally responsible selection, a point of care tool review was undertaken. The first step was to establish a Point of Care Tool Working Group whose mandate was to recommend the tool that best addressed the articulated needs. To achieve this, the working group followed a multi-pronged approach:
1. Reviewing the evidence/literature to select possible tools,
2. Reviewing criteria for evaluating selected tools,
3. Reviewing the results of evaluations, and
4. recommending the point of care tool.
This poster will outline the processes of the working group, including: the selection of representative membership; the selection and assessment criteria for the tools; and detail the mechanisms employed for soliciting feedback from users. The latter included an online survey and a subsequent focus group of power users. Describing these steps in detail provides a roadmap that others can follow when selecting a point of care tool. This is a beneficial toolkit for health information professionals considering the point of care needs of their users.

PP4. Searching French Language Canadian Newspapers for Health Topics: A Case Study of Searching Physician Assisted Death

Denis LaCroix, Sandy Campbell
University of Alberta, Edmonton AB

Background: Public health researchers frequently use newspapers to gauge the general public's views on health issues. French language Canadian newspapers are often included; however, searching them systematically and comprehensively presents some unique challenges. Health librarians would benefit from tools to guide researchers through searching these newspapers, but few tools, if any, exist to date. **Purpose:** Using "physician assisted death" as a test case, this study will determine the best resources and search strategies for identifying health related articles in French language Canadian newspapers. **Methods:** In this study, the concept of "physician assisted death" is used as a case study for determining the best resources and techniques for identifying health related articles in French language Canadian newspapers. A variety of databases and newspaper sites will be identified, and a selected set of terms will be tested on 2 to 3 years' worth of newspapers to determine a volume of publication. **Results:** Search results will be analyzed to determine the volume of unique publications. Best practices for searching these databases and websites will be documented. **Outcomes:** Outcomes of this study include analysis of retrieval, a list of relevant databases with recommendations for which sources to search first, a syntax guide for the databases, and a French language search hedge for *fin de vie et suicide médicalement assisté*.

PP5. Reflecting on Grey Horizon: A 5-Year Retrospective of a Grey Literature Current Awareness Tool in Cancer Care

Marcus Vaska, Yongtao Lin
Alberta Health Services, Calgary AB

Introduction: A subject-based cancer grey literature blog, Grey Horizon (http://grey-horizon.blogspot.ca/) was created in 2012. The authors conducted an assessment using quantitative metrics 6 months after the blog was launched to inform how information services supported by social media may best be evaluated. While daily blog page views continue to rise, information on its sustainability, proved as a critical success factor to entice readers to return repeatedly, is less easily interpreted. **Description:** To understand the viability of online information products, a retrospective review of usage in Blogger reveals how content has been selected for the most accessed postings, and the impact of abstracting and tagging in social media on reader engagement. Google Analytics provides additional insight to user behaviors by tracking new and return audiences. **Outcome:** A cursory statistical analysis in Blogger indicates that, as of November 2016, the blog has achieved more than 108 000 page views and has been accessed from several countries. Preliminary findings from Google Analytics inform us that an average of 16 users return to the blog monthly with the longest duration per visit being 9 minutes. Social media marketing metrics by Barger and Labrecque helps us understand the long-term strategies needed for user satisfaction, customer awareness, and community and relationship building. **Discussion:** Our analysis indicates the importance of engaging users and shaping users' behaviour by using information marketing tools effectively. Future directions include a focused strategy on learner participation and creativity, coupled with online identity formation, which are two fundamentals in a product's viability in social media.

PP6. A Comparative Analysis of Physical Medicine and Rehabilitation Journals' Metric Performance

Jessica Babineau, Ani Orchanian-Cheff
University Health Network, Toronto ON

Introduction: For those publishing in the field of physical medicine and rehabilitation (PM&R), the use of impact factors (IFs) from Clarivate Analytics' Journal Citation Reports (JCR) to demonstrate the impact of the research has been limiting. In a field where citations counts tend to be low, it can be challenging to demonstrate value when IFs are expected to be high to be credible. In early December 2016, Elsevier announced their CiteScore metrics. CiteScore and Impact Factor are both journal level metrics. Despite CiteScore being in its very early stages, many are already outlining the differences in these two metrics; they are not substitutes for each other. Both metrics are calculated using different variables, and thus provide a new outlook on how "impact" can be quantified. **Methods:** To determine the comparative value of each journal metric, we will compare and contrast the scope of journals categorized as PM&R in both CiteScore and JCR. We will also compare the relative journals rankings within the PM&R category, and how these fit in the bigger picture when compared to high profile journals. **Discussion:** Both products call their PM&R categories "Rehabilitation." JCR has a total of 136 journals in this subject category, while CiteScore has 105. Results of comparisons will be presented. This analysis will help determine whether CiteScore is a valuable alternative metric for those publishing in the PM&R field to consider when demonstrating research impact.

PP7. Knowledge of Journal Impact Factors among Nursing Faculty

Maha Kumaran[1], Chau Ha[2]
[1]University of Saskatchewan, Saskatoon SK; [2]Saskatchewan Polytechnic, Saskatoon SK

We surveyed nursing faculty in Saskatchewan's 3 institutions to learn of their awareness and understanding of JIF and if JIF was an important criteria when choosing a journal for publication. Forty-four nursing faculty responded and provided the necessary data to let us know that JIF is not the only important factor. It is important for librarians to understand this, so they are well equipped to guide researchers in consideration of their academic goals, needs, and personal values.

PP8. A Snapshot of the Learning Needs, Gaps and Interests of a Canadian Health Science Libraries Consortium

Jessica Babineau[1], Sarah Bonato[2]
[1]University Health Network, Toronto ON; [2]Centre for Addiction and Mental Health, Toronto ON

Introduction: This research describes the learning needs, gaps in knowledge, and continuing education interests of a large Canadian multi-institution consortium group. **Description:** The consortium membership is comprised of over 40 libraries and information centres in teaching and community hospitals, public health units, educational institutions and government and non-government organizations in the health sector. Consortium members' adherence to and promotion of professional standards in health science library services is supported by a professional practice subcommittee. The group offers opportunities for professional development and a forum for the support and exchange of resources and knowledge to support good practice to consortium members. **Outcomes:** Events have included workshops, guest speakers and round table talks on various topics of interest to the membership. Attendees are surveyed after each event to receive feedback and to provide insight for future learning events. **Discussion:** The mandate of the professional practice subcommittee and continuing education activities will be discussed. We will provide an overview of what our survey data tells us about our membership's learning needs, gaps in knowledge and continuing education interests. In addition, the challenges in providing professional development to a large, varied and Canadian multi-institutional group will be presented.

PP9. Finding the "Core" in Core Competencies: Revising Core Competencies for Public Health Information Professionals

Carolynne Gabriel[1], Susan Massarella[2], Yvonne Tyml[1]
[1]Middlesex-London Health Unit, London ON; [2]Public Health Ontario, Toronto ON

Introduction: A public health libraries association revised their 2006 core competencies document. The problems encountered were: determining which competencies were core to the work common to all association members; determining which competencies were unique to information professionals in public health; and finding the balance between creating a document to guide practice and professional development and one appropriate for job description and evaluation. **Description:** A working group reviewed relevant literature to inform their approach. They then identified the core competencies of associated professions and compiled relevant competencies as well as articulated additional competencies unique to association members, but not necessarily common to all the membership. This list was submitted to the general membership for feedback resulting in only the competencies that were unique to public health information work being retained. A statement was included in the preface that members adhere to the core competencies of the Special Libraries Association and the Medical Libraries

Association in acknowledgement that these competencies are necessary, albeit not unique to supporting public health. The revised document more fully represents the unique skills of public health information professionals. **Outcomes:** The revised core competencies have been adopted by the association. **Discussion:** Core competencies are important for guiding as well as defining a profession. Identifying the competencies which are core is challenging, especially when a profession shares many competencies with other defined professional groups. Discussion with those in the profession is key to finding what is common and unique.

PP10. Involvement of Librarians and Information Specialists in Published Network Meta-analyses

Michelle Swab, Alison Farrell
Memorial University of Newfoundland, St. John's NL

Introduction: The number of systematic reviews that employ network meta-analysis methods has increased dramatically over the past few years. Network meta-analysis (NMA) allows researchers to analyze multiple interventions using both direct comparisons from head-to-head trials and indirect comparisons based on a common comparator (such as placebo). This study will examine documented librarian and information specialist involvement in published network meta-analyses, as little information is available to date. **Methods:** The sample includes NMAs identified in a study by Li et al. 2016 [PLOS One, doi: 10.1371/journal.pone.0163239]. The searches developed in this study will be rerun in order to retrieve citations entered from 9 July 2015 to 31 December 2016. After de-duplication, the results will be analyzed for inclusion using criteria developed by Li et al. For papers included in the final set, the following data will be extracted: participation and level of involvement of a librarian or information specialist, compliance with items 7 and 8 on the PRISMA-NMA extension checklist, and involvement of a consulting company in conducting the research. Descriptive statistics will be used to present the results.

PP11. Flipping the Classroom: Illuminating Information Literacy

Sandy Iverson, David Lightfoot, Bridget Morant, Carolyn Ziegler
St Michael's Hospital, Toronto ON

Introduction: The flipped classroom is a blended learning instructional model that reverses the traditional construct of content being delivered in the classroom, followed by activities conducted outside the classroom. While grounding their experience in the established educational and library science literature, the authors will report on the use of the model to deliver information literacy instruction in an academic hospital library. **Description:** In response to an expressed need for more hands-on experience and individualized support in information literacy workshops, as well as a need to keep workshops within a one hour time frame, this academic hospital library experimented with the flipped classroom model to teach basic search skills on PubMed and Medline to hospital staff, students, and physicians. They utilized the LibGuides content management system to deliver workshop content prior to the classroom module; classroom time was then focused on hands-on activities. **Outcomes:** Evaluative data from both instructors and students were collected and analyzed. Usage data from the workshop LibGuides were also analyzed. Workshops were equally well attended as non-flipped workshops and learners were equally satisfied with their experience. **Discussion:** LibGuides were created for each workshop and included instructional videos, text, sample exercises, and contact information. Learners were expected to work through the information on the LibGuides prior to the workshops and the in-class workshop focused on reviewing the sample exercises and answering students' questions. The online resources were extremely well received by learners, indicating the value of these tools for ongoing independent learning.

PP12. A PICO Concept Map to Support Evidence-based Practice (EBP) Instruction

Francesca Frati[1], Robin Featherstone[2]
[1]McGill University, Montreal QC; [2]University of Alberta, Edmonton AB

Introduction: The PICO structure facilitates question formulation, improves the success of searches and is a cornerstone of EBP instruction. PICO identifies the Problem/Patient, the Intervention, the Comparison, and the Outcome. This in turn helps identify key concepts and tease out multiple questions from a single complex scenario. Despite its usefulness and ubiquitous nature, clinicians often forget to use PICO in their eagerness to begin searching, sometimes resulting in search results which do not answer the initial question (or questions). Presenting information using several modalities, including visual, can be an effective way to illustrate complex relationships between concepts. **Description:** While developing an EBM curriculum for hematology residents, a visual tool to supplement slides and hands-on exercises was deemed useful. A colourful concept map illustrating how PICO relates to type of question and best evidence was developed and used to teach residents. **Outcomes:** The instructors found the PICO concept map helped them teach PICO more effectively. The concept map was subsequently integrated into courses for undergraduate medicine students, and workshops for hospital based occupational therapists and nurses. Whether learners' understanding or subsequent use of PICO was increased was not independently measured. **Discussion:** The map can be used by librarians or clinicians wishing to integrate it into their EBP instruction. Further study to measure the effectiveness of the tool for increasing learners' understanding and subsequent use of PICO in practice should be undertaken.

PP13. Letting the Numbers Speak: Using Data to Guide Our Way to a More Accessible and Impactful Twitter Account

Helen He, Carolyn Pecoskie, Sadaf Ullah
University of Toronto, Toronto ON

Introduction: Known as an easy-to-use social media tool, many libraries use Twitter to communicate with their users. Our library is no exception. Although Twitter's engagement "dashboard" tells us limited information about how many times our tweet appeared on our users' screens, etc., it can't give us the full picture of the impact of our Twitter efforts. The goal of this project is to identify the areas where we should make adjustments to better serve our users. **Methods:** The scope of our analysis consists of statistical information gathered from our Twitter account from May 2015-May 2016. We utilized the Twitter Analytics feature on Twitter and the program Hootsuite to gather this statistical information. We also used Microsoft Excel to analyze the data using charts and graphs. **Results:** We found the answers for the following questions: Which topics are users interacting with the most? What are our most popular hashtags? Which news source provided the most interesting topics for our users? When is the best time to tweet? **Discussion:** This study has proven that the ongoing upkeep of our Twitter is important for the library to maintain a consistent online presence. Certain information is much easier to circulate through our Twitter, such as engaging with our faculty members about their publications. We also learned that we need to schedule our tweets in a more strategic way and that we should tweet news items which have a broader impact.

PP14. Lessons Learned from Twitter Use in Medical Education

Thane Chambers, Janice Yu Chen Kung
University of Alberta, Edmonton AB

Background: Social media has transformed communication and information dissemination. Despite its almost ubiquitous use among students, its impact on medical education (ME) is less clear. Among social media platforms, Twitter facilitates active participation, fosters concise discussions, may be used for asynchronous learning, and provides real-time feedback. However, some instructors question the use of Twitter as a sound pedagogical tool that builds meaningful knowledge for medical students. **Methods:** A systematic review of the literature was conducted to identify Twitter's use in UGME and PGME. The authors searched Medline, Embase, Cochrane, ERIC, CINAHL, and Scopus. A data extraction form identified the type of medical students, level of instruction (categorized by Bloom's Taxonomy), how Twitter was used, subject discipline, and learning objectives. **Results:** Database searches retrieved 772 articles, 340 titles/abstracts were screened, 92 full-text articles selected, and 18 articles included in the review. A preliminary analysis reveals that Twitter is not used successfully to build learning and knowledge for medical students. Many studies used Twitter as a supplementary activity or for distributing information. Most of the educational interventions did not appear to use educational theory in their construction and focused on the technology, rather than on how it can be used as an educational tool. **Discussion:** Despite high rates of social media usage by medical students and residents, there are few examples of Twitter as a successful tool for learning. However, Twitter is a new technology and with more time, there may be more examples documented of its successful use by librarians.

PP15. A Case Study on Citation Accuracy: The Letter that "Became" a Research Article

Monique Clar, Université de Montréal, Montreal QC

Introduction: A curious case of inaccurate citation was humorously presented in the Christmas 2015 BMJ issue. For several years, a 2-paragraph letter on rehabilitation was repeatedly cited as a research article on an unrelated topic. In order to understand how this citation error has started, evolved and lasted throughout the years, we will do a citation and publication analysis of the citing articles. **Methods**: Information available in Scopus for the citing articles will be collected and analysed according to various aspects, including sources, affiliations, countries, document types, co-citations, co-authorships and accuracy of bibliographies. Sources will be analysed further to identify the publishers and determine if these articles were peer reviewed. **Results:** Research articles (80) citing the letter were retrieved. All are meta-analyses of observational studies citing the 1-page letter as a reference for a statistical test. Nearly all authors are based in China. The articles were published in English, in 40 different journals; most of them peer-reviewed, indexed in Medline and available through major biomedical publishers. **Discussion:** Further analysis are being done. It is already obvious that this letter was never consulted by the authors or the peer-reviewers. Citation and quotation inaccuracies are frequent in biomedical literature, however a 1-page document is unusual in a meta-analysis' bibliography and it is surprising that it could pass through the writing, peer-reviewing and technical editing process without ever being looked at.

PP17. The Role of the Library in Supporting Open and Connected Research and Researchers

Catherine Williams[1], Jerry Villacres[2]
[1]Altmetric, London, UK; [2]Digital Science

The role of the librarian is constantly evolving, and new methods of communication and dissemination of scholarly work play a big part in this. In this poster we'll explore exactly what has changed, and what it means for librarians and the faculty they support. We'll detail the impacts that this has for ensuring effective reputation management and for growing the visibility and reach of expertise within and beyond an institution, and discuss how this translates across geographies and sectors. Being able to evidence engagement with a broader audience is becoming increasingly important to secure funding, whilst at the same time researchers involved in high profile/sensitive studies or clinical trials may have strict regulations or concerns relating to privacy and data sharing. Misunderstandings and misinterpretations of research can spread quickly, and it is important that researchers are aware and able to respond as appropriate. We'll look at how the library can play a part in navigating these challenges and the techniques and data they can use to help them do so. Attendees will leave the session with a better understanding of how they might provide better services to faculty to support them and their institution in achieving their long term goals, whilst also raising the profile and demonstrating value of the library itself.

PP18. Revitalizing the Maritimes Health Libraries Association's Logo: A Cost-effective, Creative Solution

Sarah Visintini[1], Lara Killian[2], Jackie Phinney[3], Katie D. McLean[2], Amanda Horsman[4]
[1]Maritime SPOR SUPPORT Unit, Halifax NS; [2]Nova Scotia Health Authority, Halifax & Dartmouth NS; [3]Dalhousie University, Saint John NB; [4]Université de Moncton, Moncton NB

Introduction: The Maritimes Health Libraries Association has been undergoing a renewal. Membership identified the logo and website as in need of a new "look" to continue conveying credibility. Our working group was formed to design a new logo, which would then set the tone for the rest of the Association's web presence. The Executive provided a tentative budget of $500 CAD. **Description:** After consulting industry experts, we decided to partner with a Nova Scotia Community College instructor. We solicited appealing samples of organizational logos from membership, and presented these with our mission and values to design students as a project. Students later pitched their 26 logos to working group members. We narrowed these to 3 finalists after iterative rounds of selection. Members voted for the winning logo using a survey distributed via the MHLA listserv. We sponsored a pizza party for the class, and the winning student received a letter from the Association for their portfolio. **Outcomes:** Our Association was able to renew its logo and look, involve the entire membership in the decision making process, partner with other institutions in the community, and provide students with real-world experience as part of their class project. Our project came in under budget and took less than a year to complete. **Discussion:** We highly recommend this approach to other library associations seeking cost-effective and timely rebranding options. Considerations should include timing of the academic year, adequate compensation for students, intellectual property rights, and the ability to liaise in person with the instructor and students.

PP19. Planning for PRISMA: A Tool to Accurately Track Citations in Multiphase Systematic Review Searches

Sarah Visintini[1], Leah Boulos[2], Andrea Smith[3], Rachel Olgivie[3], Jill A. Hayden[3]
[1]University of Ottawa Heart Institute, Ottawa ON; [2]Maritime SPOR SUPPORT Unit, Halifax NS; [3]Dalhousie University, Halifax NS

Introduction: Citation management plays an important role in the transparent reporting of systematic review methods. The PRISMA flow diagram is recommended to assist systematic reviewers tracking and reporting citations from retrieval to inclusion, but this can be difficult since systematic reviews often draw from multiphase searches of databases, grey literature, reference lists, and from hand searches. Librarians are ideally placed to help researchers with citation management. We describe the development and preliminary testing of a citation tracking tool to accompany the PRISMA flow diagram. **Description:** We conducted a literature review and an environmental scan of citation management strategies employed by systematic reviewers. Two librarians created a tool in consultation with past systematic review collaborators, which identifies the type and detail of information to collect at each phase of the systematic review search, and contains a modifiable tracking sheet for users to manage their project. The tool was piloted by graduate students completing their first systematic review, and feedback was collected through questionnaires and group discussion. **Outcomes:** We received feedback from 7 students completing a systematic review as part of a graduate course. Students appreciated the tool's centralization and organization of search information, yet found some aspects of the tool lacked clarity. **Discussion:** Overall, respondents found the tool was useful, making tracking and reporting less intimidating. The tool responds to the complexity of multiphase systematic review searching. More testing, from systematic review initiation to completion, is required to confirm its usability and usefulness.

CHLA 2017 LIGHTNING TALKS / ABSC CONGRÈS 2017 PRÉSENTATIONS ÉCLAIR

LT = Lightning Talk

LT1. Measuring the Effectiveness of a Pre-consult Subject Guide

Sophie Trolliet-Martial, Martin Morris, Genevieve Gore
McGill University, Montréal QC

During a one-to-one consult between a patron and the librarian, it is clearly desirable to make maximum use of the time available. Health sciences librarians at McGill Library have been studying the effectiveness of a new method of improving the impact of one-to-one consults: the use of an online Heath Sciences Information Starter (HSIS) guide to enhance students' basic information skills before their appointment. The HSIS guide covers the main steps of the information search process: research question formulation, database selection, building a search strategy, evaluation of results, and citations management. To evaluate the guide, study participants are recruited from those faculty members or students who approach a McGill health librarian for a consult. Consenting participants are invited to consult the HSIS guide before they meet their librarian and following the consult, are invited to provide qualitative and quantitative feedback by completing a brief online questionnaire. The number of visits to the guide will also be monitored to examine the relative popularity of different parts of the guide. Inspired by the model of the "flipped classroom," the "flipped consultation" could better meet students' advanced needs during in-person consults, as basic information will already have been provided through the guide, thus improving the effectiveness of consults, pinpointing students' difficulties in advance, and providing a more consistent user-centered approach to consultations.

LT2. Revolutionize your Undergraduate Instruction with Top Hat!

Caitlin Carter, Kate Mercer
University of Waterloo, Waterloo ON

One of the most difficult tasks while teaching undergraduate students is maintaining audience engagement. Historically, clickers have been used to encourage student participation and to gauge comprehension during lectures. However, using clickers has some disadvantages, which has allowed for more robust audience response systems to gain popularity within higher education institutions. Top Hat, an audience response system, is a subscription web-based product which can be used to keep students engaged in the learning process. In January 2016, the School of Pharmacy decided to pilot the use of Top Hat in all first-year courses, due to its versatility. This lightning talk will describe how 2 librarians used Top Hat in a first-year drug information course to deliver more interactive lectures. Top Hat's variety of question types, like word answer, click-on-target, and multiple choice, were used to assess student learning and to gather feedback. Top Hat has a low learning curve, but it does require some time investment when creating questions. Anecdotal feedback from students has been positive, and Top Hat has been embraced by instructors at the School of Pharmacy, while continuing to grow in popularity.

LT3. Empowering Health Librarians to Promote Research Reproducibility

Frank Palcich, Eglantine Ronfard
JoVE (Journal of Visual Experiments)

Today, over 70% of the studies published in established science journals cannot be successfully reproduced. This reproducibility crisis costs academic institutions and scientists billions of dollars, allows inaccurate research to spread, and delays scientific progress and the development of new medicines and technologies. This reproducibility crisis poses a serious threat to the scientific community and demands a unified effort from scientists, publishers, and librarians to raise awareness and increase research reproducibility. However, as the gatekeepers of the informational resources consumed by scientists, academic librarians are best positioned to spearhead the end of the reproducibility crisis and must take a leadership role to reach that end. During this talk, we will present initiatives that librarians can take to ensure that their institutions' researchers are properly equipped to conduct research and publish work that adheres to reproducible research best practices. Health librarians will take away some key concepts that can easily be implemented in their institution including how to: educate and consult with researchers about new reproducibility guidelines; provide researchers with resources that make experimental reproducibility easier and more reliably achievable; and spread awareness of the reproducibility crisis through informal and formal education and training. The presentation aims to empower academic librarians to lead the conversation on research reproducibility and organize initiatives in their own institutions.

LT4. Visualizing Library Instruction and Attributes with Heat Maps

Janice Yu Chen Kung, University of Alberta, Edmonton AB

Introduction: Health sciences programs have accreditation standards and core competencies that must be met. It is critical that library instructional sessions correspond with these standards. There is little literature that describe how library sessions align with core competencies in a visual way. **Description:** The University of Alberta developed a university-wide report on Graduate Attributes, a list of qualities that students should have developed upon completion of their university degree program. They include Ethical Responsibility, Scholarship, Critical Thinking, Communication, Collaboration, Creativity, and Confidence. As a case study, 1 librarian reflected on the attributes and evaluated all courses she taught in 1 academic semester based on learning objectives, course content, and method of delivery. Courses were then mapped to as many attributes as applicable and subsequently visualized on a heat map, a graphical representation of data in a matrix with colours. **Outcomes:** The creation of a heat map was an informative evaluation tool to determine how attributes aligned with instructional sessions. Based on the results visually represented on the heat map, it was clear that library instruction was strong in Scholarship and Critical Thinking. **Discussion:** Due to the subjective nature of the exercise, another librarian may have mapped the attributes differently. There is potential to adapt this process and apply it to core competencies of a program to identify how library instruction maps to these proficiencies. Insights gained from heat maps could be used to evaluate current teaching practices, identify gaps, and improve sessions to better align with core competencies.

LT5. Information Specialist Collaboration on Realist Reviews of Health Equity Interventions

Carolyn Ziegler, David Lightfoot
St Michael's Hospital, Toronto ON

The information specialists at St. Michael's Hospital have collaborated on a number of realist reviews of interventions to reduce health inequities. Unlike systematic reviews with a focused clinical question, realist reviews attempt to understand how, for whom, and under what circumstances complex interventions or policies work. The underlying methodology of realist reviews will be illustrated with examples, followed by a discussion of the information specialist's role in supporting them and how these types of reviews differ from systematic and scoping reviews.

LT6. Shining a Light on Library Marketing: Using Humour and Creativity to Increase Engagement and Library Value

Sandy Iverson
St Michael's Hospital, Toronto ON

Introduction: Historically, libraries have been accused of being bad at marketing and boring in their approach to communications. The authors argue that special libraries can use humour and creativity in marketing to engage with users just as larger public and academic libraries do. Drawing on examples from the literature as well as personal experience, this paper will demonstrate how utilizing creativity, humour and fun to create a strategic marketing campaign can increase engagement of both library clients and staff. **Description:** An academic hospital library serving physicians, staff and students utilized a variety of creative methods to engage library clients and improve engagement. A number of practical marketing methods were utilized including marketing checklists, unique branding samples and humorous videos. The authors will suggest tools and sources of inspiration that were used by each marketing campaign. **Outcomes:** Focusing on creativity, humour, and fun, the library created strategic marketing campaigns that increased usage of library materials and services and improved the engagement of both library clients and staff. **Discussion:** Increasing understanding of the value of library services is an ongoing issue for many hospital libraries. It is important for librarians to discuss the strategic value of considering the marketing aspect of various activities, the use of social engagement as a marketing strategy, the overlap between education and promotion, as well as the synergy between strategic planning and marketing. Effective marketing improves the perception of the library and with it the level of library staff engagement and job satisfaction.

LT7. Copyright Compliance Strategy

Obianuju Mollel, Alberta Health Services

Reusing and creating copyrighted material is a common activity in clinical and educational health service organizations. Yet there is low awareness of how to be copyright compliant in the reuse of material created by others, and of organizational copyright processes and procedures. To mitigate the potential risk of copyright infringement, the Knowledge Management (KM) Department collaborated with Legal Services to deliver copyright services in a large health care organization. This lightning talk will highlight the copyright compliance strategy, and the collaboration between KM and Legal Services.

LT8. Information from a Distance: The Embedded Librarian in a Telemedicine Continuing Medical Education Program

Jessica Babineau[1], Jane Zhao[1], Andrea Furlan[1], Ruth Dubin[2]
[1]University Health Network, Toronto ON; [2]Queen's University, Kingston ON

The role of embedded librarians has traditionally been in the developmental stages of continuing medical education (CME) program development. This lightning talk will describe the role of a librarian embedded within a successful video-conferencing continuing medical education program. In 2014 the Ministry of Health of Ontario funded a tele-mentoring program, Project ECHO Ontario Chronic Pain, with the goals of improving patients' access to specialist skills and of expanding primary care providers' (PCPs) capacity to manage chronic pain. Using a hub-and-spoke model, an interprofessional "hub" team delivers education to multiple "spoke" PCPs. A librarian embedded as a part of the hub team attends weekly sessions and provides research-driven, evidence-based resources to both hub and spoke members. Over time, the librarian's role has also grown to include providing updated best-practice evidence as well as addressing issues of copyright and information dissemination, with sensitivity to PCPs' varied and often restricted access to published medical research. As the first replication of this education model to embed a librarian, the role has been iterative and ever evolving. By receiving the support of a librarian throughout this tele-mentoring CME program, primary care providers in rural and under-served areas, and ultimately patients, receive timely access to evidence-based information.

LT9. Pan-Canadian Review of University Library Engagement with Pharmacy Departments

Melissa Helwig, Dalhousie University, Halifax NS

Introduction: The ability to find and utilize information at the point of need is a crucial element of evidence-based practice for pharmacists. Information seeking is an important skill learned by pharmacy students that ideally continues to be developed and used in their future professional practice. Librarians have a role to play in this development. **Description:** With an exception of a few established programs in Canada, pharmacy schools in Canada are currently transitioning from the Bachelor of Science (Pharmacy) to the Doctor of Pharmacy (PharmD) program. This change in curriculum will potentially change information seeking skills with increased time spent on practice experience placements. This project aims to review how libraries are engaging with pharmacy departments through an environmental scan and interviews of both in-transition programs as well as the current Canadian PharmD programs. **Outcomes:** The information gathered through this review of libraries' engagement with pharmacy programs will allow libraries who support Pharmacy programs or Pharmacist to plan engagement with the new pharmacy curriculum and potential contributions to the curriculum through collections, instruction, and services. This information may be applicable when assisting in transitions related to other health profession programs served by health libraries, based on their similarity to the case-based learning approach and need for strong information seeking skills of the Pharmacy program. **Discussion:** To be submitted, if accepted by March 1st, 2017.

LT10. Information Motherload: New Parents Information Seeking and Sharing Behaviours in Online Communities

Angela Hamilton, University of Toronto Scarborough, Scarborough ON

New parents have a seemingly endless list of questions and information needs in order to make decisions about their children, and in particular, about the health and development of their children. The internet has a seemingly endless amount of information to answer these needs. One popular source of finding and sharing information are parenting communities found on social media sites or website such as Baby Center. These sites often serve to fulfill an emotional need as well as an informational need, and these two aspects become linked intrinsically. The quality of this information varies wildly, as do the critical evaluation skills of the parents participating in these groups. This project will seek to survey the most common health information seeking and health information sharing topics, discuss the role of identity and authority in online parent communities, as well as analyze the critical discourse that does or does not occur in the sharing and receiving of information. This lightning talk will provide an overview of the project plan, present the findings of a scoping review of current literature on health information seeking behaviours of new parents in online communities, outline the next steps to be taken in the project such as a survey or a critical analysis of posts made in publically available parenting groups, and discuss the potential consequences for information literacy, patient literacy, and medical professionals working with new parents.

LT11. Drug Information Resources: Review and Update of a Credible Web Resource

Melissa Helwig, Jennifer Isenor
Dalhousie University, Halifax NS

Drug Information Resources: A Guide for Health Care Professionals (DIR) is a portal of credible and current health information that is used locally and internationally with over 45 000 visits a year. In order to maintain its status as a clinically relevant information resource tool, DIR must be continuously monitored to ensure that its content is appropriate and that its links are active. The site must also be responsive to the needs of users by ensuring that the format and design support ease of use and navigation for those accessing the site. This talk will look at results from a survey and focus group as well as the translation of this data into improving DIR's structure and content.