Out of the library and into the ward: clinical librarianship programmes at University Health Network

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Introduction

Over the last five years University Health Network (UHN) Library has become actively engaged in extending its physical walls by taking the expertise of a skilled information specialist out of the Library and closer to the point of clinical need. The practice of engaging the skills of an expert searcher at the point where the evidence-based information is needed to support the care of the patient is one of the Library's initiatives to strengthen the Library's position at UHN and remain relevant to the hospital's medical and research practice. This presentation will outline the process of implanting a clinical librarian in selected programmes at UHN, its singular contribution to patient-centred care and its limitations. I am grateful to be able to share our ideas with the participants of this EAHIL Workshop. I am pleased to showcase our Library's experience as one innovative and invaluable opportunity for face-to-face contact between librarians and health care providers.

Background

The hospital

University Health Network (UHN) is a teaching hospital affiliated with the University of Toronto, Canada. With an operating budget of more than $1 billion, UHN is one of Canada's largest teaching and research hospitals. UHN is made up of Toronto General Hospital, Toronto Western Hospital and Princess Margaret Hospital, situated at three sites. Each of the three hospitals in UHN provides tertiary and quaternary level of patient care. Major research and patient areas include transplantation, cardiology, neurosciences, oncology, surgical innovation, infectious diseases and genomic medicine.

The Hospital's staff of more than 11,000 include 550 staff physicians, 700 affiliated physicians, 3,200 nursing and allied health professionals, over 3,600 students (medical, nursing, pharmacy, allied health, research and other).

Health Sciences Libraries at UHN

UHN maintains three heath sciences libraries, with central administration, which provide a full array of professional services, training workshops and subject collections that support the programs and educational and research information needs of each individual hospital's staff, physicians, students and researchers.

Library staff consist of 9 librarians, 4 library technicians and 4 part-time evening assistants.

The Library established its electronic presence in the hospital at the beginning of 2001 when we launched the Virtual Library. Prior to 2001 the average annual attendance at the three sites hovered around 165,000 people. Since the introduction of the Virtual Library, in-person visits have steadily been dropping; in 2006/07 we logged only 148,000 in-person visits. The Virtual Library, however, available on each of the 5,000 computer desktops in the hospital, has emerged as the hub of activity on the UHN Intranet, resulting in 200,000 virtual visits in the year 2006/07.

Given such a predominantly electronic environment supplemented by services offered by Google, Google Scholar and PubMed, our Library faces the typical challenges of maintaining a face-to-face connection with our clients, monitoring their needs and their changing information-seeking behaviour, and staying relevant to their medical practice.

To address some of these challenges, during the last five years the Library has introduced a number of new initiatives to increase its visibility and to bring the information and the expert searching skills to the point of clinical need.

The last of these initiatives - bringing the librarian's expertise closer to the point of clinical need - is the topic of today's presentation.

Toward clinical librarianship programmes

Strategic alignment

One might call the implementation of the clinical librarianship programmes by the UHN Library a natural progression of its programmatic model which was established in 1998. Within this model 5 Library Information Specialists are assigned and dedicated to specific client groups throughout the hospital. In that capacity they provide in-depth reference and research, individual and group training sessions on the use of library information resources, collection development in the assigned areas, and constant marketing of new library additions and services.

The stability of staffing in the UHN Information Specialists' group in the last several years has allowed them to become familiar with their clients and comfortable with their clients' subject areas.

By 2004, most of the Library Information Specialists were ready to slowly move away from their comfort zone, the sanctuary of the Library's walls, and closer to the then unfamiliar and therefore daunting venues where an individual patient's care management was being discussed and decided.

From a strategic point of view such an alignment of librarians with their respective client groups in settings closer to the point of care would demonstrate the librarian's adaptability and highlight their unique contributions. The participation of librarians in clinical teams that meet regularly to discuss their patients would solidify the library's position in the hospital and show that we are ready to support evidence-based practice. The Library needed to move into projects that would enhance our visibility, align our

services with the hospital's programmes and reassert our relevance in the health care institution.

To test the reception of a clinical librarianship concept in our hospital we decided to start with a pilot project. A pilot project was also more palatable to somewhat hesitant Library's Information Specialists. Frankly speaking, I was hoping that by the time a pilot was done, the Information Specialist working on it, would be hooked and will convince others to embrace the undertaking.

We turned to a UHN internist who was a strong proponent of evidence-based practice and a believer in involving the clinical librarian's expertise. A pilot study looking at the impact of a clinical librarian and a Clinical Question Log on the educational experience of the medicine residents would be the UHN Library's first venture into the world of clinical librarianship.

Preparing for the pilot study

Prior to the study, the clinical librarian attended an hour-long Morning Report for Internal Medicine to familiarize herself with the type of clinical questions arising in discussions about patients admitted to the Internal Medicine floor. As well, she was interested in finding out how complex these questions were and how long it would take to answer them. Her initial findings were that approximately 20 residents and physicians attended the Morning Report and 3-5 questions per patient were generated. The clinical librarian assessed that each question could be researched and answered within 30-45 minutes.

Her pre-study preparation also included putting together three teaching sessions on: formulating clinical questions (delivered jointly with one of the principal investigators of the study); navigating the UHN's Virtual Library to find journals, books and use ACP's PIER and Clinical Evidence; and searching the primary literature applying methodological filters. The three sessions were delivered to all participating residents once the study started.

Several hours of consultation with principal investigators to discuss the details, of reading professional literature to prepare herself for participating in a clinical librarianship programme took place prior to the study as well.

General Internal Medicine Clinical Teaching Units Pilot

The nine-week pilot study started in August 2004. Residents in General Internal Medicine Clinical Teaching Units were asked to record any clinical questions that arose during their workday using the online version of a Clinical Question Log made available at designated computer stations on the Internal Medicine floor. The idea behind the use of the log was to provide residents with the convenience of being able to log their questions whenever they occur to them. The rationale behind the convenience part was that "many clinical questions arise but few are answered because of time constraints and difficulty in searching for evidence." [1]

[1] Straus SE. Impact of a clinical librarian on the medicine CTUs. Study proposal; 2004

Once the study started, the clinical librarian checked the Clinical Question Log 2-3 times a day and sent the answers via log within 24-48 hours. During the nine-week study 24 questions were logged. They all resulted in literature searches. During the study the librarian attended Morning Report twice weekly. "No real time" searching was conducted by the librarian during this pilot.

Librarian's observations:[2]

"Regular interaction with residents and (library) staff is essential! It provides opportunity for clarification, teaching moments, contextualizes queries and builds rapport. "Virtual" presence is insufficient."

"Follow up is valuable: was query answered to their satisfaction, what happened to patient, was Dx confirmed, did literature search help, does client know the next steps in terms of getting articles, looking up books, using VL, etc. Using CQ Log is like working in a vacuum and does not provide the avenues for proper reference interviewing and follow up."

"It is not enough to merely conduct a search. It is more valuable to be able to read and assess the material in order to know which one or two articles to suggest, or even to know whether what you are reading actually provides the answer. Ideally a Librarian should be able to produce a summary with the bottom line followed by a bibliography of sources consulted if they wanted to read them."

The pilot with the General Internal Medicine Clinical Teaching Units unfortunately did not translate into a permanent clinical librarianship programme. Although all three principal investigators and residents involved were very happy with the pilot results it was decided that an additional study would provide more solid data. However, a second pilot never materialized due to changes in staff and priorities.

Lessons learned from the Pilot

From the Library's perspective, the outcomes of the clinical librarian's participation in the study were successful for the following reasons:

- The Information Specialist participating in the study gained a very healthy dose of self-confidence and experience
- The study confirmed that her searching skills were top notch and accepted by the physicians
- The attendance at Morning Report contextualized the librarian's role in the total health care picture
- Lending her skills closer to the point of care became more of a thrill than doing literature searches within the Library walls
- And she was hooked!

The experience gained from the study allowed us to be more specific in our objectives for any future clinical librarianship programmes. After the pilot study we knew that ideally:

[2] The following three paragraphs are Ani Orchanian-Cheff's personal observations at the conclusion of the test study

- Because of other ongoing responsibilities that each Information Specialist has, attendance at clinical rounds would be limited to one, maximum two, meetings a week
- The setting for a clinical librarian includes opportunities to lend their expert searching skills to find evidence, and to provide educational training on the use of resources available to residents through the library right at the clinical team's meetings
- Due to time constraints at the meeting, any literature searches would have to be done at the library after the meeting. Providing "real time" searches was for now still outside of our comfort zone and was perceived as too stressful for the librarian
- Face-to-face interaction between residents and the librarian was preferable
- Since clinical meetings dealing with patient cases for the most part are held either before or after a regular 9 to 5 work day, Library staffing needs to be adjusted to accommodate the clinical librarian's schedule

General Surgery at Toronto General Hospital

Kardex Rounds

Armed with a successful completion of a pilot study and some idea of how we wanted to pursue the programme, once again we were at square one: Where do we go from here?

In November 2004 a meeting with staff surgeon was held and a new project was approved in principle by the Division Head of General Surgery.

We felt that the librarian might be best utilized in weekly General Surgery Kardex Rounds where the clinical management of patients currently on the General Surgery ward was being discussed by a group of interprofessional health care workers. In theory, the group attending the Kardex Rounds would consist of representatives from three surgical resident teams, a nurse manager, nurse practitioner, clinical pharmacist, social worker, occupational therapist and physical therapist. A faculty representative (staff surgeon) was added to facilitate resident-librarian interactions.

The librarian's role was to assist in searching medical literature for evidence to answer any clinical questions that might arise during the Kardex Rounds and to provide the findings within 24-48 hrs. The focus was to meet the needs of the whole group, with slightly more weight being given to surgical residents. The one-hour weekly Kardex Rounds took place Friday afternoon. The project with General Surgery started in January 2005. The idea of participating in meetings of an interprofessional clinical team sounded both ideal and innovative.

The Kardex Rounds while always fascinating to the librarians because of their rich surgical content proved to be less than ideal in securing any interaction between the librarian and Kardex participants. Due to emergent patient care issues, understaffing and severe time constraints the Kardex Rounds were often attended by only the minimum of surgical residents (representatives of the 3 surgical teams). When, due to scheduling

conflicts, the faculty representative could not attend the Friday meetings, the Kardex Rounds suffered from poor organization, lack of leadership and complete lack of interaction between the residents and the clinical librarian. Although in several instances the librarian was called upon to research clinical questions for both surgical residents and the clinical pharmacist, more often than not, Kardex Rounds were merely status reports on patients currently on the ward.

Quality of Care Rounds in General Surgery at Toronto General Hospital

Three months after we started participating in the Kardex Rounds we decided to continue the library's initiative but in another setting - the weekly clinical meeting in General Surgery called Quality of Care Rounds. We thought Quality of Care Rounds were better suited to engage residents and the librarian around evidence-based medicine issues.

The librarian started attending the weekly Thursday Quality of Care Rounds in General Surgery on March 10, 2005 and today we are still there.

The Quality of Care Rounds facilitated by the Division Head of General Surgery are attended by all surgical residents, general surgery faculty, at times senior medical students, clinical fellows and other health professionals. The content of the Rounds consists of several very quick paced patient reports delivered by the residents. All mortality and selected cases with strong educational merit are reported. The presentations are frequently halted by the facilitator in order to query the attending residents. The cases presented serve as a springboard for discussions between the faculty and residents about various aspects of patient or disease management, potential outcomes and best practices. If the facilitator perceives that there is a need to follow up any aspects of the discussion with a literature search, he tasks a resident to collaborate with the librarian and to report the findings back to the group a week later. After the meeting the clinical librarian conducts an expert search and emails it to the assigned resident for analysis and reporting back to the Rounds group.

To date 64 clinical questions resulting from the Quality of Care Rounds have been followed up by the clinical librarian. On average the librarian spends 50 minutes per specific request. Usually, the results are delivered within 18 hours of the research request.

The two-year long collaboration with the General Surgery Quality of Care Rounds has been most successful. A recently conducted survey (June 2007) confirmed that 84% of surgical respondents (staff and residents) were aware of the clinical librarian attending the Rounds. While only 25% of the respondents worked with the librarian for literature searches on topics or questions brought up during the Quality of Care Rounds, almost 50% of respondents worked with the librarian for literature searches on topics or clinical questions outside of Quality of Care Rounds forum. 84% agreed that the information coming from the clinical librarian changed the day-to-day management and care of their patients.

The general comments in the same survey echoed the impressions of the clinical librarian herself. Both respondents and the librarian would like to see: a better integration of her skills in the educational aspect present at the Rounds; more teaching opportunities; and face-to-face interaction between the librarian and the residents who are assigned a clinical question to follow up.

We will be meeting with the surgeons soon to discus the survey's results and options that would provide for better utilization of the clinical librarian services and strengthen the library's participation in this programme.

Family Medicine In-Patient Service at Toronto Western Hospital

While the work to establish and anchor a clinical librarianship in General Surgery was going on, the Information Specialist involved in the General Internal Medicine pilot project managed to convince the Graduate Program Director of Family and Community Medicine that his residents would benefit from having a clinical librarian attend a weekly Morning Report. In June 2005 the library secured a spot for another clinical librarian, this time in the Tuesday Morning Report of Family Medicine In-Patient Service.

The Tuesday Morning Report is attended by the Family Medicine residents on their In-Patient Service rotation, a staff physician, and at times a nurse practitioner. Like at any other Morning Report, those attending discuss and provide updates on each patient in their care. Once the patient status report is completed, the clinical librarian takes over the meeting for the last 10-20 minutes. The residents provide the librarian with a question or two based on the patient status reports. The librarian, aided by a networked computer, then guides the residents through the information resources available to them and selects the ones that provide the best information to answer their clinical questions. While navigating through different tools, the librarian uses this teaching opportunity to discuss the pros and cons of individual resources. Time permitting, she might also provide a mini teaching session to show the residents how to develop a searchable question by demonstrating the PICO model or instruct them in recently acquired library resources. In the librarian's words "the final product is hopefully their self-sufficiency in point-of-care searching on their own. Showing them how to quickly and efficiently search evidence-based resources to find their answer, without wasting time in MEDLINE when a secondary pre-appraised resource is better for their question, is (my) most valuable contribution."[3]

The Tuesday Morning Report of the Family Medicine In-Patient Service for the most part does not produce any clinical questions that must be continued outside the meeting room. In fact, the delivery of information to the residents is most immediate and as "real time" as we can hope for.

[3] Ani Orchanian-Cheff on the clinical librarian's contributions

Genitourinary Tumor Board at Princess Margaret Hospital

In late 2005 our efforts to extend the clinical librarian outreach took us in the direction of the UHN oncology programmes. Through a series of emails and meetings with a couple of senior members of the oncology group the Library was invited to the January 2006 meeting of the Genitourinary Tumor Board. After a short presentation introducing the concept of clinical librarianship, all those attending agreed that having a librarian's skills at their disposal for the purpose of the Board would be a win-win situation for everyone involved.

The Genitourinary Tumor Boards are usually attended by radiation, medical and surgical oncologists, imagers, medical and surgical oncology residents and fellows, senior medical students on electives, nurses, clinical trial staff, and drug company representatives.

Every Genitourinary Tumor Board is usually facilitated by the chair or his delegate. Whoever is in charge makes sure that all cases scheduled for presentation move smoothly and quickly. Attendees are aware of the presence of the clinical librarian.

Cases at the Board are usually presented by fellows or residents. On occasion, senior oncology clinicians, pathology and imaging experts will present cases as well. After each case presentation a general discussion follows. Although all are invited to participate, and residents' and fellows' opinions are often solicited, the discussion is dominated by senior clinicians. If during the discussion any issues pertaining to the literature arise, the Board's collective knowledge settles them. The objective of the discussion is to reach a consensus and in most cases this is achieved.

This particular clinical meeting has so far generated only a handful of requests for further literature. In fact a reversal of this situation is a more common occurrence in the Genitourinary Tumor Board. A resident or fellow who is scheduled to present a case at the Board will consult with the clinical librarian prior to the Board to ensure that all current information has been considered.

The Genitourinary Tumor Board differs from the other two settings where the clinical librarians are present in the following aspects:

- in the majority of cases any issues pertaining to the latest literature on the topic are settled by those attending
- the expertise of the clinical librarian is sought prior to the presentation at the Board
- the group demonstrates an excellent command of the current literature and exhibits superior database searching skills
- the primary objective of the Board is to reach a consensus and make a decision
- the more traditional teaching method of grilling the residents on their knowledge is not the objective in this setting

As of today, the clinical librarian is still a part of the weekly Board. Despite the fact that his services are not called upon very frequently at the meetings, this librarian's expertise is being sought more on his own turf – at the library. From his perspective and in his own words the most important " is the opportunity to hear the language used by senior clinicians in discussing cases. This has enhanced the Information Specialist's skills in the very subtle area of keyword searching, for example."[4]

Next steps

In order to keep the pulse of our clients' satisfaction with the clinical librarianship programmes established thus far, the Library will be evaluating each of the three programmes. Following the evaluation we will investigate different methods of greater integration of the librarian's skills into the clinical meeting.

The three clinical programmes currently active at UHN are focused primarily on medical and surgical residents and clinicians. It is our hope to establish a similar interaction with our nursing and allied health clients.

Lessons learned

- having a champion who has decision making power, is passionate about involving librarians in clinical teams and is prepared to lobby on your behalf is extremely helpful
- being flexible, able to adjust to the existing dynamics of the clinical team is very important. Otherwise, the clinical group might perceive your project as more work for them rather than the opposite
- starting your programmes with a librarian who is enthusiastic, eager to learn new things and who likes to be challenged is ideal
- since clinical team meetings are extremely short and intense, teaching in small bytes is preferable
- having a flexible master plan of where you want to be in 2-3 years keeps you focused
- inviting your superior and your organization's CEO to the Library Open House or the Library's Strategic Planning Retreat will showcase your team's skills
- clinicians and residents who already have a clinical librarian as part of their team are very happy to share their experience with other clinicians at formal and informal gatherings
- marketing of your new services is never done!

Conclusions

Each of the three clinical librarianship programmes discussed today was unique to establish. By design, distinct specialties located at each of the hospital's three sites were chosen. Once started, each programme took on a different path to utilize the clinical

[4] John Jackson on his participation in a clinical librarianship programme

librarian's skills. The degree of interaction between the librarian and members of the clinical teams varied from team to team depending on the facilitator, nature of the meeting and its educational objectives.

Engaging the skills of a clinical librarian at the point of care or clinical need utilizes the librarian's unique contributions to evidence-based practice that puts the patient at the centre. At the same time it offers the health professional an immediate opportunity to pose a research question and have it researched by an expert in a very timely way. Win – win.