Creating and Assessing a Subject-based Blog for Current Awareness within a Cancer Care Environment

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Abstract

Introduction
The Health Information Network Calgary (HINC) is comprised of a group of libraries providing information services and resources to urban and rural sites in the Calgary Zone of Alberta Health Services. Establishing a current awareness service is a necessity in any discipline, especially in health care. Web 2.0 and social networks have transformed how health care professionals and researchers create knowledge, access information, collaborate, and disseminate research.

One of the earliest forms of social media, blogging has taken the world by storm (1) . Although there is a wealth of literature on the use of blogs in providing current awareness services for libraries, there is a pronounced gap on how blogs are assessed or evaluated, especially for information alert purposes (2) .

Background
Clients within the HINC subscribe to e-mail alerts and RSS feeds, a trend particularly evident within the Cancer Care environment where a number of researchers have already implemented feed readers to remain aware of current

literature. However, they often comment on challenges associated not only with maintaining alerts and managing RSS feeds, but also in selecting and creating alerts for unpublished materials. The need for a librarian-facilitated current awareness strategy became more and more apparent. The literature reviewed addressed the value of an alert, namely to indicate a gap in the participant's knowledge, rather than to deliver content the librarians may have perceived as useful (3).   The authors saw the creation of a subject-based blog as an opportunity to disseminate current awareness "grey" information to this specific research community.

Method/Anticipated Results

The *Grey Horizon* Blog was created in April 2012 using Blogger. The selection and re-aggregation of information involves ongoing assessment of user needs and continuous work on the Blog. A weekly global email-digest listing of the postings will be distributed two months after the launch.

Several metrics will be employed in October 2012 to evaluate the Blog. Blogger itself tracks the number of page-views over time. Google Analytics was set up as it tracks additional information on access and use of the Blog. As clients may be using feed readers to read Blog entries and may thus not visit the Blog at all, Feedburner has also been incorporated to track the number of times that the Blog RSS is accessed, as well as calculating the number of subscribers.

A post-survey will be conducted in six months to complement the web statistics data. The additional feedback and comments will help us determine whether the Blog has successfully created an easy platform for users to keep current with unpublished literature, the type of resources found most important, and whether the amount of time spent maintaining the Blog met expectations.

Discussion

It is anticipated that this case study will portray how to successfully plan a subject-based blog to meet users' current awareness information needs in grey literature. Further efforts will focus on targeting the Blog to the topic areas in grey literature where users feel more information is needed. The findings from this assessment will direct us to potential marketing opportunities and changing technology that haven't been fully utilized in our *Grey Horizon* Blog.

Introduction: HINC and the Role of Social Media and Grey Literature in Healthcare

The Health Information Network Calgary (HINC) is a strategic partnership between the University of Calgary and Alberta Health Services (AHS). As a network of libraries covering different disciplines, the HINC is currently in the midst of progressing and extending coverage to a provincial-based service, collectively referred to as Knowledge Resource Services (KRS). The vision for the Network grew from a 2004 report, *Making Information Count*, advocating that "a transformed healthcare system needs a transformed information delivery system, if its practitioners, researchers, patients and their families are to have adequate and timely access to the information essential to their needs" (4). It proposed a new model for library services in the local health organizations, showcasing the successful integration of more dynamic information services supporting patient care, teaching, research, and learning, thereby strengthening the bond between healthcare practitioner and information provider (5). Of the six sites comprising the HINC, two cancer facilities serve nearly 500 cancer care staff.

As has been discussed time and time again, the power of grey literature lies in the fact that it is information that is rapidly produced, available when the user needs it, bypassing the often longwinded peer-review process present in commercially published journals. In fact, this body of literature can perhaps best be equated with social media, in that it is "accessible to anyone at little or no cost…can have a very short time frame of production, and can be altered as needed" (1). With the advancement of technology, social media has become widely integrated in numerous aspects of information services. When considering the role of social media in the pursuit of grey literature, questions may arise as to whether or not healthcare professionals are prepared to accept this type of material as a means of keeping current and staying abreast of the latest information published in their disciplines. Social media engages readers with similar interests, fostering a sense of community development. In health care settings, social media has been widely adapted to "promote health, improve health care, and fight

disease" (1). With *Grey Horizon* (http://grey-horizon.blogspot.com), social media has been adapted in our project as an effective platform for information and knowledge management. As such, it entails the provision of better communication, an alternative and expected social norm. As information professionals, we share our skills in retrieving and selecting appropriate grey literature material that will enhance our credibility in finding quality information.

One of the fundamental purposes of current awareness, exhibited in this paper by means of a blog, is to ensure the easy, convenient, and wherever possible, free access to information all in one place, offering support to the user every step of the way. As the discovery of grey literature material is heavily dependent upon information being made available online, engaging users to embrace social media components for their information-seeking pursuits is becoming crucial for health researchers.   An interesting paradigm, considering that the blog, of which there are an estimated 70 million today, is often considered the earliest form of social media (1). According to a survey and research findings conducted in this field, 50% of physicians in Europe and 41% in the U.S. regularly engage and/or post in blogs (1). Further, 50% of medical organizations surveyed currently use blogs in their information pursuits, with another 80% planning to do so shortly (6). The cancer care librarians and creators of *Grey Horizon* thus echo Chu's notions that due to the interactive nature of the diary-like postings, "blogs are more dynamic and permit writers to engage in one to many conversations with their readers" (6).

Background: Current Awareness' Importance in Cancer Care Leads to Creation of the Blog

The notion of current awareness in the cancer care environment served by the *Grey Horizon* Blog is not new. Current Awareness services, "designed to keep users informed about recent developments" (7), have existed in Cancer Care since 2008. Librarians involved in this study have responded to user demand by spending countless hours over the years meeting with researchers and health care professionals on an individual basis to create current awareness guides or digests, providing instruction

on how to set up a table of contents e-mail alert and/or an RSS feed for a particular journal or search strategy, catering to their clients' needs. While cancer researchers were keen, motivated, and engaged with this initiative at the beginning, increasing workloads, time constraints, and other pressing commitments soon put current awareness on the backburner. Many researchers echoed the sentiments of Attfield, Blandford, and Makri, as "participants frequently found attending to current awareness information overwhelming" (7). By sorting, selecting, and placing relevant information in a central location (i.e. blog) that all researchers could access on their own time (in lieu of filtering out a deluge of e-mails), the authors of this paper believe that issues of information overload and time constraints can be better managed.

For a librarian not to recognize his/her role as an information mediator and accept the direction that social media and the selective dissemination of information is taking, is to demonstrate that one's role in this profession is done. While the introduction of a blog in the specific cancer care environment discussed in this paper is a new initiative, it is not entirely unique, but rather merely goes with the flow of the connected health care professional. As a subject-based blog, *Grey Horizon* delivers timely and accurate information exclusively from grey literature resources, to the community in need.

Method: Designing and Creating the Grey Horizon Blog

Deciding on a subject-based blog

Findings from the literature support a strong association between current awareness and social media in healthcare. The HINC has and continues to integrate social media in an effort to reach out to the connected users served by this organization. Instant messaging chat reference, a *Twitter* account, and a *YouTube* channel containing brief self-paced tutorials, all demonstrate the need of library services to recognize the importance of this communication medium. The nature of the cancer care environment within which the authors of this paper are employed is fast-paced with ongoing clinical

trials, evidence-based guideline development, , grant proposal applications, physician meetings, and conference presentation opportunities. In fact, Health Information Network staff can be seen as information brokers, acting "as a layer of 'intelligent filters' sensitive to complex, local information needs; their decisions aim to optimize conflicting constraints of recall, precision, and information quantity" (7). Cancer Care librarians integrate current awareness in their provision of information, by offering in-person training, facilitating virtual interest groups, and creating subject-specific e-mail alert digests, emphasizing that librarianship most go forward and acknowledge the joint role of current awareness and grey literature, particularly in a 21st century technologically-enriched society.

Planning for the Blog

Despite the wealth of information available focussing on the need and importance of blogs, far less literature has been written on evaluating and assessing a blog (2). The authors of this paper have thus applied Blair and Level's guide of subject blogging etiquette while planning *Grey Horizon*. Before embarking on the actual creation of the Blog, the authors first established and planned the process and methodology dictating how *Grey* Horizon would come to fruition. Blogger (http://www.Blogger.com) was chosen as the software, due to the program's ease of posting information, tracking followers, and generating statistics. Further, the program is free anduser-friendly. Once the program of choice was decided on, appropriate material from which the Blog's postings would be generated was selected, based on the authors' past experience and knowledge of grey literature cancer resources. This included a wide array of grey literature cancer resources, such as Canadian Partnership Against Cancer, Cancer Trials Canada, New York Academy of Medicine, Canadian Cancer Society, Canadian Health News, NICE guidelines, American Society of Clinical Oncology, American Association for Cancer Research, the European Society of Medical Oncology, and several others.

Organization of content was considered an essential planning step, as the volume of posts in a Blog can become unwieldy if not appropriately managed.   To manage the scope and breadth of content, a

controlled list, consisting of a series of tags corresponding to grey literature types, was established at the outset. Each new item posted on the Blog would thus be labelled accordingly. The most common tags, many of which were formed according to the nature of the postings, were Cancer Research, News, Conferences, Drug Updates, Case Studies, Reports, Clinical Trials, and Guidelines. In addition to the tagging mechanism utilized, the Blog's interface also contained a Favourite Links section, as well as an area where the reader could find out additional information about grey literature, as well as instructions on how to set up an e-mail alert and RSS feed.

 To keep track of all of the information and make it easier for the project team to oversee all information sources for *Grey* Horizon, a shared email account was created via Gmail for storing and monitoring all RSS feeds and e-mail alerts. Meanwhile, a Blog log was initiated to keep track of the progress of postings, complete with time spent and any comments the Blog creators had with regards to issues encountered with the postings (i.e. website down, inappropriate posts, etc.) Inclusion and exclusion criteria were established before the Blog went live, to ensure that postings covered numerous aspects of cancer care, including research findings, clinical trials, and conference proceedings, as well as to maintain consistency among blog postings. Criteria common across all document types, and adversely affecting the decision of whether or not to post a particular news item included current, unbiased information from selected sources, clinical trials not endorsed by pharmaceutical companies, recognizing the various formats of grey literature and posting accordingly, as well as adhering to the main subject areas/types of sources previously identified from the users. To attract and sustain reader attention, new postings must appear on a daily basis.

Creation of the Blog

 Grey Horizon was created in April 2012, and officially launched on April 30, 2012 (see figure 1). Prior to the official unveiling, a soft launch was held for two weeks to allow for pretesting with a few key

users, measure workload involved, and finalize the interface design.

Figure 1: Screen shot of the *Grey Horizon* home page

Bi-weekly digests

Three months after launching the Blog, the librarians decided to re-aggregate selected postings into a bi-weekly digest format. The digest was disseminated to all staff at both cancer sites via an e-mail listserv. This promotion effort, combined with a link to the Blog being placed on the HINC website, established multiple avenues by which the Blog could be accessed and postings read. Along with the posting's relevancy to the cancer community at large, presenting information via a digest format provides a brief and condensed way for users to access the same information. Due to the nature of grey literature and the importance of disseminating current information in cancer care to Blog readers, *Grey Horizon* is reviewed daily, not only in posting up the latest cancer care news, but also in allowing our readers determine the direction the Blog will take. While the primary evaluation period was not scheduled until six months after the Blog launch date, librarians review postings and listen to reader comments on a continuous basis, thus following "what users would change or like to see added" (2).

Monitoring and maintaining the Blog

Due to the elusive nature of grey literature, websites that served as the focal point one day can be moved or disappear. Thus, as Attfield, Blandford, and Makri comment, the importance of continuous monitoring, particularly with a form of social media such as the blog, cannot be overlooked: "monitoring is an ubiquitous activity and can take many forms, frequently combining both formal routes with less formal routes, such as the use of social networks" (7). As creators of the Blog, the two cancer care librarians applied Ellis' model of information seeking (8-9); namely, appropriate cancer resources were identified and located (whether by conducting a search or implementing an e-mail alert or RSS feed), accessed, selected, and processed (i.e. posted on the Blog).

Methods: Analyzing and Evaluating the Blog

As there is no one standard metric for the evaluation of a blog (2), the authors decided to employ several metrics addressed in the literature to evaluate the usefulness and effectiveness of *Grey Horizon* . This included looking at participation through comments (10), webtrackers and other RSS feed reader tracking websites, in addition to monitoring blog traffic. Both qualitative and quantitative data from the post-survey and comments were gathered to assess how the blog meets successful criteria.

Blogger

Blogger, as an online platform for the creation of the blog, tracks the number of page-views over time. A total of 6806 page views on 463 postings were tracked from the Blogger from May to October 2012. As indicated from Figure 2, traffic has significantly increased during the six-month project phase. There were nearly three times (1835 page views) as many visitors in October as the first month in May (691 page views)
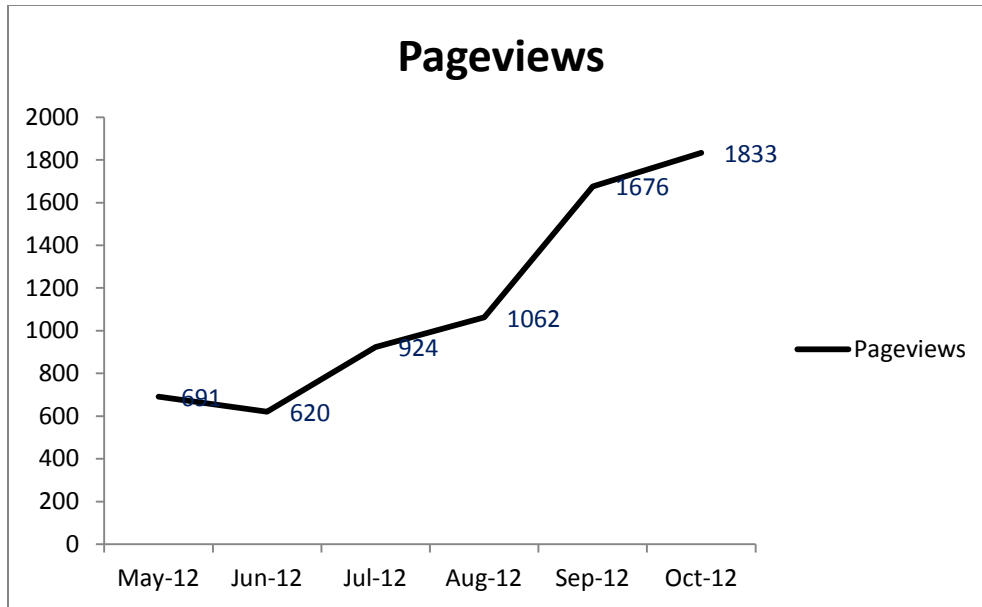
Pageviews

Figure 2: Number of page views by month from Blogger

The popularity of individual postings was also determined by the number of page views tracked, thus confirming the value of core types of grey literature for cancer researchers. Based on the total number of 463 postings as of October 22, 2012, the following was noted:

- 84 page views for news about a specific research **conference**

- 56 page views for a cancer **drug update** from Health Canada

- 53 page views for a **report** on cancer health services

- 51 page views for a clinical **guideline** from the National Institute for Health and Clinical Excellence (NICE)

- 46 page views for **statistics** on cancer incidence, survival and risk factors

Further, a definition of grey literature (66 page views), along with instructions on how to obtain full text papers from the references mentioned in the postings (23 page views) were among the most accessed pages within the More Information section of the Blog. Undoubtedly, users seek expert guidance in successfully retrieving, filtering, and understanding information.

Google Analytics

As a popular web tracking instrument, *Google Analytics* captures how visitors interact with a website. Therefore, this tool was set up to track additional information on access and use of the *Grey Horizon* Blog, including number of visits, number of hits, types of access, visitors from referring websites, and detailed user behaviour when visiting the Blog. The breakdown of new visitors and return visits was particularly helpful in evaluating the usefulness of the content and effectiveness of blog promoting strategies (Figure 3).

■ 61.51% New Visitor
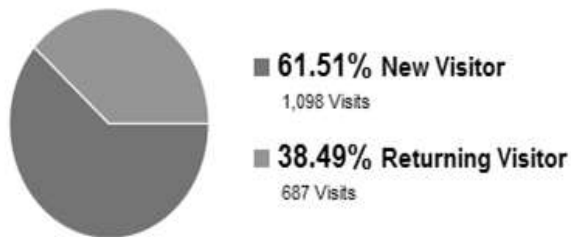1,098 Visits

■ 38.49% Returning Visitor
687 Visits

Figure 3: Percentage of new visitors vs. returning visitors of the Blog

According to *Google Analytics*, a total of 1785 people have visited *Grey Horizon*, as identified by unique IP address.   An average visit duration of 4 minutes 14 seconds indicates that time is being taken to read and digest the information presented. In addition, it is helpful to examine how visitors navigate various pages, along with the different interactions undertaken.

Feedburner

Feedburner is a tracking service for RSS subscribers. As clients may be using feed readers to peruse blog entries and may thus not visit the Blog at all, by replacing the automatically generated RSS feed with one from *Feedburner*, *Feedburner* tracks the number of times that the Blog RSS is accessed, as well as calculating the number of subscribers. A total of 17 people subscribed to the *Grey Horizon* RSS feed over six months. On average, 12 out of 17 subscribers remained active by taking the actions of clicking

the links to the postings, or viewing them in their feed readers. Responses from the post-survey questions on whether visitors subscribed to the Blog feed and their experience regarding use of an RSS feed reader confirmed users' education needs on using RSS feeds for current awareness purposes, a future instruction effort for librarians via more integrated alert services.

Reader feedback/comments

Having the ability and opportunity to comment based on postings is one of the most important features of a blog. The use of comments often foreshadow a blog's success. Since the "Comment" feature was turned on in September 2012, *Grey Horizon* has received seven comments from readers. Some echoed their own experiences with cancer, while others expressed their opinions on some of the research posted. Reader feedback and comments on our Blog were also observed from the connection activities with the Health Information Network Twitter account. The HINC Website links the *Grey Horizon* Blog in the current library news column and the tweets on individual postings were therefore tracked accordingly. As no single evaluation metric is able to present the full story, it was extremely helpful with ongoing service planning to have seen similar comments and feedback from different evaluation channels.

Post survey

A post-survey was distributed to the Cancer Care listserv in September 2012 to complement the web statistics data, with the purpose of helping the authors determine whether the Blog has successfully created an easy platform for users to keep current with unpublished literature, the type of resources found most important, and whether the amount of time staff spent maintaining the Blog met users' expectations. Fifty-one people completed the survey, comprised of questions in four sections:

- Users' familiarity with grey literature and current awareness practices
- Experience with the Blog
- Experience with bi-weekly digests

- Additional comments and suggestions on future current awareness services

43.5% of respondents mentioned unfamiliarity with the concept of grey literature prior to accessing the Blog. This finding was consistent with previous studies conducted by the authors indicating that most users successfully incorporated grey literature in their research despite being unaware of this term. (11) Google still appeared to be the most predominant source of information for grey literature searching for 21 out of 51 respondents. Despite an overwhelming number of people (67.3%) finding it challenging to keep abreast of current information in their fields, cancer researchers and healthcare professionals are still in the traditional mode of receiving and sharing new information. Attending workshops and conferences, setting up journal alerts via email, and communicating with colleagues are among the most frequent practices.

The post-survey has also reflected the success of the *Grey Horizon* Blog. 35 out of 51 respondents had accessed the Blog, a frequency ranging from a few times a month to every day. Among these, nearly all respondents (94.1%) found the postings useful. For those who hadn't accessed the Blog before, having a busy clinical/research schedule was the most noted barrier. The usefulness of the topics was rated by the readers, as shown in Figure 4. Cancer Research, Clinical Trials, Reports and Drug Updates were the top four categories, the findings being consistent with the number of page views tracked by Blogger.

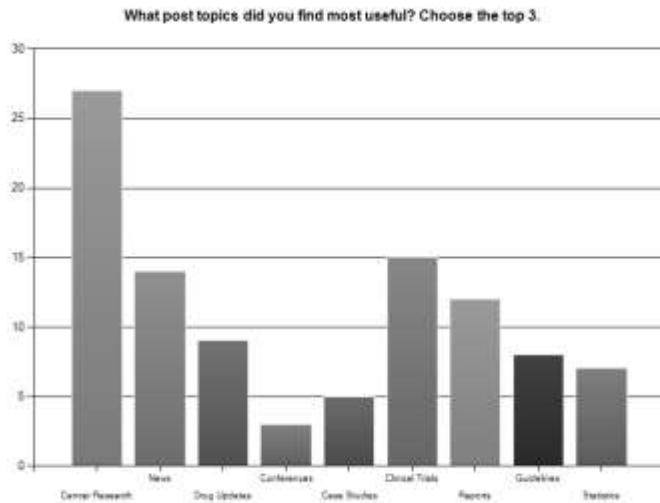What post topics did you find most useful? Choose the top 3.

Figure 4. Usefulness of posting topics perceived from the Post-Survey

Additional features of the Blog, including providing links to other websites, pointing to the published studies mentioned in the post, and creating pages to inform about grey literature and how to access full-text articles were most favoured by the readers.

Bi-weekly digests appeared to be a very successful pursuit in re-aggregating the information in a user-friendly format, promoting the site to new staff as well as serving as reminders for existing readers to revisit the Blog. Ongoing assessment of the user needs and thorough planning of this current awareness project have become common themes the authors discovered when analyzing and evaluating the success of the Blog. When readers were asked to articulate their views on what may have contributed to the usefulness of the Blog and the postings, key features of a blog, including ease of interface navigation and information gathered in one place, as well as selection of various relevant sources and provision of current, pertinent information in one place were stated as the main criteria.

Discussion and Future Directions

Enhanced research interaction and collaboration

Grey literature's placement and availability on the World Wide Web, particularly the new Web 2.0 generation is essential to its success. These new services "encourage group interaction in a space where individuals can participate, socialize, and set social norms" (12). Such was the ideology behind the creation of *Grey Horizon*: to allow readers to not only learn about the latest cancer care news, but also to actively participate and interact with their colleagues, as well as with the cancer care librarians. The Blog has achieved a chain-reaction effect, demonstrating the power of collaborative learning and information sharing.

Librarians' integrated roles in current awareness services

Librarians in this project act as the conduits of information, browsing through RSS feeds and e-mail alerts to actively pull relevant information and responsively push this out to the users, the readers of the Blog (7). The authors are thus the gatekeepers, controlling the flow of information to craft Cancer Care South into a well-informed and efficient organization (7). Although the creators of the *Grey Horizon* Blog identified resources that, in their opinion, were best suited to researchers within a cancer care research facility, it is important to note that the two librarians do not consider themselves as content experts in this field. This then emphasizes the collaboration needed between librarian and researcher, where the librarian seeks a better understanding of the information being requested is a form of contextual inquiry, playing a key role in the data that is gathered and eventually placed in the Blog (7).

Blog as a successful platform in promoting current awareness services

It is evident from this project that many researchers and healthcare professionals appreciated being "pushed" relevant information in their field, as they often did not have the time to go searching for this information themselves. Tailored information to different fields of interest in cancer was suggested as a future direction for a more dynamic and laddered current awareness service. The Blog has also become an invaluable tool that can aid in planning integrated information services, and

promoting library instruction courses, special events, and new resources.

Becoming a source of grey literature

Although *Grey Horizon* has only been in existence for a mere 6 months, it is gaining ground and is

serving as an important source of grey literature material in the cancer care environment in Alberta.

This relative success within a short time frame demonstrates that subject-based blogs work well as a

current awareness service, highlighting the importance of disseminating useful content on relevant

topics to the intended audience. Readership is growing, requests from readers to link to external blogs

is raising even further awareness.

Current awareness project planning

Grey Horizon reinforced the need for thorough project planning, achieving balance between staff

time, workload, and user expectations. Additional features of the Blog are being explored, along with

new methods of marketing and promotion. The authors are presently investigating the possibilities of

linking and sharing with other blogs in the same subject field, as well as creating a mobile site for the

Blog. . Despite making a few adjustments over the course of this pilot study, the creators of the Blog

often heed the words of Chu et al. words that can be applied to the importance of intertwining current

awareness with grey literature: "what attracts users is not technology but how you make use of the

technology so that they can fully utilize the tools to accomplish things they want" (6).

References

(1) Graham DL. Social media and oncology: Opportunity with risk 2011:421-424.

(2) Blair J, Level AV. Creating and evaluating a subject-based blog: planning, implementation, and assessment. Reference Services Review 2008;36(2):156-166.

(3) Attfield S, Blandford A. Conceptual misfits in e-mail-based current-awareness interaction. Journal of Documentation 2011;67(1):33-55.

(4) Calgary Health Region, University of Calgary. Making Information Count: AN integrated knowledge service for healthcare practitioners, staff, patients and their families 2004.

(5) Reaume R, Aitken E, Powelson S. Library advocacy at the bedside and the boardroom: Calgary Health Information Network 2010; Available at: http://www.chla-absc.ca/2010/graphics/chla2010-poster17.pdf. Accessed October 29, 2012.

(6) Chu SKW, Woo M, King RB, Choi S, Cheng M, Koo P. Examining the application of Web 2.0 in medical-related organisations. Health Information & Libraries Journal 2011;29(1):47-60.

(7) Attfield S, Blandford A, Makri S. Social and interactional practices for disseminating current awareness information in an organisational setting. Information Processing and Management 2010;46(6):632-645.

(8) Ellis D. Modeling the information-seeking patterns of academic researchers: A grounded theory approach. The Library Quarterly 1993;63(4):469-486.

(9) Meho LI, Tibbo HR. Modeling the information-seeking behavior of social scientists: Ellis's study revisited. Journal of the American Society for Information Science and Technology 2003;54(6):570-587.

(10) Jackson A, Yates J, Orlikowski W. Corporate blogging: Building community through persistent digital talk. Proceedings of the 40th Hawaii International Conference on System Science; Available at http://doi.ieeecomputersociety.org/10.1109/HICSS.2007.155. Accessed November 12, 2012.

(11) Lin Y, Vaska M. Raising awareness of grey literature in an academic community using the cognitive behavioral theory. Eleventh International Conference on Grey Literature: The Grey Mosaic, Piecing it all Together; Available at http://www.opengrey.eu/item/display/10068/698105. Accessed November 14, 2012.

(12) Cho A. AN introduction to mashups for health librarians. Journal of the Canadian Health Libraries Association 2007;28:19-22.