A post-merger hospital library collection survey and data analysis indicated better resource allocation and user satisfaction

Alexandra Davis, Risa Shorr, Kaitryn Campbell, and Jessie McGowan

Abstract: Library Services at The Ottawa Hospital was created as the result of a series of hospital mergers. Before the merger, the collections of the previous three libraries consisted primarily of print monographs and journals. The new collection meant better access to more resources. While Library Services’ staff could see the many benefits of the changes, they wondered whether these benefits were successfully communicated to hospital staff and physicians and whether electronic access was being adopted. Through qualitative and quantitative data analysis, resource management issues resulting from the shift from paper textbooks and journals to electronic resources were reviewed. Of the users who had been at the hospital more than 5 years — approximately 50% of those surveyed — half of them remained satisfied with the collection, and the other half said their satisfaction had increased. Of the users who had been at the hospital less than 5 years — the other 50% of those surveyed — 29.3% remained satisfied with the collection, and 17.5% said their satisfaction had increased. Despite the increase in the number of resources and overall user satisfaction, misconceptions, confusion, and high expectations regarding e-resources still exist. The lessons learned and future goals identified in this survey will assist Library Services in its aim to clarify these issues by better educating users about online resources and by working more closely with various groups to facilitate access to our resources, both onsite and offsite.

Setting

This article follows a previous article in Bibliotheca Medica Canadiana describing the original merger of this library [1]. Library Services at The Ottawa Hospital (TOH) was created as the result of a series of hospital mergers. It supports a large teaching hospital serving the city of Ottawa, Ontario, and the surrounding area. TOH was formed in 1999 with the amalgamation of three hospitals: the Ottawa Civic, Ottawa General, and Riverside Hospitals. A fourth hospital, the Salvation Army Grace Hospital, was closed. In 2002, The Rehabilitation Centre (formerly part of the Royal Ottawa Hospital) merged with TOH. Recently, the Ottawa Regional Cancer Centre has also been merged with TOH.

Background

Library Services serves primarily staff from TOH and its affiliated research institute, the Ottawa Health Research Institute. It also provides services to third- and fourth-year medical students from the University of Ottawa. As well, it provides services to several regional hospitals and the local public health department.

Before the first merger, there were three separate libraries. These libraries remained and were merged to create the Library Services department of the new hospital. A reading room previously located at The Rehabilitation Centre was merged into the General Campus location of Library Services. Because of the recent merger with the Ottawa Regional Cancer Centre, its library, the Beattie Library, will also be added to the Library Services department; however, this paper will only focus on the original three-library merger.

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journals before and after the merger is shown in Fig. 1. During the 4-year period from the beginning of the merger, 62 duplicate titles were cut. This allowed Library Services to save more than CAN$35,000, which was allocated to new resources and the maintenance of the collection.

None of the libraries had electronic monographs before the merger, and only the Civic Campus Library had any electronic journals. The Civic Campus Library had access to five electronic journals; however, access was not centralized through a Web site or Intranet. After the merger, all three campuses had centralized access to 26 electronic monographs and approximately 1,879 electronic journals via the Library Services Web site.

As the libraries merged, the collection budgets of each campus library were combined into one budget. Before the merger, the budgets of the two larger hospitals (the Ottawa Civic and Ottawa General Hospitals) were quite similar but allocated differently between monographs and journals. Figure 2 shows the pre-merger budget, which totalled CAN$196,320.

From 1999 to 2003, the collection budget did not increase. However, CAN$13,080 from the book budget was moved to another account to be used for electronic resources, decreasing the book budget from CAN$48,000 to CAN$35,000. Although there was no increase in the budget, the reduction in the duplication of books and journals meant that not only was there enough money to purchase the same number of new books, but there was also enough money to purchase additional titles.

The technical capabilities for accessing the collection in each library before and after the merger were reviewed. Before the merger, each library had different classification and cataloguing methods (Table 1). In each of the libraries, library users could not access the catalogue from outside the library. In addition, only one of the libraries had a Web site. After the merger, Library Services adopted one classification (Library of Congress) and cataloguing (DbText) method. The DbText system was accessible at all three campus libraries and on the Internet. A new bilingual Web site was created as part of the hospital’s Web site to access the catalogue, online books, and online journals (www.ottawahospital.on.ca/library).

All of these challenges and changes meant that the three libraries now functioned differently as Library Services. This left Library Services’ staff questioning how library users felt about the shift from paper textbooks and journals to electronic resources and the increased access to materials. Other libraries have seen that the biggest benefit of a merger is access to a larger collection of resources [1–5]. While Library Services’ staff could see the many benefits of the changes, they wondered whether these benefits were successfully communicated to hospital staff and physicians and whether electronic access was being adopted.

Methods

Through qualitative and quantitative data analysis, resource management issues resulting from the shift from paper textbooks and journals to electronic resources were reviewed. This analysis was performed through the examination of two key resources: (1) the results of a qualitative questionnaire and (2) the data analysis of retrospective and current collection development reports.

A structured 10-question survey was developed by three of the authors (RS, AD, and KC) to record users’ opinions on the impact of the new collection development strategy to reduce print resources and acquire more electronic resources (Appendix A). The questionnaire was tested and then submitted to the Ottawa Hospital Research Ethics Board as part of the study protocol. After the protocol was approved, the two-page questionnaire and one-page information sheet (Appendix B) were made available (in English and French) to the 9,100 staff and physicians of TOH in paper and electronic formats. Respondents were offered the choice of re-
plying using one of the following methods during a 4-week period in March–April 2003: responding to an e-mail message, responding to a pop-up notification on the Library Services home page, or filling out a print copy of the form received either in the internal mail or picked up in one of the libraries.

The initial goal of 369 surveys (9100 total TOH staff, 5% margin of error, 95% confidence interval (CI) = 369 surveys) was not reached. However, a total of 225 surveys were received (9100 total TOH staff, 5.5% margin of error, 90% CI = 219 surveys). Total responses for each question were counted, and comments, where applicable, were transcribed. Results are represented as a percentage of the total number of responses.

To gain an empirical understanding of the specific resources available at Library Services locations, pre- and post-merger, historical collection data was obtained from archived collection reports. The goal was to obtain a quantitative view of whether access had improved. Current data on the present collection, up until 31 March 2003, was taken from the Library Services’ catalogue in DB/Text DBMS.

Data regarding the total number of print monographs, print journals, electronic monographs, and electronic journals, pre- and post-merger, at all three campuses were collected. These numbers were calculated through a simple count of each type of resource. These resources have been previously described in the background section of this paper.

Results and discussion

The survey results fell into one of three broad areas: users’ personal information, users’ level of satisfaction with the collection, and issues surrounding online access to the collection. Approximately 75% of those surveyed used the library at least once per month, with 4% of respondents having never used the collection. Physicians and allied health professionals together accounted for 53% of respondents (Fig. 3).

Half of survey respondents had worked at TOH for more than 5 years, and therefore only these respondents had been employed by the hospital both pre- and post-merger. As shown in Table 2, TOH physicians and staff had a high level of technical competency regarding online access of resources. Since the merger, users at each of the three campuses had access to more resources. The transition to online access necessitated a shift in the conceptualization of the library for its staff and users. Both groups dealt with the issues of permanent access to resources, ease of e-resource use, and comfort with technology, although overall satisfaction with access was high.

Regarding user satisfaction, two main areas were examined: (1) the change in the users’ collection satisfaction pre- and post-merger and (2) the users’ current satisfaction level (Fig. 4).

Of the users who had been at the hospital over 5 years — approximately 50% of those surveyed — slightly fewer than half of them remained satisfied with the collection and satisfaction increased for the other half. Only 5.7% of these users said their satisfaction had diminished. Possible reasons for dissatisfaction could be attributed to the cancellation and relocation of print subscriptions and books to other campuses. Also, many users had difficulty adapting to resources that were once in print now being available only electronically.

**Fig. 3.** Respondent distribution by profession.

![Respondent distribution by profession](image)

**Table 2.** Technical competencies regarding online access.

| Issue                                                                 | % of respondents |
|----------------------------------------------------------------------|------------------|
| Find online material somewhat or very convenient                      | 90               |
| Find it easy or very easy to access material online                    | 74               |
| Have read or printed material from online resource                     | 73               |
| Would use electronic version of resource over paper                    | 62               |

**Fig. 4.** Change in collection satisfaction.

![Change in collection satisfaction](image)
This change was too sudden for some users and caused confusion. Overall, however, the users who had been through the merger felt that the collection had improved or remained satisfactory.

Of the users who had been at the hospital less than 5 years — the other 50% of those surveyed — 29.3% remained satisfied with the collection, and 17.5% said their satisfaction had increased. Only 3% of this user group said their satisfaction had diminished. Possible reasons for dissatisfaction could be that these users were coming from other institutions, where the resources were more abundant and already electronically advanced. These users may have had higher expectations that could not be met, given the current status of Library Services. Also, many people replied on their survey that they answered “not currently satisfied with the collection” because they felt that “there was always room for improvement”. Even though the merger had not affected this user group, they still regarded the collection favourably.

When asked to comment about the ease, convenience, or overall satisfaction regarding Library Services’ electronic resources, the majority of users’ comments were positive. However, some users reported confusion or frustration in gaining access, with comments such as it was “sometimes confusing trying to get material online and may be faster to get a paper copy”; one user had been “sometimes frustrated by the convoluted access to e-journal passwords”. There is also a clear opportunity for Library Services to offer users some education and (or) guidance regarding copyright misconceptions, as some users reported that the features they most enjoyed regarding e-access was being able to integrate electronic documents “into quick presentations for teaching”, or “saving documents to [their] hard-drive”. Additionally, Library users’ expectations were quite high regarding what sort of online access Library Services could provide, as evidenced by suggestions such as, “what about linking to the University of Ottawa Heart Institute [an agency funded separately from TOH] e-journals thru TOH?”

**Conclusions**

Combining the collection from three hospital libraries into one was a challenging experience. With the successful initial merger and re-organization of the collection, and a move to more resources in electronic format and fewer in print, users can now access more resources from their desktops. Through the analysis of the data collected during this study, a number of lessons were learned (Table 3). A number of goals on which to focus Library Services efforts in the future were also identified (Table 4).

Despite the increase in the number of resources and overall user satisfaction, misconceptions, confusion, and high expectations regarding e-resources still exist. The lessons learned and future goals identified will assist Library Services in its aim to clarify these issues by better educating users about online resources and by working more closely with various groups to facilitate access to our resources, both onsite and offsite.

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Appendix A

**TOH Staff & Physician Survey**
from Library Services

We are very pleased you are taking the time to fill out our survey. Please answer the following questions as accurately as possible.

1) Which department(s)/division(s) do you work in? ____________________________

2) Please circle the category which best matches your job title:
   - Administration
   - Allied Health Professional
   - Management
   - Nurse
   - Physician
   - Researcher/Scientist
   - Support Staff
   Other: ____________________________

3) Which of the 3 campuses is your home campus (check 1)?
   - ❏ Civic
   - ❏ General
   - ❏ Riverside

4) How often do you use Library Services’ print and electronic collection of books and/or journals (check 1)?
   - ❏ Never
   - ❏ 1 or 2 times ever
   - ❏ 1 or fewer times/year
   - ❏ once/month
   - ❏ once/week
   - ❏ too often to count

5) How long have you been using Library Services (check 1)?
   - ❏ over 10 years
   - ❏ between 5-9 years
   - ❏ between 1-4 years
   - ❏ under 1 year

6) Since you started using Library Services, has your level of satisfaction with the available books and/or journals (check 1):
   - ❏ increased
   - ❏ remained the same
   - ❏ diminished

7) Are you currently satisfied with the selection of books and/or journals you have access to (print & online) through Library Services (check 1)?
   - ❏ Yes
   - ❏ No
   - ❏ Don’t care
   a) If not, why not (circle all that apply)?
      Not enough/No resources in my specialty
      Resources are not current
      Don’t know how to navigate/use website
      Other: ____________________________

8) Have you ever printed/read an article from one of the electronic books or journals offered by Library Services through our website (check 1)?
   - ❏ Yes
   - ❏ No*
   *If no, please skip this question and continue on to question 9).

If yes:
   a) How would you rate the ease of accessing the information you were looking for (e.g. I found the information without any trouble or frustration, so it was very easy.) (circle 1)?
      Very easy 4 3 2 1 5
      Over
      Easy Neutral Difficult Very difficult
b) How would you rate the level of convenience in using our electronic journals and/or books (e.g. I didn’t have to leave my office, so it was very convenient.) (circle 1)?

5  Very convenient   4  Somewhat convenient   3  Neutral   2  Somewhat inconvenient   1  Very inconvenient

c) How would you rate your overall level of satisfaction with using our electronic books and/or journals (circle 1)?

5  Very satisfied   4  Somewhat satisfied   3  Neutral   2  Somewhat dissatisfied   1  Very dissatisfied

d) Do you have any other comments about the ease, convenience or your overall satisfaction regarding our electronic resources?

9) If you had a choice between using an electronic or paper format of a book and/or journal, which would you choose (check 1)?

☐ electronic   ☐ paper   ☐ don’t care

a) Why would you choose this format (circle all that apply)?

More convenient   Just prefer this format
Don’t know   Prefer to read away from my computer
Other: __________________________

10) Circle any of the following sites to which you have gone to use books and/or journals instead of using Library Services’ collection, while employed at TOH (circle all that apply):

CISTI (Canadian Institute for Scientific & Technical Information)   World Wide Web (Internet)
My own collection   University of Ottawa
Other area hospital libraries   Other: __________________________

a) Why have you used these sites instead of using Library Services’ collection (circle all that apply)?

Not enough time to go to Library Services   Better selection elsewhere
Didn’t know we had a library   Everything I need is free on the Internet
Other: __________________________

Thank-you very much! The results of this survey will be available at all 3 Library Services locations in May.

Yours,

Library Services Staff
Sondage des Services de bibliothèque auprès des employés et des médecins

Nous sommes très heureux que vous acceptiez de remplir ce sondage. Veuillez répondre aux questions le plus précisément possible.

1) Dans quel(s) service(s)/division(s) travaillez-vous ? __________________________________

2) Veuillez encercler la catégorie qui correspond le mieux au titre de votre poste :
   Administration Professionnel(le) paramédical(e) Direction Infirmier(ère)
   Médecin Chercheur/scientifique Personnel de soutien Autre : ______________________________

3) Quel est votre campus principal (cochez une seule case) ?
   □ Le Civic □ Le Général □ Le Riverside

4) À quelle fréquence utilisez-vous la collection sur papier et électronique de livres/revues des Services de bibliothèque (cochez une seule case) ?
   □ Jamais □ 1 ou 2 fois à ce jour □ Pas plus d’une fois l’an
   □ Une fois par mois □ Une fois par semaine □ Très fréquemment

5) Depuis combien de temps utilisez-vous les Services de bibliothèque (cochez une seule case) ?
   □ Plus de 10 ans □ Depuis 5 à 9 ans □ Depuis un à quatre ans □ Depuis moins d’un an

6) Depuis que vous avez commencé à utiliser les Services de bibliothèque, votre degré de satisfaction au sujet des livres/revues disponibles (cochez une seule case) :
   □ a augmenté □ est demeuré le même □ a diminué

7) Êtes-vous présentement satisfait(e) de la sélection de livres/revues à laquelle vous avez accès (sur papier ou en ligne) par l’entremise des Services de bibliothèque (cochez une seule case) ?
   □ Oui □ Non □ Indifférent(e)

   a) Dans la négative, pour quelle raison (encerclez toutes les réponses qui s’appliquent) ?
      □ Pas assez/pas de ressources dans ma spécialité □ Les ressources ne sont pas à jour
      □ Ne sait pas comment naviguer sur le site Web ou l’utiliser □ Autre : ____________________________________
8) Avez-vous déjà imprimé/lu un article de l’un des livres ou l’une des revues offerts sur le site Web des Services de bibliothèque (cochez une seule case) ?

[ ] Oui  [ ] Non

*Dans la négative, veuillez sauter la question suivante et passer à la question 9).

Dans l’affirmative :

a) Comment classeriez-vous l’accès aux renseignements que vous cherchez (p. ex. : je les trouve très facilement, sans problème ni frustration.) (encerclez une seule case) ?

5 Très facile  4 Facile  3 Neutre  2 Difficile  1 Très difficile

b) Comment classeriez-vous le niveau d’inconvénients que représente l’utilisation de nos revues/livres électroniques (p. ex. : je n’ai pas à quitter mon bureau, alors c’est très pratique) (encerclez une seule case) ?

5 Très pratique  4 Assez pratique  3 Neutre  2 Peu pratique  1 Très peu pratique

c) Dans l’ensemble, quel est votre degré de satisfaction par rapport à l’utilisation de nos livres/revues électroniques (encerclez une seule case) ?

5 Très satisfait(e)  4 Assez satisfait(e)  3 Neutre  2 Peu satisfait(e)  1 Très peu satisfait(e)

d) Avez-vous d’autres commentaires au sujet de la facilité, de l’aspect pratique ou de votre satisfaction générale au sujet de nos ressources électroniques ?

__________________________

9) Si vous aviez le choix entre l’utilisation d’une revue/d’un livre en format électronique ou sur papier, quel serait-il (cochez une seule case) ?

[ ] Électronique  [ ] Sur papier  [ ] Peu importe

a) Pourquoi choisiriez-vous ce format (encerclez toutes les réponses qui s’appliquent) ?

Plus pratique  Je préfère tout simplement ce format
Ne sais pas  Je préfère lire les documents ailleurs qu’à l’ordinateur
Autre : ____________________________

10) Encerclez l’un des sites suivants où vous avez consulté des livres/revues au lieu d’avoir recours à la collection des Services de bibliothèque (encerclez toutes les réponses qui s’appliquent) :

CISTI (Institut canadien de l’information scientifique et technique)  World Wide Web (Internet)
Ma propre collection  Université d’Ottawa
D’autres bibliothèques d’hôpitaux de la région  Autre : ____________________________

a) Pourquoi avez-vous utilisé d’autres sites plutôt que de consulter la collection des Services de bibliothèques (encerclez toutes les réponses qui s’appliquent) ?

Pas le temps de me rendre aux Services de bibliothèque  Meilleure sélection ailleurs
Ne savais pas que nous avions une bibliothèque  Tout ce dont j’ai besoin est gratuit sur l’Internet
Autre : ____________________________

Merci beaucoup ! Les résultats de ce sondage seront disponibles en mai dans les trois emplacements des Services de bibliothèque.

Bien vôtre,
Le personnel des Services de bibliothèque
Appendix B

Information Sheet
Resource Management in the Face of Hospital Amalgamation

Background of Study – Library Services is conducting a study in order to evaluate the impact of the hospitals’ amalgamation on our collection of books and journals.

Purpose and Design – Our objective is to evaluate the access to resources at all three campuses before and after the merger. In addition, we look at the impact of the changes on our users. Along with the results of this survey of TOH/OHRI staff and physicians, we are comparing the number of resources to which each campus had access pre- and post-amalgamation in order to obtain a quantitative view of whether access has improved.

Survey Procedure – We are asking for your participation as a member of TOH/OHRI staff, so that we may incorporate your views in our results. This is the only questionnaire we will be asking staff and physicians to answer. It will take approximately 5 minutes. You may skip any questions you are not comfortable answering.

Voluntary Participation – Answering this questionnaire is completely voluntary.

Questions about the Study
Please contact any of the investigators below, should you have any questions about this survey or its results:

Kaitryn Campbell          Alexandra Davis          Risa Shorr
Librarian, Riverside Campus Librarian, Civic Campus Librarian, General Campus
738-8400 x. 88230          798-5555 x.14459          737-8899 x.72811

Consent
I have read this Information Sheet (or have had this document read to me), and have had an opportunity to ask any questions I had about the study.

My questions and/or concerns have been answered to my satisfaction and I agree to participate in this study.

A copy of the Information Sheet will be provided to me should I want to review the information at a later date, if I need to contact someone about the study or my participation in the study, or simply for my records.

Signature

Participant’s Name (print)          Participant’s Signature

Investigator/Delegate's Name (print)          Investigator/Delegate's Signature
Fiche d’information
Gestion des ressources face à l’amalgamation des hôpitaux

Contexte de l’étude – Les Services de bibliothèque mènent une étude afin de déterminer les répercussions de l’amalgamation des hôpitaux sur sa collection de livres et de revues.

Objectif et intention – Notre objectif consiste à étudier l’accès aux ressources dans les trois campus, avant et après la fusion. Nous examinons aussi les conséquences des changements sur nos usagers. Nous comparons, en plus de l’analyse des résultats de ce sondage auprès des employés et des médecins de L’HO/L’IRSO, la quantité de ressources auxquelles chaque campus avait accès, avant et après l’amalgamation, en vue d’obtenir un aperçu quantitatif de l’amélioration de l’accès, le cas échéant.

Procédure du sondage – Nous vous demandons de participer au sondage en tant que membre du personnel de L’HO/L’IRSO, afin d’inclure votre opinion dans nos résultats. C’est le seul questionnaire auquel nous demandons au personnel et aux médecins de répondre. Il ne faut qu’environ cinq minutes environ pour ce faire. Vous pouvez sauter les questions auxquelles vous hésitez à répondre.

Participation volontaire – Vous êtes entièrement libre de répondre à ce questionnaire.

Questions au sujet de l’étude
N’hésitez pas à communiquer avec l’une des responsables suivantes si vous avez des questions au sujet de ce sondage ou de ses résultats :

Kaitryn Campbell
Bibliothécaire,
Campus Riverside
738-8400, poste 88230

Alexandra Davis
Bibliothécaire,
Campus Civic
798-5555, poste 14459

Risa Shorr
Bibliothécaire,
Campus Général
737-8899, poste 72811

Consentement
J’ai lu cette fiche d’information (ou quelqu’un me l’a lue), et j’ai pu poser des questions au sujet de l’étude.

On a répondu de manière satisfaisante à mes questions ou préoccupations et je consens à participer à cette étude.

On me fournira une copie de la feuille d’information si je souhaite consulter à nouveau ces renseignements ultérieurement, si je dois communiquer avec l’une des responsables au sujet de l’étude ou de ma participation ou tout simplement si je veux la conserver dans mes dossiers.

Signature

Nom du(de la) participant(e) (en majuscules)    Signature du(de la) participant(e)

Nom de la responsable/de son(sa) remplaçant(e) (en majuscules)    Nom de la responsable/de son(sa) remplaçant(e) (en majuscules)