DEPARTMENTS / DÉPARTEMENTS

Editor's message

By the time you read this editorial, you will have enjoyed another wonderful CHLA / ABSC conference, this time in Toronto. Unfortunately, I was away on course and could not attend this year, but from all reports, it sounds like it was very informative and of course, fun too! Now we can look forward to Vancouver in 2006!

Our relatively new electronic version of JCHLA / JABSC is now indexed in the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database. There were a few transition issues when the journal moved from a paper to an electronic version, but these have now been taken care of.

In terms of production issues, the addition of the ability to print a single PDF for an issue of JCHLA / JABSC has been well received. Previously, you had to go into each section and print the articles individually. NRC Research Press is excellent to work with, and the production process has been easy because they are extremely accommodating.

Soliciting content for the journal continues to be difficult, and the focus of some of the issues can tend toward "opinion pieces", rather than effectiveness studies, reviews, qualitative studies, or program descriptions. Despite calls for papers on international listservs, brainstorming amongst CHLA / ABSC members or board members, and networking, this is a very daunting task for the Editor of the journal.

The editorial team has actively sought sponsorship for the online version of the journal, and although presently there are no sponsors, this will hopefully change in the near future. Sponsorship would not only generate revenue, but would increase the profile of JCHLA / JABSC.

The editorial team and selection committee for the BC Decker prize decided not to award the prize this year. I am confident that it will be awarded next year. Thanks to BC Decker Inc. for their support for this award.

We welcome Gillian Griffith from Bracken Health Sciences Library at Queens as our new incoming Assistant Editor for JCHLA / JABSC. I look forward to meeting you in person, Gillian!

Enjoy this issue, and think about how you can transform your projects and initiatives in your institutions into print for our national journal!

Cheers,

Rebecca Zakoor

DEPARTMENTS / DÉPARTEMENTS

A word from the President

I write this in April, so by the time you read this, the CHLA / ABSC 2005 Conference in Toronto will be over, and Tamsin will be the new President of CHLA / ABSC. It is downright impossible to believe that a year has come and gone.

CHLA / ABSC has accomplished a lot in the past year. We have a new affiliation agreement with the Ontario Public Health Libraries Association (OPHLA). OPHLA has made great strides in lobbying for public health information in Ontario, and CHLA / ABSC is delighted to be affiliated with such a dynamic group. Check out the OPHLA Web site at http://ophla.ca/members.htm.

With the all-electronic journal and increasing use of the CHLA / ABSC Web site as our primary communication vehicle, the Board has created the new position of Webmaster. Tim Tripp has agreed to serve for the first term in this position. Many thanks to Tim for his work in polishing up the Web site, creating the members-only section, spearheading electronic membership renewal, etc., while in his current role as the Public Relations chair. We are very fortunate that Tim has agreed to continue his work as the Webmaster.

The National Network of Libraries for Health / Réseau national des bibliothèques pour la santé (NNLH / RNBS) Task Force continues to work overtime to get the word out about what is such an obviously good idea. The Stakeholder conference is set for June with Muir Gray booked as the keynote speaker. The NNLH / RNBS group is made up of Patrick Ellis (Co-Chair), Jessie McGowan (Co-Chair), Liz Bayley, Charlotte Beck, Bev Brown, and Jim Henderson. They deserve a standing ovation for their continued progress in moving the NNLH / RNBS forward.

The Task Force on Hospital Library Standards is up and running, and Susan Powelson, the Task Force Chair, is committed to keeping CHLA / ABSC members informed as progress is made. Expect that this important work will be ready for publication in time for the CHLA / ABSC 2006 Conference. Speaking of conferences, mark your calendar for the next CHLA / ABSC conferences:

- 2006 in Vancouver
- 2007 in Ottawa
- · 2008 in Calgary
- 2009 in Winnipeg

On the national scene, this has also been a good year for the Canada Institute for Scientific and Technical Information (CISTI). CISTI has increased their collection by 135 titles, decreased some of their charges, and introduced reductions on document delivery charges for DOCLINE libraries. This is a remarkable achievement and will have broad impact on health libraries in Canada. Although this is not a CHLA / ABSC achievement, we are grateful that CISTI responds to and involves its constituents through the CISTI Committee on Health Sciences Information.

As this is my last opportunity for "A word from the President", I want to thank the Board for their friendship and guidance: Laurie Scott, Past President; Tamsin Adams-Webber, President-Elect; Caren Mofford, Treasurer; Charlotte Beck, Secretary; Tim Tripp, Public Relations/Webmaster/all-round IT guy; Judy Inglis, CE Coordinator; Rebecca Zakoor, Editor; Sandra Halliday, Assistant Editor; and Joan Leishman, AFMC Liaison. Also special thanks to Paul Clark, representative to the CISTI committee, and Elizabeth Lamont, CHLA / ABSC representative to the Canadian Council on Health Services Accreditation (CCHSA).

It is a difficult thing to run an association with an allvolunteer Board. Everyone has busy lives and jobs, and it is wonderful to have such dedicated people who find the time to work on CHLA / ABSC objectives on top of all the other demands on their time. All these folks deserve a round of applause for their dedication, hard work, and devotion to the cause.

Thank you for the opportunity to rub shoulders with these great folks.

Penny Logan

Le mot de la présidence

Nous sommes en avril au moment où j'écris le présent rapport et pour cette raison, au moment où vous en prenez connaissance, le Congrès annuel de l'ABSC / CHLA à Toronto s'est tenu et Tamsin est la nouvelle Présidente de l'ABSC / CHLA. C'est simplement incroyable que cette année soit déjà terminée.

L'ABSC / CHLA a réalisé beaucoup de choses au cours de cette dernière année. Nous avons maintenant une nouvelle entente d'affiliation avec l'Association des bibliothèques publiques en santé de l'Ontario, (« Ontario Public Health Libraries Association » (OPHLA)). L'OPHLA a donné un élan considérable aux démarches de sensibilisation à l'égard de l'information relative à la santé publique en Ontario et l'ABSC / CHLA ne peut que se réjouir de l'affiliation qu'elle a avec un groupe d'un tel dynamisme. Jetez un coup d'œil au site Internet de l'OPHLA à l'adresse suivante : http://ophla.ca/members.htm.

Grâce au journal entièrement électronique et à une utilisation accrue du site Internet de l'ABSC / CHLA comme outil principal de communication, le Conseil a créé un nouveau poste de Webmestre. Tim Tripp a accepté de servir à ce poste pour le premier terme. Nos plus sincères remerciements à Tim pour le travail qu'il a fait à peaufiner le site Internet, en créant entre autres la section réservée exclusivement aux membres et en stimulant le renouvellement de l'adhésion par Internet, etc. le tout dans le cadre de son rôle de responsable des relations publiques. Nous nous estimons très chanceux que Tim ait accepté de continuer son travail de webmestre.

Le Groupe de travail du Réseau national des bibliothèques pour la santé / National Network of Libraries for Health (RNBS / NNLH) continue à faire du temps supplémentaire pour s'assurer de passer le mot relativement à ce qui semble pourtant sans conteste une excellente idée. Le congrès des Parties intéressées est prévu pour le mois de juin, Muir Gray en sera le conférencier invité. Le Groupe de travail du RNBS / NNLH est formé des personnes suivantes : À la coprésidence, Patrick Ellis et Jessie McGowan, et les membres du comité, Liz Bayley, Charlotte Beck, Bev Brown et Jim Henderson. Ils ont tous droit à une ovation debout de notre part pour les progrès incessants qu'ils font vers la réalisation du RNBS / NNLH.

Le Groupe de travail sur les normes des bibliothèques en milieu hospitalier va bon train et Susan Powelson, la présidente du comité *ad hoc* s'est engagée à informer l'ABSC / CHLA des progrès accomplis. On peut s'attendre à ce que cette tâche importante soit terminée et prête pour publication d'ici le Congrès de 2006.

Parlant de congrès, réservez les dates qui suivent à votre agenda pour les futurs congrès de l'ABSC / CHLA :

- 2006 à Vancouver
- 2007 à Ottawa
- 2008 à Calgary
- 2009 à Winnipeg

Sur la scène nationale, l'Institut canadien de l'information scientifique et technique (ICIST) a eu, elle aussi, une très bonne année. L'ICIST a accru sa collection de 135 titres, diminué ses frais et offert des réductions de ses frais de livraison de documents via DOCLINE. Il s'agit d'une réalisation remarquable qui aura un impact important pour toutes les bibliothèques de la santé au Canada. Bien qu'il ne s'agisse pas d'une réalisation de l'ABSC / CHLA, nous sommes reconnaissants à l'ICIST du fait qu'elle implique ses membres et qu'elle répond à leurs attentes par le biais du Comité de l'information en sciences de la santé de l'ICIST.

Puisqu'il s'agit de mon dernier « mot de la présidence », j'en profite pour remercier les membres du Conseil d'administration pour leur amitié et leurs conseils : Laurie Scott, Présidente sortante; Tamsin Adams-Webber, Présidente élue; Caren Mofford, Trésorière; Charlotte Beck, Secrétaire; Tim Tripp, Relations publiques / Webmestre / Homme-à-toutfaire-en-TI; Judy Inglis, Coordonnatrice de la formation continue; Rebecca Zakoor, Éditrice; Sandra Halliday, Éditrice assistante ainsi que Joan Leishman, Agente de liaison de l'AFMC. Un merci tout spécial à Paul Clark, représentant auprès du Comité de l'ICIST et à Elizabeth Lamont, représentante de l'ABSC / CHLA auprès du Conseil canadien d'agrément des services de santé (CCASS).

C'est une tâche difficile de diriger une association dont le Conseil est entièrement formé de bénévoles. Chacune et chacun ont une vie active et un travail accaparant; c'est d'autant plus merveilleux de voir ces personnes dévouées trouver le temps de travailler aux objectifs de l'ABSC / CHLA en dépit des nombreuses exigences de leur horaire personnel. Toutes ces personnes ont droit à nos applaudissements pour leur dévouement, leur dur travail et leur ardeur.

Merci de m'avoir permis de côtoyer ces personnes merveilleuses.

Penny Logan

FEATURE / MANCHETTE

Consumer health information on the Internet: an evaluation report on the Nova Scotia Health Network

Mardi Amirault, Shelley Cobbett, Andrea Doherty, Jackie Hartigan-Rogers, Adele LeBlanc, Martha Muise-Davis, and Joanne Newell

Abstract: The Nova Scotia Health Network (NSHN) is a province-wide, Web-based consumer health information service provided through the cooperative efforts of various organizations, including public libraries, health sciences libraries, the Nova Scotia Provincial Library, and Dalhousie University. The primary intent of the NSHN was to build on existing community resources to provide a quality source of local and general health information. Objective - The purpose was to evaluate the NSHN from the perspective of its users in relation to the ease of use of the site and the usability of the information and content. Methods - A descriptive design was chosen to address the study objectives. Results - Study participants were those users of the NSHN site who agreed to complete and submit an online survey between June 2002 and June 2003. The majority of study respondents were white, middle-aged, English-speaking females, who resided in rural Nova Scotia. They were mostly able to find the information they wanted with little effort and in a reasonable time frame. One in four participants indicated that the information had been used to help them change their lifestyle, whereas one in three reported that they had shared the information with their health care provider. The content found on the site was very highly rated, with more than 90% reporting that the information was easy to understand, useful, and of high quality. Conclusion - The data obtained in this study was positive and encouraging. Sixty-six percent rated the site as a 4 or 5 (with 5 being the best rating) when compared with other health information sites they had visited. Individuals who visited the NSHN site in the past used the acquired information to change health care practices and (or) seek further treatment.

Introduction

The Nova Scotia Health Network (NSHN) is a provincewide, Web-based consumer health information service. It is provided through the cooperative efforts of public libraries, health sciences libraries, the Nova Scotia Provincial Library (Department of Education), several health-related organizations, and a number of departments in Dalhousie University. It is a straightforward initiative that identifies and pulls together quality publicly funded health information resources and services that are available to all Nova Scotians regardless of geographic location, reading level, or Internet access. The services provided by the NSHN include the following:

- (*i*) Links to directories of Nova Scotia (N.S.) health-related organizations
- (*ii*) Information written by Nova Scotian health care providers
- (*iii*) Links to reputable health information sites such as the Canadian Health Network and Medline

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- (*iv*) Access to the Health and Wellness Resource Center (a database of reference material and full-text journal articles)
- (v) Links to the databases of N.S. libraries that provide health information
- (vi) E-mail "Ask a Librarian" service (direct responses to public queries provided by a professional librarian)

Objective

The overall purpose of this research was to evaluate the NSHN Web site from the perspective of its users in relation to the ease of use of the site, usability of the information, and the content itself. More specifically, our purpose was to describe the demographic characteristics of the users of the NSHN, describe the use of the Web site quantitatively and qualitatively, describe the participant's reasons for using the NSHN, and evaluate the "Ask a Librarian" service on the site.

Literature review

Growth in the use of the Internet as a resource for health information has been well documented in the literature. One of Canada's largest full-service marketing, opinion, and social research organizations reported that, as of July 2002, three-quarters of Canadian Internet users were using the Web to seek health information [1]. This figure is a substantial increase compared with the 55% of Canadians reported to be visiting health-related sites in an Ipsos-Reid 2000 study of 1066 Canadian Internet users (Ipsos-Reid is also one of Canada's leading public opinion and market research companies) [2].

Further evidence of such growth over a 4-year period was provided by Statistics Canada. In 1998, only 9.6% of all Canadian households were using the Internet for the purpose of accessing medical and health information [3]. This grew to 15.6% in 1999, 22.9% in 2000, and 30.1% in the last report year of 2001.

Recent studies indicate a growing reliance on online information for health care decision-making. A 2001 RAND Health Report suggested that the increasing consumer interest combined with the vast amount of health-related information available online is beginning to change patientdoctor interactions and perhaps even the health care delivery system. The report stated that "there are both extravagant expectations and serious concerns about the trend" [4]. There are those who propose that the health of the individual will be improved because people will be better informed and able to actively participate in their own care in new ways. Others are fearful that reliance on inaccurate, incomplete, or misleading information will result in actual harm to online consumers. Similarly, Powell and Clarke discussed the role of the Internet in changing the balance of power by empowering the patient with knowledge and contributing to the deprofessionalization of medicine [5].

Alvarez [6] took a uniquely Canadian perspective and argued that e-health can be better used to resolve Canada's inherent health care challenges of geographic isolation, population density, harsh climate, socioeconomic and cultural influences, and rising health care costs. E-health is defined as any exchange of health-related information using information and communication technology, including the Internet, for health care purposes. Alvarez suggested that the health care sector is at least 10 years behind other sectors, such as banking, when it comes to the technology of ehealth. Alvarez also suggested that investment in e-health could significantly reduce or even eliminate some of the challenges facing the Canadian health care system.

On a smaller scale, Sciamanna et al. suggested that great gaps exist between what consumers are currently able to do on the Internet and what they would like to do as it relates to health care activities [7]. Sciamanna et al. contended that opportunity remains for developing more Web sites to address unmet patient needs, such as accessing information on the quality-of-care ratings of specific hospitals, ordering prescription drugs and drug renewals online, scheduling doctor's appointments, and communicating with one's physician by e-mail.

Along with the possibilities and promises are the issues and concerns. One concern addressed in the literature is that of personal privacy. Statistics Canada reported that in 1999, 60% of Canadians were concerned or very concerned that their personal information could be accessible to others while using the Internet [3]. In an article promoting e-health as a solution to Canada's health care woes, Alvarez expanded upon the privacy and patient confidentiality issue by stating that "the recent proclamation of Privacy and Confidentiality legislation across the provinces and territories is a considerable challenge to the development of interjurisdictional data sharing arrangements and to storage and manipulation of data holdings (especially patient records)" [6].

In summary, the literature suggests that we are still in the early stages of exploring the use of the Internet in the delivery and facilitation of health care. There are many unexplored opportunities and many challenges to be addressed, making ongoing research a priority.

Methodology

A descriptive design was chosen to address the study objectives and provided a means to describe the characteristics of the users of the NSHN, frequency of site use, perceived usefulness of the site, specific services used when accessing the site, content obtained, and usability of the content. Ethical approval was received from Dalhousie University Health Professional Ethical Review Board in June 2002.

Using the Web for research purposes and as a data collection method is quite new to many researchers: "practical issues related to the use of the Internet [*sic*] research have rarely been explored and discussed" [8]. Williams et al. recommended criteria for assessing the quality of Internet information [9]. The NSHN study included such criteria. Williams et al. also suggested a multimethod approach combining Web site inspection, user evaluation, and log statistics. All three methodologies were employed by the this study.

A convenience sample (n = 114) included users who chose to complete and submit the online questionnaire. The development of the questionnaire was based on an extensive literature review, and content validity was established by a panel of five educators. The readability level of the questionnaire is below grade eight, which is acceptable as the literature suggests that many people seeking health information read at or below the eighth grade level [10,11].

The setting for this study was the Internet protocol address for the NSHN. The URL is www.nshealthnetwork.ca. When users visited the NSHN, they were asked to complete an online questionnaire as part of a research study that was evaluating the site. Data were collected from June 2002 to April 2003 from users who chose to complete and submit the questionnaire. Twenty people declined to complete the survey indicating that they were worried about their privacy, worried about unexpected risks, did not have enough time, or had other reasons not stated.

The data collected were imported into a database developed for the sole purpose of this study and analyzed using the Statistical Package for the Social Sciences. Qualitative data were compiled, and the research team performed a thematic analysis. Issues of auditability, credibility, and fittedness [12] were addressed as the themes emerged. Data coding was conducted by three people to ensure consistency of findings. The triangulation of data enabled the research team to search for social significance [13].

Results and discussion

Data gathered from study participants indicated that the majority of the users were female (80%), English speaking (97%), white (90%), and indicated that their country of origin was Canada (99%) (Table 1). Results reported from previous studies of individuals using the Internet to obtain health care information are consistent with the findings of this survey. According to Houston and Allison, the majority of "activist health care information) are female, white, and English speaking [14].

Pandey et al. conducted a research study that examined women's use of the Internet for health purposes and found that geographic considerations did not have a significant association with Internet health usage [15]. More significant in predicting a woman's use of Internet health-based resources was the number of multiple daily commitments that the woman was "juggling", such as elder care, child care, and occupational responsibilities. The increased number of roles was predictive of the use of the Internet to access health information [15].

In this study, 64% of the sample reported that their age range was 41–60 years, with 23% indicating that they were less than 41 years old and 13% indicating that they were more than 61 years old. This finding is consistent with other research studies on Internet use for health information [14,5].

Previous research demonstrated that education level also affects Internet usage. Ninety-nine percent of the sample indicated that they had a high school diploma as a minimum level of education. Twenty percent reported having a community college education, 34% an undergraduate university education, and 22% a graduate degree. This finding is also consistent with other studies, indicating well-educated users dominate those using the Internet for health information. It is important to note that only 50% of all Nova Scotians understand printed information well enough to make informed decisions about their own health and to put them in a position to improve their family's health [16]. Some authors have questioned whether or not it is education alone or access to the Internet that impacts the lack of Internet use by less-educated people [5,17]. The research suggests that when access to the Internet is given to less-educated individuals, they are just as willing to obtain Internet-based health information.

Ease of use was defined as the degree of ease or difficulty in finding information on the site and whether or not assistance was required to obtain the information. According to the findings, the vast majority (64%) of users were able to find the information they required in less than 15 min and 80% were able to find the information within 30 min. However, 13% reported that they were unable to find the information they were seeking.

Consistent with the above findings, 83% of users reported that it was easy or very easy to find the information they wanted (64% and 19%, respectively) (Table 2). One major contributing factor in the individual's reported interest in obtaining health information from the Internet was their confidence in their ability to use the Internet — "self-efficacy" and "positive outcome expectancy". In other words, the belief that Internet use will help them deal with health con-

Table 1. Gender, language, ethnic group, and geographical location of the users.

	% of	Total
Variable and category	sample	n
Gender		
Female	80	100
Male	20	108
Language		
English	97	100
French	3	108
Ethnic group ^a		
Acadian	6	
Asian	1	
Native	1	103
White	90	
Other	2	
Geographical location		
Canada	99	
Nova Scotia	96	
New Brunswick	4	109
Ontario	2	
Other	1	

^aEthnic group was self-identified.

Table 2. Ease of finding information (n = 108).

Overall how easy was it		
to find the information you wanted on this site?	No. of respondents	% of respondents
Very difficult	6	5.55
Difficult	9	8.33
Easy	69	63.88
Very easy	21	19.44
Unsure	3	2.77

cerns will encourage further use [18]. The fact that users consistently reported that the NSHN was easy to use increases the probability that they will return to the site for future health care information needs.

The use of the site was conceptually defined as how frequently the site as a whole and specific services were accessed and how the site was used (i.e., in what capacity did users visit the site). Between 2002 and 2003, there were 13 000 hits on the index page of NSHN. More than 4600 of these hits were on the Health and Wellness Directory, and approximately 4500 searches were conducted from the site index page. One of the limitations of using the number of hits as an outcome measure is that this quantitative finding does not indicate the length of time spent on the site and the services used while on the site. A person who inadvertently visits the site is counted the same way as the person who spent hours using the site.

Users came to visit the NSHN site through a number of different pathways. Ten percent of respondents came to the site by using a bookmark, and 8% had seen or heard advertisements for the site. Similar percentages of respondents linked to the NSHN from the Canadian Health Network or

other Web sites. It was difficult to ascertain how the majority of users had come to the site, with more than 50% of the respondents saying they had used a means other than the choices offered (Table 3). This would be a fruitful area to explore in subsequent site evaluations.

The most common reason for getting information for 42% of the respondents was for their own use. The next reason was for a family member or friend (15%), and 10% were seeking information for a client or employer. There is some preliminary research indicating that how a person uses the health information found on the Internet is correlated with the user's health status [14]. For example, it is suggested that people who perceive themselves to be in excellent health were more likely to search for health information for others (friends or family). In future evaluation efforts, it may be beneficial to inquire about the perceived health status of the user. For example, a 2000 study conducted by Cain et al. (see Powell and Clark [5]) characterized users into three groups: (1) the "well", who carry out episodic searches on short-term medical conditions and prevention; (2) the "newly diagnosed", who carry out intensive searches for very specific information; and (3) the "chronically ill", who regularly search for new treatments and alternative therapies.

The research variable of "content" on the NSHN is defined as the perceived characteristics of information materials found on the site. Regarding the completeness of content found on the site, more than 76% of respondents indicated that they found all desired information. In terms of the specific attributes of the health information, 90% of the respondents found the information easy to understand, useful to them, and of high quality. This high percentage is a very positive response. A study by the Health on the Net Foundation found that 33% of the respondents were dissatisfied with the quality of information found on the Internet [19].

Several users did make comments about the cultural sensitivity of materials found on the site, with some requesting more French content. Other respondents had suggestions concerning the need for more languages to be included in the multilingual health site. The literature suggests that English continues to dominate the Internet, with 52% of Web pages in English, compared with 4.6% in French [20]. Alvarez identified one of the challenges of providing ehealth to a country such as Canada, as the issue of the need for multiple languages [6]. It may be timely for consumer health Internet resources to invest energies into providing more content in a language other than English.

Usability of the information is defined as the perceived usefulness of the information found on the NSHN and includes how the individual used or planned to use the information obtained from the site. Eighty-seven out of 90 respondents described the information they found as being "useful to me".

Although not a specific measure of the usefulness of the site, users were asked to indicate where they usually obtained their health care information. Consistent with the literature, a large proportion (71%) of visitors to NSHN were using the Internet as their primary source of health care materials, although printed materials (84%) and speaking with health care providers (79%) were also prevalent sources of information. The findings from this study reflect the documented trend that, increasingly, the general public is turning

Table 3. How people came to visit the site (n = 3).

How did you come to visit the	No. of	% of
site today?	respondents	respondents
Saw or heard the site advertised and wanted to check it out	12	7.52
Had this site bookmarked from using it before	10	10.75
Came up in a search using a search engine	8	8.60
Linked to this site from the Canadian Health Network site	7	7.52
Linked to this site from another Web site	7	7.52
Other	49	52.68

Table 4. Respondents' reasons for looking for health information.

	No. of
Reasons	respondents
Stay healthy	23
Satisfy my curiosity	36
Understand illness or condition	40
Understand medical or surgical treatment	29
Assist with providing health care	31
Help with school work	12
Other	22

Note: Respondents were allowed to choose more than one reason.

to the Internet as a means of "self-care" in regard to health matters [5,21].

Data from the survey indicated that the most common reason for looking for information was related to illness, illness treatment, and related care (Table 4). This finding is consistent with several other recent studies. Sciamanna et al. [7] found that regardless of the patient's current access to the Internet, the majority of primary care patients were most interested in using the Internet to obtain information about a specific disease (67%) or medications (53.4%). A Health on the Net study found that 82% of participants were searching for information related to medications [19].

When asked their reasons for seeking information, 23 respondents stated that they were seeking information to stay healthy, and 12 users were looking for information to help with schoolwork or projects. Twenty-two people gave other reasons for seeking health information, such as preparing for a workshop, becoming familiar with what information was available online, and looking for a physician. The most common other reason was related to librarians assisting patrons to find specific health information.

Internet surveys indicate that online information does directly influence users' decision making about health issues [18]. One survey indicated that more than 70% of users said that health information found online influenced a decision about their treatment [22]. There are emerging trends toward health care consumers playing a more active role in their own care. As this occurs, there is a subsequent change in the roles of health professionals as collaborators in illness management and as health promoters [21]: "the Internet is a key

Table 5	5.	Usefu	lness	of	informa	ation	found	on	the	site	in	the	past.
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		Yes		No		Uns	ure
In the past, the information I found on the site helped me	Total n	n	%	n	%	n	%
Decide not to go to the doctor	25	2	8.00	17	68.00	6	24.00
Change my lifestyle (e.g., diet)	27	6	22.22	15	59.25	6	22.22
To help others to change their lifestyles	27	5	18.51	16	64.00	6	22.22
Decide to go to the doctor	25	6	24.00	15	60.00	4	16.00
To provide treatment at home	27	7	25.92	16	59.25	4	14.81
To make contact with support groups or services within my community	27	9	33.33	13	48.14	5	18.51
Other	17	7	41.17	6	35.29	4	23.52

influence in changing the balance of (knowledge) power between health care professionals and the public, empowering patients to become more involved in health care decisionmaking" [5].

However, information concerning how Internet health information is actually used by health care consumers is in its infancy [17]. When asked how they planned to use the information found and how they had used the information found in the past, 11 people (22.91%) indicated that they planned to use the information to help change their lifestyles. Fifteen of the respondents (32.6%) indicated that they would be sharing the information with their health care provider, and 63 (80.76%) people indicated they were going to share the information with others. Twenty people (37.03%) indicated that this information would be used to provide or influence care.

Forty percent of all survey respondents indicated that they had visited the NSHN on at least one previous occasion. Of these, 33.33% indicated that in the past they had used the information to make contact with support groups and services within their communities, while 24% stated they used the information to decide to go to the doctor, and another 8% indicated that the information had helped them to decide not to go to the doctor.

The survey findings indicated that individuals who visited the NSHN site in the past used the information to change health care practices and (or) seek further treatment. One in four users indicated that the information found on the site was used to help them change their lifestyle. A similar percentage (24%) decided to seek medical attention based on information found on the site, and 26% indicated that they provided treatment at home (Table 5).

Almost one in three users reported that they had shared the information with a health care provider. It is interesting that most health information sites, like the NSHN, post a disclaimer stating that the information on the site is not a substitute for information from their health care provider. Consumers are given mixed messages concerning the degree of "suitable self-care". Health care providers recognize that there is a risk to self-care when using information found on the Internet [19]. However, a recent UK study of 800 doctors who use the Web found that twice as many doctors reported that their patients experienced more benefits than harm from Internet use. The most frequently reported benefits were that patients were more self-confident about self-care (34%) and better able to cope with their symptoms or disease [23].

As an overall measure of the usefulness of the NSHN site, users were asked to rank the site as compared with other health information sites they visited (with the ranking of 5 being the best). Sixty-six percent of respondents rated the site either a 4 or a 5. Forty-two respondents included some general comments with their questionnaire. The most common suggestion was for the site to have one search engine that would search the entire site. Other specific comments were related to the lack of French material (n = 6), inaccuracy and (or) incompleteness of information (n = 16), outdated physician links (n = 3), and difficulty navigating the site (n = 11).

Conclusion

The NSHN provides an important service to the citizens of Nova Scotia and beyond. It enables consumers to easily access information about their health, health problems, and resources available in their communities. This study provides a snapshot from the perspective of some of its users. The results discussed here should be useful in guiding future improvements in the availability and quality of health information on the Internet.

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FEATURE / MANCHETTE

The Open Access Initiative, Google Scholar, and librarians: opportunity or threat?

Dan D'Agostino

Introduction

Situated on the reference desk, librarians have always acted as intermediaries between information seekers and the world of information within the library's collection and beyond. It is the unique knowledge we have gained there about how our clients search for and use information that has been the life blood of the profession. Up to this point, the rise of the digital universe has not altered this model. Library homepages, designed and organized by librarians and containing links to information sources selected and paid for by librarians, are the new intermediaries between the information seeker and the world of information. In some cases, the reference desk has even moved online. What to do then about a development that threatens to not only remove users from libraries completely, but also keep them away from library homepages? If the Open Access Initiative (OAI) succeeds and our clients no longer need the library to access material, what use will they have for librarians? This article attempts to answer that question by discussing (i) the latest developments in the OAI, (ii) in what form the initiative might succeed in fundamentally altering the information universe, (iii) the threat it poses to librarianship, and (iv) strategies necessary for the profession to thrive in a new open access world.

Open access: the background

Although the concept of open access has been around since the mid-1990s, it is still widely misunderstood as advocating the overthrow of the current scholarly communication system based on publishing in established, peer-reviewed commercial journals. In fact, the concept of open access refers only to the removal of all barriers between information seeker and information. In other words, the OAI aims to take advantage of the potential created by the development of digital publishing and the Internet to create a global online library of information that was previously collected, paid for, and held by libraries. With the price barrier removed, this open access library would be available to all users to "copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship" [1]. Contrary to popular belief, this open access world would not mean abolishing the peer review system in favour of a kind of vanity press for academics. Nor would it necessarily entail the abolition of established academic journals for new nonprofit replacements. Finally, although generally supported by academic libraries, the OAI does not seek to rescue library budgets from the burdens placed on them by the serials crisis. Again, the only problem the OAI seeks to address is how to remove barriers to information, chiefly for the benefit of scholars, not libraries.

Advocates have described two roads leading to an open access world. The "Green" road to open access has the author self-archiving a preprint or postprint of her paper in an open access repository. The "Gold" road has the author publishing in a journal that makes articles accessible immediately upon publication. Both routes can be taken without jeopardizing the peer-review system. Authors can self-archive papers published in peer-reviewed journals — postprints if the journals allow it, preprints if they do not. New open access journals can be peer reviewed; established peer-reviewed journals can adopt an open access policy. Rather than the question of peer review, the real obstacles to the implementation of the OAI have been a lack of incentive for authors to take the Green road and the lack of a viable financial model to support publications that take the Gold road.

While peer review may not be threatened by the Gold road, the existence of subscription-supported journals certainly is. What library, already overburdened financially by the journals crisis, would pay for content that is available for free? If the subscription base of journals is significantly eroded, how will they be able to continue publishing? Although there may be many different business models that attempt to solve this problem, the one being tried most frequently at the moment is what has been called an "author pays" system. In this scenario, most notably with the many new BioMed Central open access journals, institutions are charged on behalf of their faculty for the right to publish in these journals. While removing the price barrier to accessing these articles, the "author pays" model does not address the serials crisis and has, in fact, only increased the financial burden on libraries. Not surprisingly, libraries, while generally in favour of the OAI, have been reluctant to support journals operating on this model. The viability of "author pays" open access journals remains in doubt.

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Meanwhile, the development of institutional repositories, new policies adopted by major commercial publishers allowing authors to self-archive papers, and new guidelines regarding open access by grant giving agencies have made the Green road an attractive option. Many of the major commercial publishers, including Reed Elsevier, are now allowing authors to self-archive papers published in their journals in the institutional repositories many universities are now beginning to construct (the distinction among publishers at the moment is whether or not they permit self-archiving immediately upon publication or only after a set period of time). Further, grant giving agencies, such as the Wellcome Trust, are now requiring grant recipients to publish open access versions of their articles. Last winter, in what might have proved the greatest boost yet for the OAI, the National Institutes of Health (NIH) considered a similar proposal. But after intense lobbying by commercial and society publishers, the NIH backed down and in the end asked authors to voluntarily submit their articles for open access inclusion on PubMed Central within 12 months of publication.

A way forward

Far from being the end of the OAI, the new NIH policy may point to a method for making established journals open access in a way that maintains current subscription bases. Since most scientific articles are read within the first year of publication [2], journals can protect their subscription base by releasing articles to open access repositories only after an embargo period of at least 6 months. I think a fair assumption is that any library that is willing to pay to acquire content within the first year of publication would want to pay for content within the first 6 months of publication; which is to say that an embargo period of 6 months would not lead to a significant decrease in the number of a journal's institutional subscribers. (There is one important caveat: this may not be the case for journal packages. Universities may balk at paying for titles whose content they are willing to wait 12 months for, and this might provide libraries with the necessary leverage to make package deals obsolete. This in turn would lead to substantial revenue loss for the big commercial publishers who have made large profits by forcing libraries to subscribe to low impact journals that traditionally cost very little to produce.) Although this solution does nothing to address the need for open access immediately upon publication and may do little to alleviate the journals crisis and the damage being done to library budgets, it has the virtue of being achievable. However, the fact that a way forward does exist does not mean that academics will embrace the idea of open access when it comes to putting their own papers in repositories. Two recent developments at Google may provide researchers with the incentive they need to begin to self-archive in a serious way.

In 2004, Google made two surprise announcements. The first was Google Print, a project to scan and mount full-text versions of the collections of several major academic libraries and then make the material available for free on the Web. This development has been much commented on by librarians who feel it may take users out of libraries forever and by those who dismiss it outright as unachievable. As it relates to the current state of the OAI, Google Print's most positive effect is to provide momentum to the idea that the dream of a barrier-free online library of the world's information is both desirable and achievable. It is, rather, the second initiative, a search engine designed to search the academic literature called Google Scholar that has been less commented on by librarians but should be of much greater concern.

Scientists publish papers for many reasons, but none more important than to provide visibility to their work. Visibility is ensured by publishing quickly in high impact journals; visibility is measured in how often their work is cited. The genius of Google Scholar is not only the comprehensiveness of the publications searched, but the fact that it functions like Science Citation Index and Scopus as a citation index. That is, it provides links to papers that cite the paper the user is viewing. As a citation index, it is able to provide a measure of how important a paper is by determining how often it has been cited. Although the logic behind measuring a paper's importance in its field by how often it is cited may be dubious, the concept has been embraced by faculty and university administrators over the past several years. Putting this functionality in a Google product, a search engine already widely favoured by faculty, should ensure the popularity of Google Scholar with researchers. A high use of Google Scholar among researchers will in turn promote the adoption of open access among this same population in two ways. First, by showing that those who publish in open access journals or who self-archive are more likely to do better in the citation counting competition, since early studies are showing that open access articles are cited more than those in subscription only journals [3]. Second, articles whose full text is available through Google Scholar are more likely to be read by the many faculty, university administrators, administrators of grant giving agencies, journalists, and members of the public who will be using Google Scholar than articles that can only be accessed through a subscription. It is even possible that the increase in visibility gained by having an open access paper on Google Scholar will put pressure on established journals to significantly reduce embargo periods.

To sum up, the prospects for the creation of an open access world continue to look positive. But what initially emerges will not be largely open access to information immediately upon publication, and this means that libraries will continue to provide their clients with access to current subscription-based publications. Google Scholar, if it succeeds in becoming the first search tool of choice among researchers, will provide the necessary incentive to authors to mount open-access versions of their papers in institutional repositories, as soon after publication as their journals allow. The question then is what impact will this less ambitious open access world have on libraries and librarians?

A role for librarians

Although scientists in most disciplines are reading more articles than ever before and relying on library-provided access to do so, a surprising number remain unaware of the role libraries play in providing these journals [4]. As Google Scholar allows institutions to provide their users with links from the search engine to the full text they pay for, the notion that their institution's librarians are not involved in their research will only increase. Therefore, is there a role we can perform for our faculty other than simply providing content to link to Google Scholar?

Two developments in scholarly communication that are occurring parallel to the OAI may have the paradoxical effect of making us more relevant than ever, just at the time when our clientele thinks they are leaving us behind. The first is that scientific publishing is becoming more data intensive. Data, in the form of large databases like the Human Genome Project, are being increasingly shared and utilized by researchers. Indeed, some, such as Vitek Tracz, the head of the Current Science group, believe that the sharing of data will become so important that many journals may be replaced in the future by large databases that organize data in meaningful ways and contain text commentaries:

Above all, however, I believe it means highly specialized, editorially intensive databases — databases that take data, usually publicly available data, and put it together in a structure that makes it more useful and understandable by organizing it and adding commentaries and analysis. So, where today you have thousands of journals sold on subscriptions, in 10 to 20 years there will be thousands of editorially intensive databases also sold on subscriptions, many of them probably sold by existing science publishers [5].

Whether or not many journals will eventually disappear is unclear, but the key concept here is that scientists will need assistance in creating, managing, and searching these databases. Who better to help than librarians, who have always had unique knowledge of how scientists search for and use information?

The second development is that scientists continue to need to read more to keep up with their discipline but do not have more time to read than in the past [6]. Again this implies that there will be a need for tools (beyond those that currently exist) to help scientists search the literature as efficiently and effectively as possible. These tools will have to be developed at the subject level to be helpful, that is, responsive to the specific subject needs of researchers and beyond the capabilities of Google Scholar, since citation counts do nothing to tell you how important a paper is within the first year of publication. Evidence that such a need exists is that researchers themselves are beginning to create tools and make them available for free. One such tool is CiteULike (see http://www.citeulike.org/), a free online service where researchers can organize the citations they are reading as bookmarks, tag them with keywords, and share that information with other researchers using the service. Knowing what other researchers in your field are reading helps to direct you to must-read articles in your discipline. CiteULike goes one step further than simply providing a bookmark organizing service: they now allow researchers to create their own personal library of articles in PDF format mounted on the CiteULike server (to comply with copyright, users must first download the article to their personal computer and only then to the CiteULike server). The fact that researchers themselves are beginning to develop these tools should alert librarians everywhere that these needs exist and that if we do not take the initiative in addressing them, scholars will for themselves.

The key to survival: getting to know our users

The creation of tools that are suited to the needs of specific users for sorting through databases and literature is, in fact, what librarians have always done. Before the Internet, we did this at the reference desk, for example, by guiding users to indexes to the journal literature. In the first 10 years of the Internet, we have adapted the same approach by guiding our users to tools and literature we have collected on the library's homepage. In a largely open access, Google-dominated world, the only difference will be that we are creating these tools ourselves for literature that the library has not always selected.

The key to creating this new role for ourselves is actually knowing first hand what information researchers are searching and what tools they are searching with. In the past, it was our position on the reference desk that gave us this knowledge. If researchers are by and large avoiding libraries, we can only now regain this knowledge by going into research offices. We will need to know how their information-seeking behaviour is changing, while it is changing. We will need to sell them on our ability to create resources that help them do their research more efficiently. To remain in the library is the one way to guarantee that our role will shrink from that of the unique intermediary between information seeker and information that we have always been, to that of essentially clerical staff maintaining the financial end of a static collection of journal subscriptions.

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FEATURE / MANCHETTE

A month at the Shanghai Library, November 2004

Helen Michael

Introduction

In November 2004, I spent a month working in China at the Shanghai Library, at the invitation of its director, Dr. Wu Jianzhong. This was a very interesting experience for me, and I am forever grateful to the University of Toronto for making the trip a reality. The Shanghai Library is the second largest library in China. It is a large public library that also functions as the leading resource library for the Shanghai university community, with exceptionally strong collections in the areas of science and technology. The city of Shanghai is a very westernized city in comparison with most of China, hence its nickname "China's window on the West".

I left Toronto very early on 28 October 2004 and flew to China via Vancouver, arriving on the following day at 1600 hours. China is 13 h ahead of Toronto, so night turns into day, and I had terrible jet lag for almost the first 2 weeks of my stay. The flight from Vancouver was wonderful. We flew up the coast of British Columbia, along the mountains of Alaska, over the Aleutian Islands, past eastern Russia and Korea, over Japan, and finally over the China Sea and straight down into Shanghai.

The first thing I noticed about Shanghai was the huge number of people. There are people everywhere. Shanghai is a city of 17 million, in an area roughly the size of Toronto. It is crowded everywhere, seemingly all the time — the airport, the streets, the intersections, the subway, and all the department stores and markets and shopping areas. There is severe gridlock, and there are literally millions of bicycles, large "cargo" tricycles, and motorcycles all over the sidewalks as well as the roads.

The second thing was the poor air quality. This was hard to miss and is at least partly the result of the extensive construction taking place all over the city. Shanghai is changing at a very rapid rate. Old areas are being demolished, and huge high rises and skyscrapers are going up in their place. It's very exciting to see, but it makes for a lot of dust!

The first really exciting thing for me was seeing actual Chinese characters denoting Shanghai Airport. Then I began to realize that everything was written in Chinese characters (of course!), and it sounds silly, but that was a huge adjustment for me. I'd never been to a country where there was absolutely no chance of deciphering anything written. I was totally illiterate.

Getting around the city was best done by taxi. A taxi anywhere seemed to cost only about CAN\$4.00. (China is not expensive for Canadians.) This worked well for tourist sites, but there was a problem with lesser-known places. The taxi drivers could not read my Pinyin-transliterated map, and therefore it was necessary to have two — one in Pinyin, one in Chinese — so that we could put them together to figure out the location of my destination. One was then at the mercy of the taxi driver, and I never travelled anywhere without the hotel business card, so as to be sure of getting home.

Description of the library

My first impressions of the Shanghai Library made me want to cry. The building is lovely, solid as a rock, with 32 beautiful reading rooms and substantial, well-made furniture. Everything is spotless and sparkling, and the books are all tidy on the shelves. This is, of course, because there is an army of staff — 900 in total, 200 cleaning staff alone! There is seating for more than 3000 people, and there are two exhibition halls, two large lecture halls, and six seminar rooms. Retrieval of most of the 48 million items is done by the staff, since the stacks are closed. (There is a separate circulating collection of 100 000 items, and all the most recent material throughout the reading rooms *is* directly accessible.)

To request retrieval, the user must find the item record in the Internet Public Access Catalogue (IPAC) and enter a request. The user is then given a retrieval number and waits up to 30 or more minutes for the item to appear. Items are sent down from all areas of the stacks on a computerized bookcarrier system, consisting of about 60 small "buckets" moving on rails at a rate of half a meter per second. As items are ready for the user, the retrieval number is posted electronically on a ceiling-high screen. The user must then claim the book, take it to a separate counter to request photocopying, if required, and return it to be reshelved.

Resources and staffing

There are more than 48 million items in the Shanghai Library and many electronic resources. Because these are not all networked, it is not easy to be sure what is really avail-

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able. Everything published in Shanghai is purchased by the Shanghai Library and then other Chinese material is purchased as budgets permit. Foreign language material is chosen from the lists of a book import–export company that arranges all purchases. The 32 reading rooms reflect the breadth of material that is collected (e.g., Chinese natural sciences, industrial documents, genealogy, business information, foreign publications). A wide variety of services are offered. There are extensive search and consultation services, including many for business and industry. There are a few that seem strange to the westerner (e.g., "house property management services").

The Shanghai Library, like most other establishments in the city, is extremely well staffed by western standards. There is a sense of relaxation among the staff, which is striking to the westerner. However, it is quite normal to see staff members of all ages literally running to get whatever it is that the user needs. All staff members wear a uniform consisting of dark jacket, slacks, and (optional) vest, provided by the library, and a white shirt. The staff also wear photo ID.

I met the director of the library, Dr. Wu Jianzhong, in the eastern visitors' room, which is the one used for visitors from the West. The room is full of dark-red wooden chairs decorated with dragons and flowered screens and cabinets. Dr. Wu completed his library Ph.D. at the University of Aberystwyth in Wales and speaks excellent English. It seems there is still a strong paternalistic relationship between the library employees and the director, though not as strong as in earlier times, when the director was required to give his approval to staff marriages! Even quite recently it seems that the library was responsible for ensuring that all retirees were supplied with decent housing. Salaries are not set by the director, so this is not an issue. A canteen service is provided for staff, which is very inexpensive and must be heavily subsidized (I spent approximately CAN\$20 on lunches over the span of 4 weeks). Lunch is from 1130 to 1300 hours, and employees often turn down the lights and sleep on their desks, if they are out of the public eye.

There were always uniformed army guards in the lobby, but they were very approachable. On one of the few rainy days, they stood at the top of the steps and handed out open plastic bags for people to put their umbrellas and raincoats in so that water would not get all over the foyer.

The work experience

Patents, standards, and technical reports

During the first 2 weeks, I worked in the Reading Room for Patents, Standards, Technical Reports, Abstracts and Indexes. Here are a great variety of print, CD-ROM, and networked resources, some on a LAN, a few available via the Web. Most are familiar, but accessed with a Chinese interface.

Since I can neither speak nor read Chinese, the staff was initially not really sure what I should do. We eventually settled on a system: someone in the department would translate incoming e-mail questions into English, I would answer them in English, and she would translate the answers back for the user. This arrangement worked quite well. The younger staff spoke reasonably good English, so I was able to ask for help with the computer screens, which were the biggest problem for me.

In fact, the computer screens were a huge challenge, because they were mostly in Chinese and totally unfamiliar. Most people search the databases by entering the Pinyin transliteration, since the keyboards show the western alphabet. The results might display in Chinese or western script. I resorted to drawing diagrams of the screens I used most frequently to help me know what I was searching and how to navigate. I was told that most people use Pinyin to input a query, but there are actually several different input methods, and some people use a system based on character strokes for which they need a good grasp of the linguistic radicals. The arrangement of entries in things like dictionaries and telephone books is still something I'm not sure about, but it may be based on the number of strokes in a character.

I'm told there are 50 000 characters in Chinese, and at least 5000 characters must be learned just for basic purposes like reading the newspaper.

Document supply centre

I spent the next 2 weeks in the Document Supply Centre, a fairly new service consisting of document supply and interlibrary loan, literature searching, translation service, and clipping service. Most of the work in this centre is fee based. The translation service provides translation for about 15 languages. A member of the document services team farms out the jobs to a roster of translators, many of whom work for the Chinese Academy of Sciences or are retired researchers. Charges depend on the language being translated and the number of Chinese characters involved in the translation. English and Japanese translations are the most affordable.

The search and consultation service consists of a literature search — mostly using Chemical Abstracts, Engineering Index, or another STM database — and the supply of selected articles. The staff is also involved in a project funded by the municipal government to set up an archival site for SINOPEC, the China Petroleum and Chemical Corporation. Similar knowledge management projects are being undertaken for other commercial customers.

I was assigned to the Document Services Team. I searched for items in the IPAC so that they could be retrieved for photocopying or scanning. Many of the requests came from university libraries around China, since the Shanghai Library has such an extensive collection. The library uses OCLC for interlibrary loan, and either fax, Ariel, or China Post Express Mail Service to deliver items, which may also be sent as e-mail attachments whenever possible. Records are added regularly to the OCLC database; the availability of ISSN and ISBN numbers for these records is a boon to the non-Chinese searcher!

Copying rules appear to be less stringent than in Canada. It appears that so long as a copy is not made for commercial purposes, it can be as extensive as the patron wishes, so sometimes whole books are copied. This is seen as preferable to loaning an item, which is done only if there are two additional copies in the library.

Borrowing and loaning items that have to be returned is considered to be somewhat problematic. There is a reluctance to send out items that might get lost and a reluctance to borrow items that, if lost, might have to be paid for later. This stems from the recent loss of a Library of Congress book that cost the Shanghai Library dearly to replace because of the unfavourable exchange rate. Most items come from the China National Library, other Chinese universities (in particular Tsinghua University in Beijing), the Japan National Diet Library, and various North American libraries, including the Canada Institute for Scientific and Technical Information.

In addition to working in the units described, I was given orientation to most of the other areas in the library, and I had discussions with the staff in the foreign languages section. From these discussions I learned that the national Chinese Library Classification is used for book classification, and OCLC cataloguing is configured to map to the appropriate numbers. The scheme is somewhat similar to LC in its layout. Prior to 1949, a Chinese version of the Dewey Decimal Classification.

Other libraries

Cooperation among libraries of all kinds is stated in the goals of the Shanghai Municipal Government, and there are several good examples of the sharing of resources. The Shanghai Information Resources Network (SIRN) has 31 member libraries, including most of the universities in the Shanghai area, and is concerned with implementing and upgrading the technology associated with online resources and connectivity.

The China Academic Library and Information System (CALIS) is a nation-wide consortium consisting of 100 of the 1400 university libraries in China. Members are selected by the government and focus on bibliographic searching and interlibrary loan.

Jiaotong University Library

During my stay in Shanghai I had the opportunity to visit several other libraries. Jiaotong University (http://www.lib. sjtu.edu.cn/english/) has an excellent reputation for science and technology throughout China and has four separate campuses. The central campus library, which I visited, has a collection of 2.7 million volumes, with subscriptions to 4000 print journals, 50% of which are in Chinese, 50% in a foreign language. In the past, these consisted of Russian, German, Japanese, and English titles. There is a current shift towards English titles.

Electronic resources account for about 35% of the acquisitions budget, and they number 15 000 titles. There are 40 data systems (e.g., Web of Knowledge) supplying more than 200 databases. Many of these would be familiar to our users in Canada; others are of Chinese origin. Jiaotong University provides a mirror site for Elsevier (one of only two in China) and in this capacity serves 200 libraries. Students have free access to all the databases and to the Internet from the university IP range. It seems that free access to resources is not common among university libraries. Remote access is possible via a proxy, which must be set up by the Network Centre, and appears to be very strictly controlled.

The library has 200 staff members, about a quarter of whom are professionally trained. Priorities for hiring professional staff are library training, computer training, and English language skills. Computer training is beginning to take over from library training as the most important skill set. Each librarian is assigned a subject area, which includes responsibility for the relevant databases. In this capacity the librarian must check the database daily for functioning; deal with the provider as necessary; write up instructional fliers for the users; and provide training in the lab in the form of a structured PowerPoint presentation listing the features of the database being taught and a case study.

The library takes a lead role within CALIS (see above). CALIS provides cataloguing records to its members and interlibrary loan and document delivery based on the system designed by the Tsinghua University Library. A virtual reference project is under way, sponsored by CALIS, which will use software developed inhouse. The use of CrossLink is being investigated as a link resolver.

Some observations and conclusions

There are, of course, many differences between libraries in China and those in Canada, but at least some of these differences can be seen as the result of the larger staffs employed in China. The Shanghai Library has much more staff than would be found in a similar library in the West. As a result, the library is able to provide a broad range of services for its users, of the kind we expect users to manage themselves. At the Shanghai Library, all copying is done by staff; almost all retrieval is done by staff; and staff (often two at once) check library cards at reading room entrances. Uniformed guards are on hand both in and out of the library and can be approached for assistance. Many library staff are available to answer questions in all areas.

The Shanghai Library has an exceptional collection of which it is justly proud. Items are not lent if they may get lost and are difficult to replace (e.g., on interlibrary loan), and the users are not permitted to enter the stacks. This care of the collection is accompanied by more paperwork than we would perhaps feel necessary; for example, when an item is taken from the stacks, its details are manually recorded in a notebook, and when it is returned it is checked off. This speaks to the large staff available and is the kind of function that we have either abandoned or automated.

The Shanghai Library is eager to involve librarians from outside China in its work. To this end, it has invited me to assist with e-mail reference when a health science question is involved. Similar assistance in different subject areas has been provided by other program participants and seems to have worked well.

Regarding future visits and the content of the program, it must be said that the computer screens are a huge challenge for non-Chinese speakers. Some basic knowledge of Chinese, acquired before leaving Canada, would be useful, both in and out of the library.

A final word must go to the Shanghai Library staff, who treated me with the utmost hospitality during my visit. Their patience and, in fact, the patience and friendliness of all the people I met in Shanghai means I would have no hesitation in recommending such a visit to other colleagues fortunate enough to have such an opportunity.

Librarian office hours in a family practice unit

Ani Orchanian-Cheff

Abstract: Objective – To determine if the implementation of well-advertised "librarian office hours" in a busy clinical department of a teaching hospital would increase utilization of library services. Setting – The open-concept office of the Department of Family and Community Medicine at the Toronto Western Hospital site of the University Health Network. Program – As of June 2004, a librarian provided monthly office hours during the lunch hour in the Department of Family and Community Medicine. Staff were encouraged to e-mail any specific issues or questions to the librarian in advance of consultation, if possible, but all consultations were otherwise provided on a first-come, first-served basis. Results – In the 7-month period since the librarian office hours were initiated, 21 separate training sessions or consultations were provided to this department. This constitutes 15 sessions more than the number of sessions provided to this group in the same 7-month period in the previous year. Concurrently, the number of literature search requests made by this department has doubled compared with the same 7-month period in the previous year. Conclusion – User-centered information services for primary care professionals need to be mindful of clients' information-seeking preferences and lack of time. While providing librarian visits to individual hospital departments may not be the best use of a librarian's limited time and resources, in the drive to meet the unique needs of general practice, such an approach may be an advantageous way of librarians meeting client needs in the context of their own environment. Further examination of the benefits of approaches similar to this concept, for both librarians and hospital staff, is warranted.

Introduction

"Office hours", a concept familiar to those associated with the hallowed halls of academe, is not a concept common to the literature of librarianship. It refers to the "time set aside for advisees and students who want to consult with the professor outside of the normal classroom hours"¹ and is associated with the professional habits of professors. The closest comparison is perhaps a scheduled reference interview. Yet, in a teaching hospital, where habits of lifelong learning are encouraged, such a concept is perhaps not too unusual even for a librarian. Similarly, the concept of a "walk-in clinic", where appointments are unnecessary and help is available on short notice, while arguably similar to the type of service provided by a library, is not a term associated with the provision of its services. Both these concepts, familiar to primary care, were, however, used to market library services tailored to meet the needs of this specific client group.

Background

At the Health Sciences Libraries of the University Health Network (UHN) — a three-site library system servicing the Toronto General Hospital, Toronto Western Hospital, and Princess Margaret Hospital — information specialists are assigned the task of providing librarian services to specific client groups. These services include librarian-mediated literature searches and training in the use of bibliographic databases and evidence-based search techniques. The information specialist's role is to market these free services and tailor them to meet the individual needs of their clients. Thus, training can be provided to an individual or group and take place either in the library or in the client's office, depending on the client's preference and learning style. In addition to having the assistance of a designated librarian, staff at the UHN also have a virtual library that provides 24-7 access to bibliographic databases, online journals, and e-books, and is available both onsite and remotely via the hospital's intranet.

The information specialist responsible for the UHN's Department of Family and Community Medicine felt that this client group was underutilizing the library's services. When discussing training opportunities and preferences with department staff, it was suggested to the information specialist that monthly literature search office hours would be preferable to scheduled training opportunities.

Information needs and preferences of primary care

Literature on the information needs and organizational culture of primary care professionals, notably from the UK,

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¹JM Lang. Office-hour habits of the North American professor. *The Chronicle of Higher Education*. 2003 May 13. Available from http://chronicle.com/jobs/2003/05/2003051301c.htm.

identifies unique challenges in delivering information services to this population. The Primary Care Sharing the Evidence (PRISE) project, for example, identified the need for tailored information services with flexible working patterns on the part of health care librarians responsible for providing service to primary care staff. Because of their busy schedules, it was discovered that primary care staff were most likely to access electronic resources at key times of the day ("pressure points") — before work, during lunch, or in the evening. It was thought that "practice-based training" would allow "busy health care staff to make the most of limited time available for training" [1]. Other studies also identified workload problems and lack of time as key factors influencing information-seeking behaviour in primary care [2-4]. Rose states that "it has been shown that GPs [general practitioners] are likely to be too busy to express information needs or to try to get them answered" [2]. Interestingly enough, "an increase in the promotion of sources of evidence may raise awareness, although primary care professionals may still perceive that they have little time to utilize them effectively" [2].

Rose outlines various primary care initiatives in the UK to demonstrate the "importance of taking information services out to the communities they serve, rather than expecting end users to visit a central source, for example, a multidisciplinary hospital-based library" [2]. An outreach approach is generally suggested for meeting the needs of practices in the community because they are physically remote from an institutional library, but in a multisite hospital setting, the size and culture of the institution may also result in a sense of isolation. Some departments will invariably be more physically remote from the library than others, and services designed to meet the needs of multiple disciplines may be perceived as impersonal or generic. Two of the roles for information professionals that Rose identifies are "outreach worker" and "educator and trainer" [2]. Both roles can reap the benefits of providing services within the practice environment of primary healthcare workers.

The role of the clinical librarian, as another example, requires the librarian to meet clinician needs by going out of the library and into the busy clinician's environment. This too is an answer to time constraints and limitations in search skills on the part of the clinician [5]. However, while the clinical librarian responds to information requests directly related to patient care, what about questions related to teaching, research, residents' projects, program development, or evaluation? All of these, ideally, do not require immediate responses.

Pearson and Rossall [6] point out that those general practitioners "involved with teaching, training, and research have additional information needs and often need clinical and nonclinical material from original sources". Pearson and Rossall are specifically referring to the value of librarians linked to individual practices or practice libraries. However, it may not be possible to have a dedicated librarian for each clinic's dedicated use. Primary care professionals have varied information needs, not just patient-related, and if the professionals do not come to the library to make these requests, the drive to provide library services outside library walls must include services that are not limited to ward rounds, clinics, or practice libraries. When marketing library services, it is just not only about the *actual* service, but about "engaging people in a relationship", "knowing or anticipating what users want, communicating to them what is available, and being able to provide it to a level that is satisfactory to them" [7]. Each segment of the library's client group may require a different style of services: "it is the role of the librarian to customize and package the service for the groups that use the library" [7]. Regarding the future of hospital libraries, Brice and Gray [8] refer to a "workplace library model", where the library would "operate much more fully outside the boundaries of their physical structures and would only be truly effective if fully tied into the business needs and working patterns of their organizations". They argue that "knowledge has to reach the point where it is needed and be available when it is needed" [8]. This is not a new idea. Similar to this model is the idea of a "librarian in context", where the information specialist, being fully integrated into the practice setting, works as a peer with those they serve [9].

Program description

As of June 2004, a librarian provided monthly office hours during the lunch hour every second Wednesday of the month in the UHN's Department of Family and Community Medicine. The objective was to provide a face-to-face librarian presence within the Family Practice office at a time convenient to department staff to provide training and assistance in conducting literature searches. Office hours were advertised to a group of 75 department staff, residents, and students via monthly e-mail (Fig. 1) as a walk-in "literature search clinic" during the lunch hour. This service was open to all those involved in the UHN's Family and Community Health Program, a multidisciplinary program consisting of pharmacists, social workers, physicians, primary care nurse practitioners, staff nurses, and other health care providers. It was felt that despite departmental underutilization of free literature search and training services already provided by the librarian, department staff might be more inclined to seek out these services if the librarian were available within the department rather than in the library or even remotely via email or telephone. The e-mail reminder of this service was sent out the week before and the morning of the actual office hour. Staff were encouraged to e-mail any specific issues or questions to the librarian in advance of consultation, if possible, but all consultations were otherwise provided on a first-come, first-served basis.

Outcomes

During the first 7 months of this program, office hours were well attended. Most months, the librarian met with several staff back to back, sometimes even working past the designated hour until all staff waiting had a consultation. Each consultation consisted of an informal reference interview where the client and librarian would discuss the particular training or information need, followed by either training in the particular skill or database, troubleshooting a search previously attempted by the client, or a hybrid form of training where the librarian would conduct the literature search while at the same time explaining the process to the client.

Figure	1.	E-mail	advertisement	for	librarian	office	hours.
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🚽 Upce	ming Literature Search Office Hours: Wed. June 9th 12:30-1.30pm - Message (HTML)	<u>Ø</u>]2
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	Literature Search questions?	1
	Want to know where to find valuable information?	
	Looking for evidence-based answers to clinical questions?	
	Literature Search Clinic	
	with Ani Orchanian-Cheff,	
	Research Information Specialist	
	(office hours, every 2nd Wednesday of the month)	
	Next Session:	
	Wed. June 9th, 12.30-1.30pm	
	in the Dept of Family & Community Medicine	
	3rd Floor West-Wing	ľ
	~open to all in Family & Community Health~	
en	all her your questions by the Monday prior, or drop in to learn about her expertise	

Depending upon the specific need, a consultation could range from 10 to 40 min in length. The average encounter with physicians was 10–15 min, while the average encounter with allied professionals was 30–40 min.

The nature of the inquiries tended towards information needs related to teaching or research rather than clinical queries. For example, physicians were often preparing to present at rounds or planning to submit a paper for publication. In both cases, the types of search conducted were very different from those that would have been conducted for a treatmentoriented patient issue. On most occasions, searches previously conducted by the client were not successful because the searches were not conducted in the most suitable database. Most clients were familiar with basic searching in MEDLINE but had not been exposed to other useful databases such as CINAHL, PsycINFO, or Health and Psychosocial Instruments. Research needs often related to qualitative research methods such as conducting surveys, developing or validating research instruments, program evaluation, and measuring patient satisfaction or quality of life. If the queries were clinical, the issues were related to the comprehensiveness of a search. This provided the librarian with the opportunity to introduce clients to resources other than MEDLINE that they may not have considered, such as EMBASE or the Cochrane Collaboration. The nature of the query also determined if there were also opportunities to demonstrate the value of secondary Evidence Based Resources such as BMJ's Clinical Evidence and to discuss the pros and cons of Google versus MEDLINE or MEDLINE versus one of the other available biomedical databases.

In the 7-month period since the librarian office hours were initiated, 21 separate training sessions or consultations were provided to this department. This constitutes 15 sessions more than those provided to this group in the same 7-month period in the previous year. Concurrently, there was a 104% increase in literature search requests made by this department compared with the same 7-month period in the previous year (Fig. 2). This constitutes more than double the amount of work generated by this client group. For the purposes of librarian statistics, a query was considered a "literature search request" when it was made outside of office hours and required the independent work of the librarian, whereas "training" included one-on-one work with a client during office hours or troubleshooting a literature search.

Discussion

The librarian found the encounters during office hours to be extremely rewarding. It afforded the opportunity to meet with clients regularly, as well as the opportunity to receive updates on their work. In addition, it was rewarding to see a dramatic increase in client usage of librarian services. The librarian noticed a level of satisfaction from face-to-face encounters that was not akin to that derived through mere virtual interaction. Moreover, it was felt that face-to-face contact was more conducive to building relationships and trust with clients.

A number of clients had attempted a search on their own and were requesting help because they either were not satisfied with their results or were curious if their results would match those retrieved by a professional librarian. Other clients returned to more than one office hour to discuss their searches, thereby continuing to improve their search skills. Both these observations were consistent with those reported from the Front-Line Evidence-Based Medicine project [4]. An official survey to verify anecdotal observations by the librarian would be needed to evaluate the results of this intervention.

It was interesting to note that clients preferred to consult informally with a librarian during a designated time, even waiting their turn, rather than make appointments. It is possible that this provides a level of flexibility that is more suitable to work in primary care.

One of the challenges in providing training and services to general practice is the tension between providing individual attention and making the most of the librarian's limited time and resources. A single group training session, for example, could have addressed all members of the family practice staff at once, allowing the librarian to attend to other services and departments after the initial session. Single group sessions were provided in the past and were regularly suggested; yet they did not result in greater utilization of services, nor did they necessarily result in self-sufficiency on the part of staff in successfully conducting their own literature searches.

In reference to family doctors in the town of Aylesbury, UK, Bryant states that "group sessions are bound to disappoint most GPs to some degree ... family doctors favour one-to-one sessions of an hour or more. This preference may reflect an unconscious reluctance to demonstrate hesitation in front of colleagues as well as the undeniable difficulties of arranging training sessions around a demanding clinical and management schedule" [10]. Such an observation could be generalized to refer to staff in the UHN's Department of Family and Community Medicine as well. Bryant goes on to identify practical guidelines that would be useful for a librarian in approaching general practice with information services: liaise, build alliances, and offer choice. Bryant describes general practitioners as "individualistic" [10], which may explain why office hours provided on the clients' terms and at a time chosen by the clients was more successful than the use of virtual resources on the library's terms.



Figure 2. Comparison of total literature searches in June–December 2003 and June–December 2004.

Bryant points out that "it is understandable that busy professionals are reluctant to commit the time needed to conduct literature searches, let alone to read and reflect upon the findings of previous studies" [11]. In addition, the literature reflects a low use of medical libraries by GPs and emphasizes the importance of convenience, accessibility, and availability in choosing information sources [3,6,10]. By sitting at a computer in the actual department, the librarian was providing a convenient and available information source. Specific factors would need to be identified in trying to explain previously low library usage by this client group within the UHN, because the librarian believes the relative proximity of the site library and the 24-7 accessibility of electronic resources via the virtual library on their desktop were equally convenient and accessible. It is possible that this specific client group is not yet comfortable or confident in the use of electronic resources. More likely, the issue may be that what a librarian considers accessible and convenient is not necessarily accessible and convenient from the perspective of a client. Ultimately, the librarian may need to step outside her comfort zone to provide services in a manner most suitable for the clients she serves.

The nature of the actual inquiries was consistent with research on the educational needs of GPs in a teaching practice [6,12]. Further research would need to be done to determine whether the provision of office hours was directly related to the increase in literature search requests by this department. Once office hours have been in place for a full 12-month period, the librarian intends to conduct a survey of staff to elicit feedback on the service. It would be useful to determine why clinicians were more likely to discuss a need with the librarian in person rather than make a request via email or submit electronic search request forms. It is possible that in this particular departmental culture, speaking face-toface is considered faster and more convenient than composing an e-mail message or keying into an online form. Alternately, it may be the development of a personal relationship with the librarian that is the more important factor. It would be interesting to note whether this client group is more willing to embrace virtual services after the establishment of a relationship with their specific librarian.

Though personal contact with the client group has been rewarding, providing office hours is also time-intensive for the librarian. It has yet to be determined if the current successes in increasing service utilization by this department will continue and whether they are a sufficient return on investment. How much effort is needed? How consistent does that effort need to be? Can it be maintained? For how long? Further evaluation will be conducted after the first full year of implementation of this program.

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FEATURE / MANCHETTE

Timeline of the delivery of health knowledge in Canada, related events in the USA and the world, and additional contemporaneous events

1823		*	McGill Faculty of Medicine Library, the oldest medical library in Canada, was founded (http://www.health.library.mcgill.ca/ OSLER/exhibits/175th/begins.htm).
1836		*	First railway in Canada (between La Prairie and St. Jean, Quebec) opened.
1851			Melvil Dewey, father of librarianship, was born.
	Leg warden der gene der		Library of the Office of the Surgeon General of the Army (the present National Library of Medicine) established (http://www.nlm.nih.gov/about/nlmhistory.html).
1858	HALL SED VOID	*	Margaret Ridley Charlton was born. Charlton was the first Assis- tant Librarian at the McGill Medical Library and a founder of the Medical Library Association (http://www.health.library.mcgill.ca/osler/charlton/).
1865			John Shaw Billings was appointed to supervise the Surgeon Gen- eral's Library, which Billings developed into a national resource of biomedical literature. Billings served as director until 1895.

1876	000 Generalities 100 Philosophy & psychology 200 Religion 300 Social sciences 400 Language 500 Natural sciences & mathematics 600 Technology (Applied sciences) 700 The arts 800 Literature & rhetoric 900 Geography & history		Dewey Decimal System was invented.
1890			John Shaw Billings was assigned the responsibility to tabulate the US census. Billings described an electromechanical punch card mechanism that a statistician named Herman Hollerith devel- oped. Hollerith later founded International Tabulating Machines, which became International Business Machines (IBM).
1898			Medical Library Association was founded (http://www.mlanet.org/ about/history/milestones.html).
1901		*	Population of Canada was 5 371 051.
		*	Canadian and McGill graduate William Osler served as president of the Medical Library Association 1901–1904.
1906		*	Vancouver Medical Association established library precursor of the British Columbia (B.C.) Medical Library Service.
1911		*	A Plea for a National Library by Lawrence J. Burpee (<i>University Magazine</i> , 1911 Feb;10(1):152–63) was published (http://www.uoguelph.ca/~lbruce/documents/burpee.html).
1923	Crafted Best and Frederics Besting	*	Nobel Prize awarded to Frederick Banting and Charles Best for the discovery of insulin.
1925		*	Canadian women received the right to vote.
1928	C.S.	*	Margaret Gill appointed the first official chief librarian of the National Research Council (NRC). Gill inherited a minuscule collection of 1000 titles (http://cisti-icist.nrc-cnrc.gc.ca/media/ news/cn16n5_e.html#three).
1933		*	Libraries in Canada: A Study of Library Conditions and Need (Toronto: Ryerson Press; Chicago: American Library Associa-

(Toronto: Ryerson Press; Chicago: American Library Association) was published (http://www.uoguelph.ca/~lbruce/documents/ LibrariesCanada.htm).

1937		Rowell-Sirois Commission appointed to investigate the financial relationship between the federal government and the provinces.
1946	http://www.cla.ca	Canadian Library Association was founded.
1951	1	Canada's population was over 14 million.
		Findings of the <i>Royal Commission on National Development in</i> <i>the Arts, Letters, and Sciences.</i> (Chapter IX, Libraries, National Library and Library of parliament, Ottawa: King's Printer) were published. The Commission declared "that a National Library finds no place among the federal institutions which we have been required to examine is a remarkable fact which has been occasion of much sharp comment during our sessions. Over ninety organizations have discussed this matter, some in great detail, urging that what has been called a 'national disgrace' be remedied" (http://www.collectionscanada.ca/2/5/h5-416-e.html).
1953	The test of te	 National Library of Canada (NLC) established. The NLC's mandate was the following: to preserve the documentary heritage of Canada for the benefit of present and future generations to be a source of enduring knowledge accessible to all, contributing to the cultural, social and economic advancement of Canada to facilitate in Canada cooperation among communities involved in the acquisition, preservation and diffusion of knowledge to serve as the continuing memory of the government of Canada and its institutions
1956		Act of Congress moved Armed Forces Medical Library to the Public Health Service and rechristened it the National Library of Medicine (NLM) (http://www.nlm.nih.gov/about/ nlmhistory.html).
1957	1	NRC library unofficially assumed the role of national science library (NSL).
1959	1	Agreement made between NRC library and NLC on concentrating its activities in the fields of social science and humanities, thereby securing the national role of the NRC science library.

1960		Prime Minister John Diefenbaker introduced Canada's first bill of rights.
		College of Physicians and Surgeons of British Columbia estab- lished the B.C. Medical Library Service (https://www.cpsbc.ca/ cps/college_library/information/admin_history).
1961	CIA http://www.cla.ca	The present state of library service in Canada: A program of inquiry for 1960/61 (Ottawa: Canadian Library Association) was published.
1962		Committee on Medical Science Libraries of the Canadian Library Association presented a brief to the Royal Commission on Health Services that recommended a National Medical Biblio- graphic Centre be established in the near future.
		Resources of Canadian university libraries for research in the humanities and social sciences: Report of a survey for the National Conference of Canadian Universities and Colleges by Edwin E. Williams (Ottawa: National Conference of Canadian Universities and Colleges) was published.
1963		US President John Fitzgerald Kennedy, in his Special Message to Congress on National Health Needs, stated the following: The accumulation of knowledge is of little avail if it is not brought within reach of those who can use it. Faster and more complete communication from scientist to scientist is needed, so that their research efforts reinforce and complement each other, from researcher to practicing physician, so that new knowledge can save lives as swiftly as possible, and from the health professions to the public, so that people may act to pro- tect their own health.
1964		 Library support of medical education and research in Canada: Report of a survey of the medical college libraries of Canada, together with suggestions for improving and extending medical library service at local, regional and national levels by Beatrice V. Simon (Ottawa: Association of Canadian Medical Colleges) was published. The report recommended the following: that a National Medical Bibliographic Centre be established in the near future that a percentage of all medical research grants from federal agencies be made available to libraries to alleviate the strain imposed by research programs
	NUMBER OF SOURCESSON OF SOURCE	Social insurance cards introduced.

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1966		*	NSL recognized as a national library of health sciences for Canada (http://cisti-icist.nrc-cnrc.gc.ca/media/news/ cn16n5_e.shtml#one).
1967		*	Health Sciences Resource Centre established at NSL.
			Resources of Canadian academic and research libraries by Robert B. Downs (Association of Universities and Colleges of Canada) was published.
1968			Advent of online searching was instituted with the nine libraries accessing the SUNY Biomedical Communication Network Index Medicus database.
1969			Arpanet, precursor of the Internet, was developed. First system crash occurred when the letter "g" was typed in the very first "Login" (http://www.walthowe.com/navnet/history.html).
1971	MEDLINE (Multironshine) 		MEDLINE became operational.
1972		*	CAN/OLE was created, the first real-time information tracking system in Canada, introduced by NSL.
1974		*	NSL moved into its new building. "In February 1974Jack E. Brown had brought his dream into reality: extending the tenta- cles of a national network for disseminating scientific information" (http://collection.nlc-bnc.ca/100/201/301/cisti_news/ html/1999/16n05/cn16n5.html#4).
1976	Canadian Health Libraries Association Association des bibliothèques de la santé du Canada	*	Canadian Health Libraries Association / Association des bibliothèques de la santé du Canada (CHLA / ABSC) was formed (http://www.chla-absc.ca/).
1986			Grateful Med introduced user-friendly MEDLINE searching.
1005			

1987

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- Libraries Without Walls: Report of a Survey of Health Science Library Collections and Services in Canada by M.A. Flower, a Joint Project of the Special Resource Committee on Medical School Libraries (SRCMSL) of the Association of Canadian Medical Colleges (ACMC) and the Canadian Health Libraries Association (CHLA), was published (http://www.chla-absc.ca/ documents/wallsfinal.pdf). The report recommended the following:
 - that the Canadian Institute for Scientific and Technical Information (CISTI), with SRCMSL, establish a task force on harnessing technology for health sciences information

		 that the ACMC invite the Dean of Medicine at each of Canada's 16 medical schools to establish an Information Management Council to deal with health sciences information provision within the region served that ACMC's SRCMSL and the CHLA establish a joint committee to deal with problems of interlibrary sharing of information resources in health sciences fields that ACMC's SRCMSL and the CHLA appoint a work party to grapple realistically with recurrent problems of underfunding and propose defensible plans for more adequate funding as required for the future that the Health Sciences Resource Centre at CISTI, as a national centre, clearing house, and research base, be maintained and strengthened Attention was also drawn to particular problems facing francophone health sciences libraries in Canada.
1990	*	Health Science Information Consortium of Toronto established (http://www.library.utoronto.ca/hsict/consorthist.htm).
1992		Cumberlege seminars identified objectives to improve management of the health care knowledge base in the UK.
1993	*	CISTI's Health Sciences Resource Centre closed.
		Alberta Health Knowledge network established (http://www.hkn.ca/overview.htm).
1994	*	DOCLINE introduced in Canada, first implementation of DOCLINE outside the US (http://cisti-icist.nrc-cnrc.gc.ca/ health/docline_e.shtml). CISTI created position of DOCLINE Coordinator to handle the Canadian administration of the system. (DOCLINE is the NLM's automated interlibrary loan request routing and referral system. The purpose of the system is to provide efficient document delivery service among libraries in the National Network of Libraries of Medicine) (http:// www.nlm.nih.gov/docline/newdocline.html).
1995	*	HealthLINC concept paper submitted to Health Canada by Joanne Marshall (http://ils.unc.edu/%7Emarshall/nnhl/hcansia.htm).
		UK National Health Service Executive Library Adviser appointed.
		The Cochrane Database of Systematic Reviews launched in London by British Minister for Health.
1996	*	Association of Universities and Colleges of Canada – Canadian Association of Research Libraries Task Force on Academic Libraries and Scholarly Communication released report calling for a national strategy for securing scholarly content in digital formats, as one means of addressing the chronic erosion of library collections supporting university research and teaching (http://researchknowledge.ca/about/history/).
1997	*	Health Libraries Assistance Act proposal submitted to Allan Rock, Minister of Health, by Jim Henderson of the B.C. Medical Library Service.

1997–1998	Canadian Health Libraries Association Association des bibliothèques de la santé du Canada	*	 The vision of <i>The Role of Health Libraries and Library Professionals in a National Health Information Network in Canada</i> was adopted by the CHLA / ABSC Board of Directors on 27 October 1997 adopted by the Association pour l'avancement des sciences et des techniques de la documentation on 8 November 1997 endorsed by the Association of Canadian Teaching Hospitals in February 1998 ratified by the Association of Canadian Medical Colleges / Association des facultés de médecine du Canada Board of Directors on 23 April 1998 (http://www.chla-absc.ca/assoc/vision.html)
1998		÷	Health Canada commissioned the development of a concept paper to show the value of a national network of health libraries, to clearly define stakeholder benefits, and to recommend strategies upon which to proceed. Principal investigator was Joanne Mar- shall (http://ils.unc.edu/~marshall/nnhl/welcome.htm).
			CISTI hosted meeting to discuss a national network of health libraries (http://cisti-icist.nrc-cnrc.gc.ca/media/health_e.shtml).
			Canadian Nursing Association's Helen K. Mussallem Library closed.
1999	Health info for every body Des infos qui font corps avec votre santé	*	Canadian Health Network was launched: "CHN's mission is to support Canadians in making informed choices about their health, by providing access to multiple sources of credible and practical e-health information." CHN's vision was to become "your preferred choice in Canada for helpful, e-health informa- tion you can trust" (http://www.canadian-health-network.ca/).
2000 Ca	nadian Health Libraries Association sociation des bibliothèques de la santé du Canada	*	CHLA / ABSC established the National Network of Libraries for Health / Réseau national des bibliothèques pour la santé (NNLH / RNBS), CHLA / ABSC Steering Group with the support of Health Canada (http://chla-absc.ca/task/nnlh.html). The following was CHLA / ABSC's vision for the NNLH / RNBS (http://www.chla-absc.ca/nnlh/vision.html): The National Network of Libraries for Health / Réseau na- tional des bibliothèques pour la santé (NNLH / RNBS) will ensure that all health care providers in Canada will have equal access to the best information for patient care. It is designed to fit the Canadian health care model and fill in the informa- tion gaps inherent in a complex health delivery system.
2002		*	CHLA / ABSC Steering Group folded into Task Force.
2004		*	The Canadian Cochrane Collaboration and the NNLH / RNBS Task Force jointly authored a proposal to Health Canada to network the Cochrane Library nationally. The proposal was rejected, and Health Canada withdrew from NNLH / RNBS

rejected, and Health Canada withdrew activities. roi . /

Task Force held a "prestakeholders" meeting at the Cochrane Colloquium in Ottawa to determine whether there was support to continue with the NNLH / RNBS project and its planned Stakeholders meeting. There was support.

June 2005





NNLH / RNBS Task Force held a successful Stakeholders Meeting on 17 June 2005, with the generous support of CISTI. (Thanks are also due to Wiley, Ovid, Ebsco, and McGraw Hill.)

Patrick Ellis

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COLUMN / CHRONIQUE

Current research

Compiled by Sandra Halliday

Perry GJ, Roderer NK, Assar S. A current perspective on medical informatics and health sciences librarianship. *J Med Libr Assoc*. 2005 Apr;93(2):199–205.

Objective: The article offers a current perspective on medical informatics and health sciences librarianship. Narrative: The authors (1) discuss how definitions of medical informatics have changed in relation to health sciences librarianship and the broader domain of information science; (2) compare the missions of health sciences librarianship and health sciences informatics, reviewing the characteristics of both disciplines; (3) propose a new definition of health sciences informatics; (4) consider the research agendas of both disciplines and the possibility that they have merged; and (5) conclude with some comments about actions and roles for health sciences librarians to flourish in the biomedical information environment of today and tomorrow. Summary: Boundaries are disappearing between the sources and types of and uses for health information managed by informaticians and librarians. Definitions of the professional domains of each have been impacted by these changes in information. Evolving definitions reflect the increasingly overlapping research agendas of both disciplines. Professionals in these disciplines are increasingly functioning collaboratively as "boundary spanners", incorporating human factors that unite technology with health care delivery.

McDiarmid M, Auster E. Using volunteers in Ontario hospital libraries: views of library managers. *J Med Libr Assoc*. 2005 Apr;93(2):253–62.

Background: Volunteers have been a resource for all types of libraries for many years. Little research has been done to describe the attitudes librarians have toward library volunteers. More specifically, the attitudes of hospital librarians toward volunteers have never been studied. Objective: The objective was to explore and describe the extent of volunteer use and to determine library managers' attitudes toward volunteers. Design, setting, and participants: An anonymous, self-report 38-item questionnaire was mailed to the target population of 89 hospital library managers in Ontario. Seventy-nine useable questionnaires were analyzed from an adjusted sample of 86 eligible respondents, resulting in a response rate of 92%. SPSS 11.5 was used to analyze the data. Findings: The data revealed that the attitudes of managers using volunteers did not differ significantly from the attitudes of managers not using volunteers. The findings showed that a majority of managers did not believe their libraries were adequately staffed with paid employees. Sufficient evidence was found of an association between a manager's belief in the adequacy of staffing in the library and the use of volunteers in the library ($\chi^2(1, n = 76) = 4.11, p = 0.043$). Specifically, volunteers were more likely to be used by managers who did not believe their libraries were adequately staffed. The presence of a union in the library and the use of volunteers were also associated ($\chi^2(1, n = 77) = 4.77, p = 0.029$). When unions were present in the library, volunteers were less likely to be used. **Implications:** This research has implications for hospital library managers in the management of volunteers. Volunteers should not be viewed as a quick fix or as a long-term solution for a library's understaffing problem.

Pluye P, Grad RM. How information retrieval technology may impact on physician practice: an organizational case study in family medicine. *J Eval Clin Pract*. 2004 Aug;10(3):413–30.

Rationale: Information retrieval technology tends to become nothing less than crucial in physician daily practice, notably in family medicine. Nevertheless, few studies examine impacts of this technology and their results appear controversial. Aims and objectives: Our article aims to explore these impacts using the medical literature, an organizational case study, and the literature on organizations. Methods: The case study was embedded in an evaluation of the implementation of medical and pharmaceutical databases on handheld computers in a Canadian family medicine centre. Six physicians were interviewed on specific events relative to the use of these databases and on their general perception of impacts of this use on clinical decision making and the doctor-patient relationship. A thematic data analysis was performed concomitantly by both authors. Results and conclusion: Findings indicate six types of impact: practice improvement, reassurance, learning, confirmation, recall, and frustration. These findings are interpreted in accordance with both a medical and organizational perspective. The fit with the literature on interorganizational memory supports the transferability of the findings. In turn, this fit suggests how information retrieval technology may change physician routine. This study suggests a new basis for evaluating the impact of information retrieval technology in daily clinical practice. In conclusion, our paper encourages policymakers to develop, and physicians to use, this technology.

Kipnis DG, Childs GM. Educating Generation X and Generation Y: teaching tips for librarians. *Med Ref Serv Q*. 2004 Winter;23(4):25–33.

This article provides a list of helpful teaching tips for instructional librarians who need to meet the changing generational needs of their patrons. Specific generational qualities and attitudes of Generation X and Generation Y are discussed along with educational techniques and software recommendations. These tips are based on the authors' experiences at Drexel University's Hahnemann Library and Thomas Jefferson University's Scott Memorial Library, both of which are academic health sciences libraries.

Moore ME, Vaughan KTL, Hayes BE. Building a bioinformatics community of practice through library education programs. *Med Ref Serv Q.* 2004 Fall;23(3):71–9.

This paper addresses the following questions: (i) What makes the community of practice concept an intriguing framework for developing library services for bioinformatics? (ii) What is the campus context and setting? (iii) What has been the Health Sciences Library's role in bioinformatics at the University of North Carolina (UNC) Chapel Hill? (iv) What are the Health Sciences Library' goals? (v) What services are currently offered? (vi) How will these services be evaluated and developed? (vii) How can libraries demonstrate their value? Providing library services for an emerging community such as bioinformatics and computational biology presents special challenges for libraries, including understanding needs, defining and communicating the library's role, building relationships within the community, preparing staff, and securing funding. Like many academic health sciences libraries, the UNC at Chapel Hill Health Sciences Library is addressing these challenges in the context of its overall mission and goals.

Weightman AL, Williamson J, Library & Knowledge Development Network (LKDN) Quality and Statistics Group. The value and impact of information provided through library services for patient care: a systematic review. *Health Info Libr J.* 2005 Mar;22(1):4–25.

Objective: An updated systematic review was carried out of research studies looking at the value and impact of library services on health outcomes for patients and time saved by health professionals. Methods: A comprehensive systematic search was undertaken of the published literature to September 2003 in ERIC, LISA, MEDLINE, PREMEDLINE, EMBASE, the Cochrane Controlled Trials Register, and Google. Some hand searching was carried out, reference lists were scanned, and experts in the field were contacted. Twenty-eight research studies of professionally led libraries for health care staff, including clinical librarian projects, met the inclusion criterion of at least one health or "time saved" outcome. Papers were critically appraised using internationally accepted criteria. Data were extracted and results were summarized using a narrative format as the studies were heterogeneous and precluded a statistical analysis. Results: There is evidence of impact from both traditional and clinical librarian services. The higher quality studies of traditional services measured impacts of 37%-97% on general patient care, 10%-31% on diagnosis, 20%-51% on choice of tests, 27%-45% on choice of therapy, and 10%-19% on reduced length of stay. Four studies of clinical librarian projects suggested that professionals saved time as a result of clinical librarian input, and two of these studies showed evidence of costeffectiveness. However, the clinical librarian studies were generally smaller, with poorer quality standards. Conclusions: Research studies suggest that professionally led library services have an impact on health outcomes for patients and may lead to time savings for health care professionals. The available studies vary greatly in quality, but the better quality studies also suggest positive impacts. Good practice can be gathered from these studies to guide the development of a pragmatic survey for library services that includes the direct effects for patients among the outcome measures.

Wleklinski JM. Studying Google Scholar: wall to wall coverage? *ONLINE*. 2005;29(3):22–6.

Most academic librarians reacted to the initial introduction of Google Scholar with a mixture of glee and horror. They were delighted to see Google making scholarly literature more accessible, but terrified students would not search beyond Google. Libraries rushed to incorporate mentions of Google Scholar on their Web pages, emphasizing the availability of full text at the library and explaining how library collections supplement and enhance Google Scholar.

REVIEW / CRITIQUE

The enduring library: technology, tradition, and the quest for balance. Michael Gorman. Chicago: American Library Association, 2003.

Michael Gorman is not afraid to say *exactly* what's on his mind. As American Library Association (ALA) presidentelect, Gorman is both activist and politician at a time when we need both. If his latest book, *The enduring library: technology, tradition, and the quest for balance*, is any indication, he will continue to speak out on what matters most to librarians.

Take last summer, for example. Gorman delivered the keynote address at the 2004 Canadian Library Association (CLA) Conference in Victoria, B.C. He outlined some of librarianship's main achievements over the past 100 years and spoke eloquently about the key values of our profession. As a skilled polemicist, he warned of dangers if librarians become complacent about values: right-wing governments eroding our free speech; libraries' autonomy and intellectual freedom under siege (the US Patriot Act); even how computers threaten to overwhelm us (making us stressed and stupid). Full of one-liners and political jabs, it was exactly what you want from a keynote speaker.

But candour without diplomacy can be a dangerous thing. After his *Library Journal* editorial was published in early 2005, Gorman found himself at the centre of controversy months before his ALA presidency starts. This time aiming at bloggers, Gorman said that "many of the Blog People are [not] in the habit of sustained reading of complex texts. It is entirely possible that their intellectual needs are met by an accumulation of random facts and paragraphs." Librarians — often among the first to adopt new technologies (like blogs) found his comments insulting. Not what you'd expect from an ALA president.

Was it *Gormangate*, as some suggested? Were his comments out of touch with librarians on the frontlines? To what

extent does the ALA president have a responsibility to "speak for all librarians"?

As the issues were debated, Gorman was unrepentant. Lighten up, don't take yourselves so seriously, he seemed to be saying in a follow-up editorial. While the debate continued, Gorman had achieved his goal — to have a discussion and to incite debate about new technologies.

And so it is with *The enduring library*. In this slim volume, Gorman covers territory familiar to those who have read him or to those who have heard him speak at conferences.

Gorman is one of the few among us to look critically (some would say negatively) at technology's impact on our lives, our profession, and on services. Even if you don't agree with his views, it doesn't matter; he helps you to sort out your position on important issues, to find some balance at a time when it is badly needed.

This is a must-read for all librarians. Health librarians may find the chapters on the future of research libraries and overcoming techno-stress particularly relevant. health care system, but its practical use is limited at best.

Dean Giustini

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NEWS AND NOTES / NOUVELLES ET NOTES

Compiled by Sandra Halliday

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NEWS AND NOTES / NOUVELLES ET NOTES

Promoting evidence based decision making

http://health-evidence.ca (launched on 20 March 2005)

This is a Web site designed to provide quality research evidence to public health decision makers, saving you time by searching, screening, and rating the systematic review evidence to compile it in a free, searchable online registry. Findings of a research project funded by the Canadian Institutes of Health Research demonstrated a need for a reliable source of review evidence that decision makers in public health could access and use easily. You can read more about the study and ongoing research elsewhere on the site, and you can also read more about the process each review must pass before being posted here. (Accessed on 1 May 2005 at http://health-evidence.ca/why_he.aspx.)

New special queries resource in PubMed

http://www.nlm.nih.gov/pubs/techbull/ma05/ma05_technote.html#queries

A new link called Special Queries will be added to PubMed's blue sidebar. Like the Clinical Queries link that takes you to a page providing specialized PubMed searches for clinicians, the Special Queries link provides access to a directory of topic-specific PubMed queries. The directory includes links to the following:

- Queries targeted for clinicians and health services researchers, including a listing for the standard clinical queries, health services research queries, and the cancer topic searches feature (offered by the National Cancer Institute)
- Subject queries, such as AIDS, bioethics, systematic reviews
- Special search queries or interfaces for complementary medicine, history of medicine, and MedlinePlus health topics
- Journal collection queries

The Special Queries directory provides links to special search interfaces or presets the Limit function of the standard PubMed interface to the selected subject or journal subset. (Accessed on 1 May 2005 at http://www.nlm.nih.gov/pubs/techbull/ma05/ma05_technote.html#queries.)

Journal of the European Association of Health Information and Libraries

http://www.eahil.net/newsletter/newsletters.htm

The first issue of the Journal of the European Association of Health Information and Libraries was published in February 2005. It was formally entitled Newsletter of the European Association for Health Information and Libraries. Currently, this publication is available free on the Internet at the above address. It will be published quarterly.

Dare to dream — one vision for medical libraries in 2015

Take a few moments to consider what you think a medical library will look like in 10 years and then read what one physician and medical librarian predict for the future. Consider writing an article for the *Journal of the Canadian Health Libraries* Association about your unique vision for 2015!

Lindberg DA, Humphreys BL. 2015 — the future of medical libraries. N Engl J Med. 2005 Mar 17;352(11):1067-70.

Ghostwritten articles — are you familiar with the practice?

The topic of ghostwritten articles in medicine is interesting and very controversial. It is not often that people with first-hand knowledge discuss their experience; however, Adriane Fugh-Berman wrote an article for the *Guardian* entitled "How I was asked to 'author' a ghostwritten research paper" (http://www.guardian.co.uk/life/feature/story/0,13026,1464037,00.html).

Call for papers for the Journal of the Canadian Health Libraries Association

The Journal of the Canadian Health Libraries Association (JCHLA) invites you to submit material for publication in upcoming issues of the journal. Here is the link for the journal's Web page, just click on Instructions to Authors: http://pubs.nrccnrc.gc.ca/jchla/jchla.html.

Articles may take the form of effectiveness studies, reviews, qualitative studies, or program descriptions. Topics may include health informatics; consumer health information; governmental health information networks; health information services; evidence-based practice/health care librarianship; clinical/private sector roles for health librarians; general information sciences topics (e.g., distance services, management, consortia, reference, education, recruitment and retention); accreditation; or any other issue or topic related to health or general library and information science.

Deadlines for submission are as follows:

- Summer issue 26(3) Deadline is no later than 1 August 2005 for publication on 1 October 2005.
- Fall Issue 26(4) Deadline is no later than 1 November 2005 for publication in January 2006.

JCHLA is dedicated to providing a voice for issues and interests shared among health libraries and health sciences librarians in Canada.