



*Article*

**The Impact of the Acquisition of Electronic Medical Texts on the Usage of Equivalent Print Books in an Academic Medical Library**

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**Abstract**

**Objectives** – This study examines whether acquiring a text in electronic format effects the usage of the print version of the text, focusing specifically on medical texts. Studies in the literature dealt specifically with general collections and it was not clear if they were applicable to medical collections. It was also not clear if these studies should play a role in determining whether a medical library should purchase electronic texts or whether reserve collections are still needed for print texts.

**Methods** – Four usage studies were conducted using data from the circulation system and the electronic vendor systems. These were 1) trends of print usage; 2) trends of electronic usage; 3) a comparison of electronic usage with print usage of the same title in the reserve collection; 4) a comparison of electronic usage with print usage of the same title in the general collection.

**Results** – In comparison to print, substantial usage is being made of electronic books. Print is maintaining a level pattern of usage while electronic usage is increasing steadily. There was a noticeable difference in the usage levels of the electronic texts as regards to the package in which they are contained. Usage of print texts both on reserve and in the general collection has decreased over time, however the acquisition of the electronic version of a medical title had little impact on the usage of the equivalent print version.

**Conclusion** – There is a demand for medical texts in medical libraries. Electronic versions can replace print versions of texts in reserve. Further investigation is needed of current patterns of print collection usage, with particular emphasis on trends in reserve collection usage.

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## Introduction

Libraries are still confronting the issue of electronic resources and their place in the library. While most have transitioned to some electronic holdings, questions still arise as to the degree to which a library should acquire electronic resources and whether electronic versions should replace print or whether print and electronic versions should exist concurrently.

Remote accessibility and the ability to link from electronic bibliographic citation indexes through to full-text articles encouraged user demand for increased electronic access to the journal literature. The same cannot be said of e-books. Despite the same ease of remote access and linking ability, e-books have not yet received the same degree of acceptance as e-journals, and their presence in libraries has been slower to grow. Reading full-text onscreen remains an unacceptable model for most users and printing from e-books is not easily accomplished.

Like many libraries, Memorial University of Newfoundland's Health Sciences Library has been implementing electronic resources and establishing management guidelines. The library has switched its print subscriptions to electronic ones wherever possible and implemented a policy indicating a preference for electronic versions of a journal over print versions. But it is faced with difficult decisions regarding the development of the monograph collection, with particular reference to e-books and the reserve collection. While the library has been experimenting with e-books, the time has come to make a policy decision on whether to fully develop an e-book collection and to determine the relationship between the electronic and print monographs. As a collection that, by its general definition, receives high use, the reserve collection is an

easy target for replacing the print version with an electronic version that can be accessed at all hours by multiple users.

This study compares the usage trends of the print and electronic versions of the same standard medical texts in order to enhance the monograph collections policy by seeking to answer two questions: 1) Should a health sciences library acquire medical e-books? 2) Can the electronic versions of standard medical texts replace the print versions that are traditionally kept on reserve?

## Literature Review

E-book usage studies in the literature examine e-books in general collections, with most focused on netLibrary collections. No studies were found examining specialised medical collections of e-books.

Few scholars read print books in their entirety, rather preferring to scan the book, read specific sections in detail, look for precise information, read the introduction and conclusion to get the general flavour, or make notes or copy specific items of interest (Summerfield, 1998, p. 317-318; Hughes, 2001, p. 116). Levine-Clark (2006) reported that only 7% of users read the entire book online, with the majority only reading a chapter (p. 14), while Nicholas (2008) reported 6% reading the entire book online, with most dipping in and out of chapters (p. 323). Following a similar pattern to e-book reading, Hughes (2001) reported that 40% of users of reserve print collections indicated that they read less than 50 pages of the reserve texts (p. 116). This could open the way to replace print reserves with electronic texts.

Studies of e-book collections show that they are used at least as much as print collections. Use of titles within the e-book collections

ranged from 58% (Mandel & Summerfield, 1998, Section 3.2.1.2.), through 70% (Dillon, 2001, p. 115) to a high of 94% (Langston, 2003, p. 25; Grigson, 2009, p. 67). In contrast, Christianson (2005) found that most electronic books in the collection were not used at all, and that the high usage could be attributed to a small number of titles (p. 354-5). This was corroborated by Littman & Connaway's discovery that that if a title were unpopular in print it was also unpopular in electronic format (2004, p. 261). Williams & Best (2006) compared titles available in both formats and found that only 7% of the electronic titles circulated compared to 79% of the titles in print format. The remaining 14% of titles were checked out in both electronic and print format (p. 477).

Chan (2005) reported "...that subject areas that were heavily used in print were also heavily used in electronic form... Similarly, subject areas that were not well used in print also received little use in electronic format" (p. 215). Dillon (2001) speculated that subjects which "...lend themselves to the quick reference-style lookup that are already part of web behaviour... may indicate that these subjects are particularly suited to web-based e-books" (p. 119). Medicine consistently fell into the top ten subject areas using e-books (Langston, 2003, p. 26-27; Chan (2005, p. 214; Bailey, 2006, p. 58; Wilkins, 2007, p. 249). Despite this higher use of electronic books in certain subject areas, both Ramirez & Gyeszly (2001, p. 163) and Fernandez (2003, p. 28-29) found an overall preference of print for all subject areas. Woo (2005) found that medicine preferred print to electronic at a rate of two-to-one (p. 132). Wilkins (2007) also noted, however, that e-books are used more heavily when the faculty promote their use and include them on reading lists (p. 249).

Snowhill (2001) surveyed academic libraries with known e-book collections to determine their experiences (Section 8, *Academic Institutions' Experience*, bullet 2). All agreed that the acquisition of electronic books had little to no impact on print usage. This pattern

was also borne out in other studies (Dillon, 2001, p. 124; Hughes, 2001, p. 117).

Online titles, however, appear to be used to a higher degree than the print titles, possibly because of the variance in the type of reading undertaken. Electronic versions lend themselves to jumping into a section and then hopping around following links, whereas print versions are more likely to be read extensively. Christianson & Aucoin (2005) found that fewer e-books were used than print books but that the circulation for those e-books was higher than for the print (p. 75). Both Hughes (2001, p. 117) and Mandel & Summerfield (1998, Section 3.2.1.2) reported that online titles were used three times more than print titles, while Williams & Best (2006) reported average use of 2.11 circulations for print compared to 1.30 for electronic titles (p. 477). Joint (2009) stated that a digital library is used forty times more than a print library (p. 66), while Littman & Connaway (2004) described 11% higher usage of e-books than of the print equivalent (p. 260).

As can be seen, trying to find a correlation of print and electronic use is complex. On the one hand, popular print titles are also used in electronic format, and certain subject areas and types of materials are used more than others in electronic format. On the other hand, there remains a preference for print format across all subjects. In addition, the electronic texts are used more than print, with the variations ranging from double to forty times, but have had little impact on the use of the print format. Difficulties in comparing print usage to electronic usage are compounded by the lack of a standard definition as to what exactly constitutes an electronic "use" and how this compares to a print "circulation".

## **Background**

Memorial University of Newfoundland, Canada, is a comprehensive university offering a wide range of programs at undergraduate, graduate, and post-graduate levels. The Health Sciences Library is one of

four libraries and serves the Faculty of Medicine, the School of Nursing, and the School of Pharmacy, comprising some 1500 undergraduates, 285 graduates, and 130 permanent faculty. Interns and Residents of the Faculty of Medicine rotate throughout the hospitals in the province, and there are many part-time faculty who are practitioners in various regions of the province. The School of Nursing has a large distance education program with international enrolment. Students, faculty, and staff of the university may obtain remote access privileges to the electronic resources purchased by any of the university libraries via a proxy server.

The Health Sciences Library began experimenting with e-books in the online format rather than e-book readers and other formats. The library purchased an electronic copy of the standard *Harrison's Principles of Internal Medicine* as well as the *STAT!Ref* package in 2001, and added *MD Consult* through a consortial arrangement with other Atlantic provinces health libraries in 2002. These resources were supplemented by taking advantage of the university's main library's *netLibrary* and *ebrary* subscriptions, which include materials in a variety of health-related areas. Based on preliminary results of this study, a subscription to selected texts within *Books@Ovid* began in 2005, and a subscription to the *Canadian Electronic Library: Canadian Health Research Collection* was added in 2007. A brief description of the electronic packages mentioned is available in Appendix A.

All course textbooks required by the Faculty of Medicine are placed in the reserve collection, in addition to instructor-requested texts and those identified by the library as high demand items. Normally the library acquires every edition, with the latest placed on reserve and the two previous editions placed in the stacks. Books in the stacks circulate for two weeks for undergraduates and four months for graduate students and faculty, with unlimited renewals. The majority of reserves circulate for 2 hours with no renewals.

## Methods

Four studies were conducted: an analysis of trends of both print and electronic usage, a comparison of print reserve titles relative to the Health Sciences Library's subscribed electronic versions, and a comparison of print titles in the general collection relative to the Health Sciences Library's subscribed electronic versions.

### *Electronic Data*

The three e-book packages (*MD Consult*, *STAT!Ref*, and *Books@Ovid*) each provided statistics in a different manner. For *MD Consult*, the statistics for the consortium as a whole were emailed to each member of the consortium. However, because individual title statistics were not available from *MD Consult*, this database was used only to determine comparable print titles. While *STAT!Ref* allows compilation of statistics based on a specified time frame, limited historical statistics are available. *STAT!Ref* statistics for the trend analysis were obtained for eleven-month periods, February through December, since February 2003 was the earliest date for which *STAT!Ref* statistics were available at the time of compilation. The statistic "Document Use by Title" was used. Trend analysis statistics for *Books@Ovid* were downloaded from their website using the report "Monthly Book Usage Report by Customer". Neither system contained statistics for unique users, which would be most comparable to print circulation statistics. Nor did the systems count usage in exactly the same way, an issue which will be addressed later in the discussion section.

### *Print Data*

The titles held by the Health Sciences Library through these three e-book packages were checked against the library catalogue to determine comparable print titles. Texts were eliminated from the study if the editions did not match or if the print edition was in the non-circulating Reference Collection. Titles for which the current print edition was on reserve

were set aside for a separate comparison of the reserve collection.

Reports were generated from the library's SIRSI Unicorn Library Management System using the "Transaction Statistics" report to identify whether the call number for the selected reserve titles, and all earlier editions, had a "Charge Item", "Charge Reserve", or "Renew Item" transaction during the specified time period. Individual transaction reports were compiled for periods of one calendar year, from 1995 to 2009. Each edition was specified by its unique call number.

In the case of the trend analysis for the circulating collection, the transactions were determined for the base call number, rather than by specific edition, over the specified period. This provided total circulation figures for all editions that are classed in the same call number, including those editions that have since been withdrawn from the collection. The call number transactions were compiled for periods of one calendar year, from 1995 to 2009, which allowed for a trend of print usage to be established in order to compare usage before and after the electronic subscriptions began.

The starting date of 1995 was chosen because the Unicorn logs only contain data beginning in that year. That year is therefore the earliest

data that could be collected for the print editions, regardless of the date of the actual edition held by the library. Additionally, statistics are not available for when a print title is off the shelf to be consulted or copied, but not actually signed out. The data was entered into spreadsheets in order to manipulate the data and compare patterns of usage.

## Results and Analysis

### *Print Trends*

Eighty-two titles were examined in the print collection. These titles were selected specifically because they were available electronically in the packages being examined, were in the circulating collection, and circulation figures were available for the three years before and after acquisition of their electronic counterpart. Twelve titles that were in the reserve collection were excluded from this section of the study.

Usage was highest in the first year studied and declined every year thereafter with the exception of 2003 and 2004 when there was a modest increase. Similarly, average use of titles in the collection declined except for those same two years (Fig. 1). Overall average use of a title during the twelve years of the study was 3.8 uses.

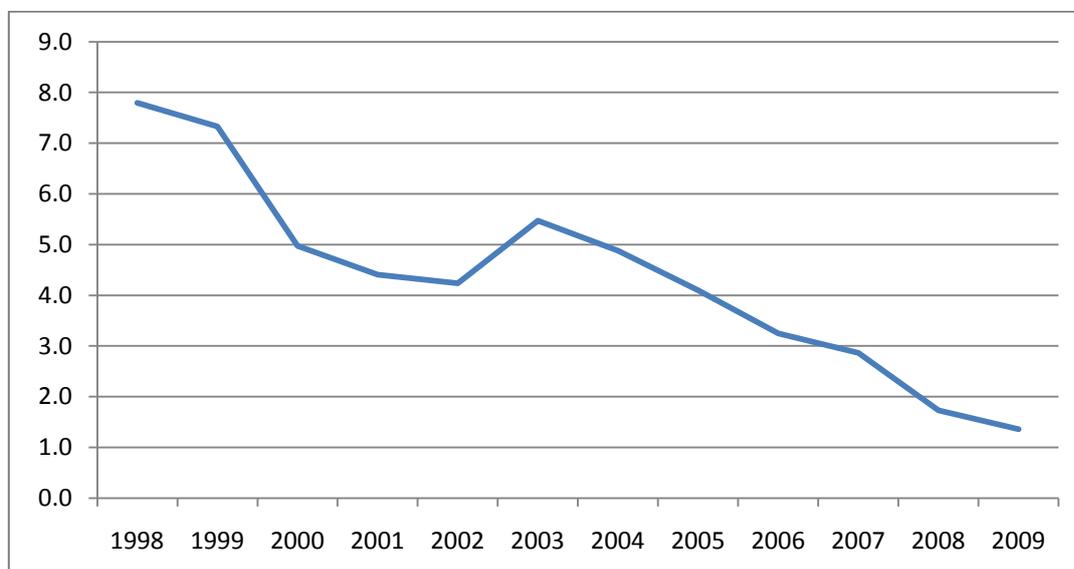


Fig. 1  
Average print usage

The highest annual use for any title over the course of the study was for a pharmacy title. Its usage dropped substantially in 2000, from 111 uses to 39 uses, and dropped again the following year to 13 uses. There were twenty titles with zero use from 1998-2000, accounting for an average of 27% of the titles studied. The number of print titles never used has been increasing steadily, reaching an average of 60% of the titles studied by 2008-2009.

#### *E-book Trends*

*STAT!Ref* showed substantial use from its first introduction and usage increased steadily until 2007 (see Fig. 2). Pharmacy texts are consistently amongst the highest used texts in the collection, and one partial reason for the high usage is that the pharmacy titles have been regularly used in a laboratory class. Total usage declined for the first time in 2007 and 2008, but is showing signs of recovery in 2009, though there is no apparent reason for the decline. While one of the most highly used titles changed name in 2007 and its total usage dropped substantially, from some 2000 uses to just over 200 uses, another well-used title also dropped, from some 1800 uses to under 300 uses, with no change in either the name or means of access. Thus while some decline can be attributed to the title change, the decline

cannot be fully attributed to this one title, and indeed removing both of these titles from the calculations still resulted in a decline in overall usage. Thus, the decline is spread over all titles, with 80% of the titles showing a decline in usage from 2006 to 2007. The database vendor has indicated that there was no change in their method of collecting statistics. Please note that actual titles are not named at the request of the vendor.

As can be seen in Fig. 3, the number of e-books in the *STAT!Ref* package has increased every year since its purchase. The titles are selected annually by the librarians. While some low-use titles have been cancelled by the librarians, other titles have been removed by the publisher, including some moderately used titles. With the addition of new titles, one would expect that total usage of the collection would increase, but as already noted, total usage has declined and is only slowly increasing in 2009. This 2006 to 2007 decline in usage, combined with the addition of titles, had a serious effect on the average use per title, from 291 uses per title to 114 (see Fig. 3). Additional titles in 2008 further decreased average use, but as total usage is recovering, the average use per title is also improving in 2009.

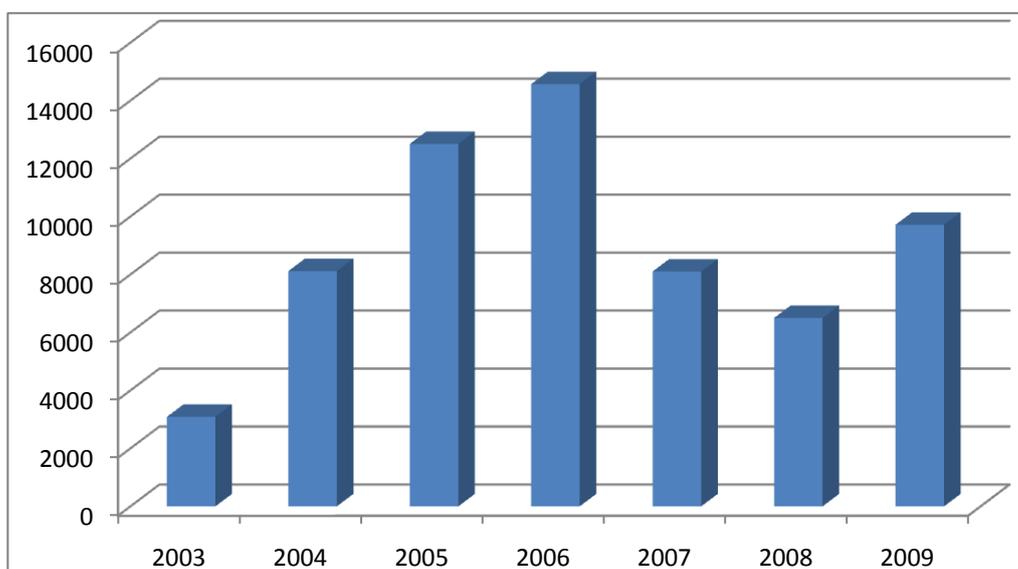


Fig. 2  
*STAT!Ref* total usage

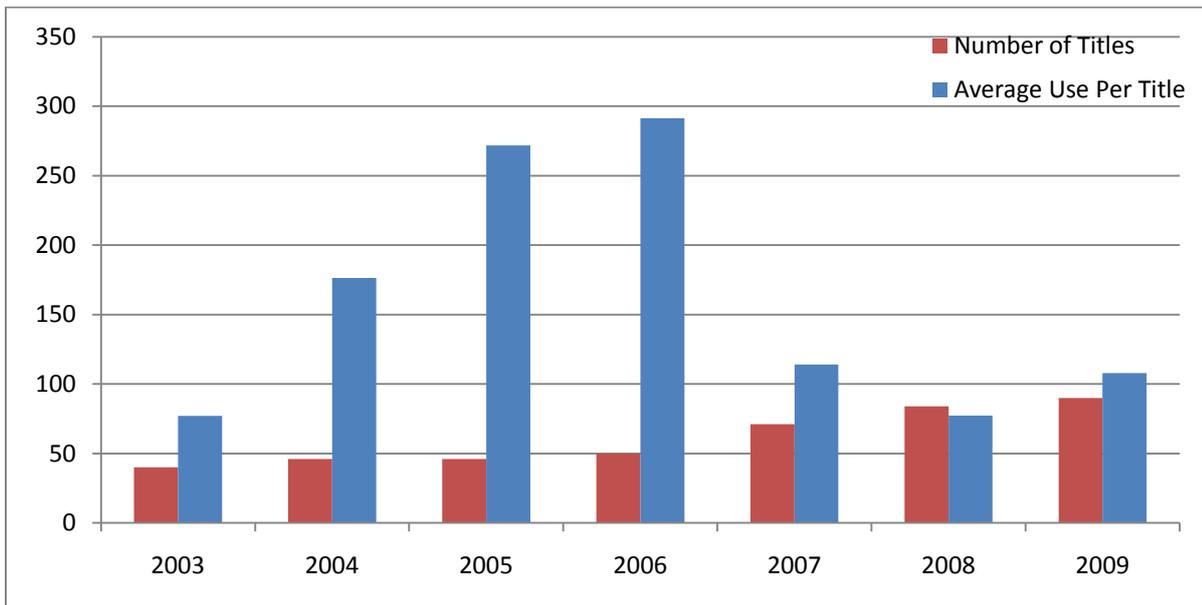


Fig. 3  
STAT!Ref average use per title

A new subscription to *Books@Ovid* was begun partway through 2005, with a package deal for 25 titles as selected by the librarians. Seven titles were added in 2006, and a further 29 titles were added in 2007, doubling the size of the collection. In 2008, the library purchased the *Doody Core Book Collection*, for a total of 144 titles currently in the *Books@Ovid* collection. As can be seen in Fig. 4, total use of the collection has risen each year until 2009, when there is a slight decline in usage. With the addition of so many new titles, increased usage was to be expected.

*Reserve Titles, Print and Electronic*

The current edition of a title is kept on reserve and two earlier editions are kept in the general circulating collection. Five titles in the reserve collection are also in the *STAT!Ref* collection, one is in the *MD Consult* collection, and five titles are in the *Books@Ovid* collection. One title was initially available online from the publisher and is now available in the *STAT!Ref* collection. These twelve reserve titles were analyzed to determine if the acquisition of the electronic version had an effect on the use of the print version on reserve.

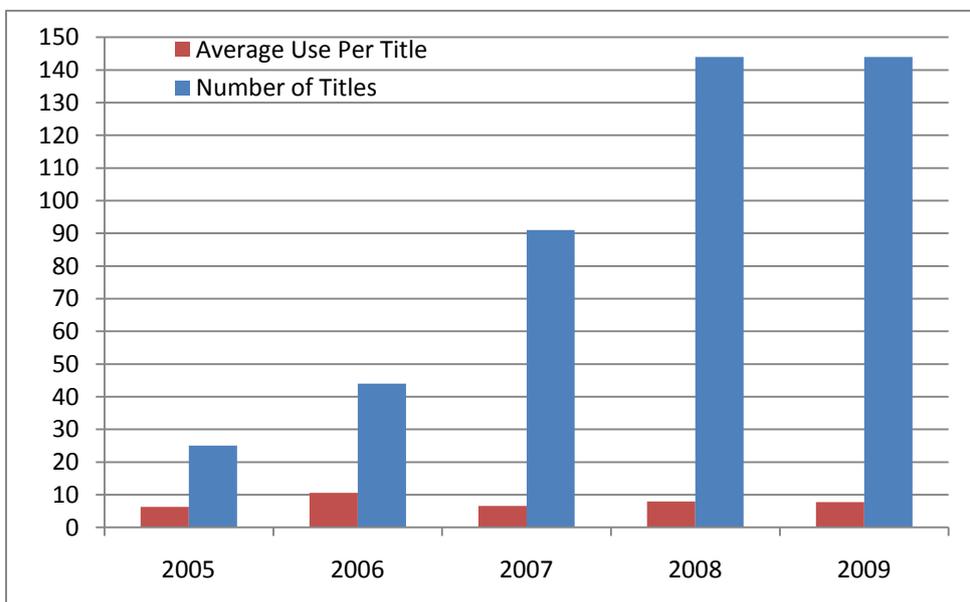


Fig. 5  
*Books@Ovid* average use per title

One title was acquired in print at approximately the same time as the electronic version was acquired, and thus there is no earlier circulation pattern for comparison, leaving eleven titles to study. Of these 11, two have been cancelled electronically since the study began (one in 2005 and one in 2009), and another two have an earlier edition on reserve than is available electronically.

Only two titles showed a decline in the year of or following the year in which the electronic version was acquired. However, both of these titles had begun a decline in usage several years earlier, thus the decline in print usage cannot be attributed solely to the introduction of the electronic version. Furthermore, this decline in print usage has continued. In another three cases, usage declined the year of acquisition of the electronic version, but increased in the subsequent years. In two cases, usage of the print went up the year the electronic version was acquired, and then

returned to normal levels, while in the remaining four cases, there was no noticeable difference in the circulation patterns. Note, however, that in all cases, the electronic version is used more frequently than the print version (see Fig. 6).

The sharp decline in electronic usage for these texts corresponds to the previously mentioned decline in usage from 2006 to 2007. As could be expected, print usage for the reserve texts is highest for the latest edition on reserve, and lower for the older editions in the general collection. However, there is an overall decline in the use of all editions of the reserve texts, including those that are on reserve (Fig. 7). It is difficult to ascertain why reserve usage is in decline, particularly as there is no obvious increase in electronic usage of these particular titles. It could be that other electronic titles or evidence based summary databases such as *UpToDate* and *Essential Evidence Plus* are meeting the needs of users.

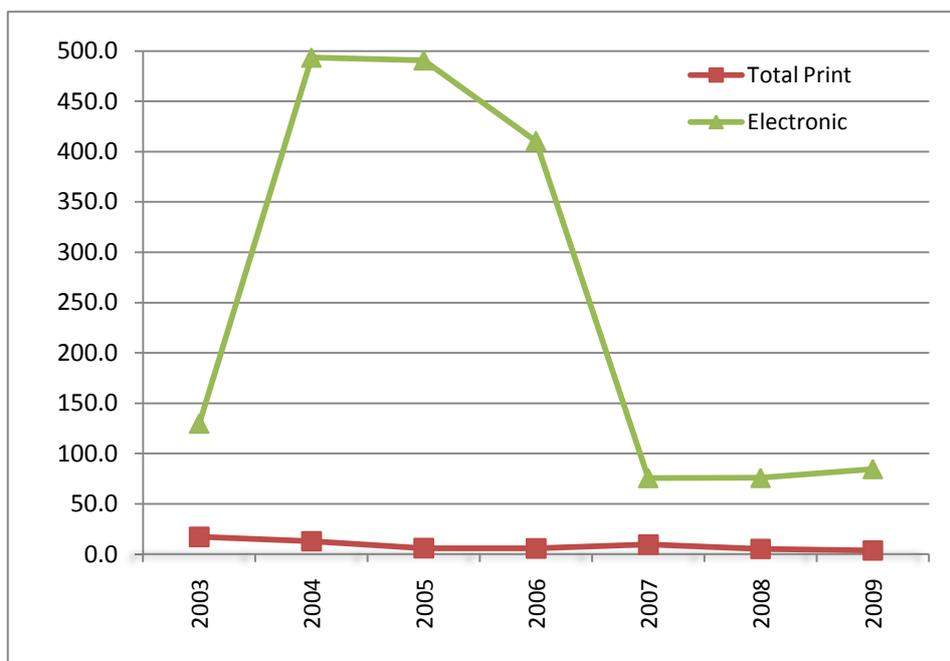


Fig. 6  
Average usage of reserve titles

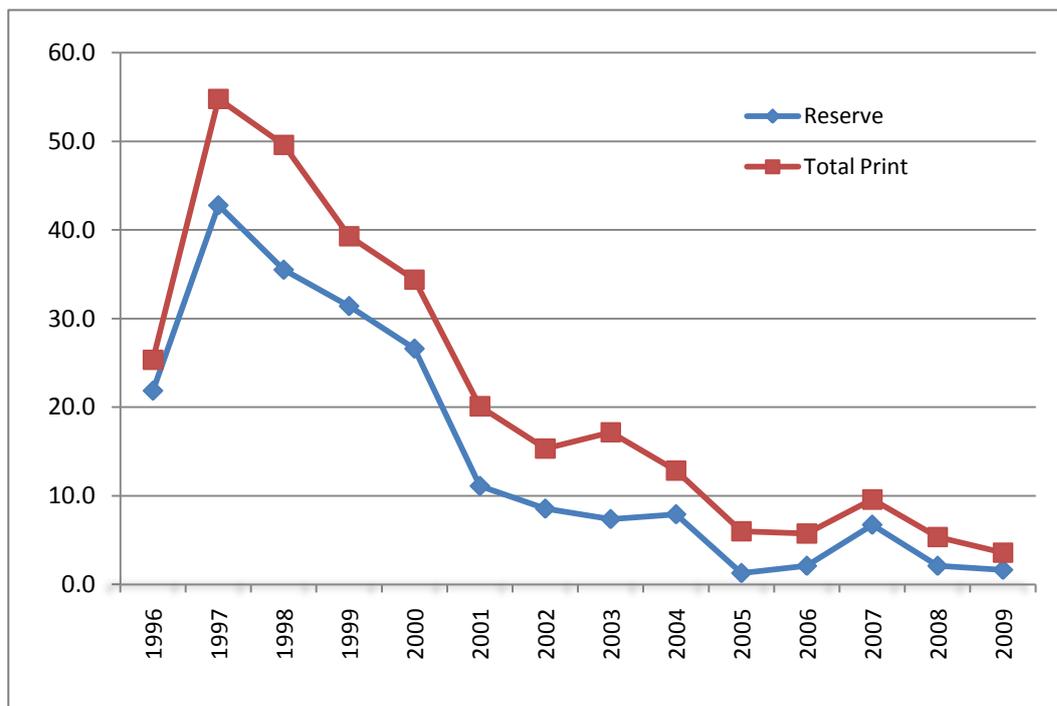


Fig. 7  
Total print usage versus reserve usage

#### *General Collection, Print and Electronic*

An examination of the print titles in the general collection, for which the library also had an electronic version via either *MD Consult* (37 titles) *STAT!Ref* (26 titles), or *Books@Ovid* (19 titles) reveals that the acquisition of the electronic versions had virtually no effect on the usage of the print version. This holds true even in eight test cases where the electronic version was a more recent edition than the print version. Circulations for the three years previous to the acquisition of the electronic version were compared to the Circulations for the three years after the acquisition of the electronic version. In only five cases does it appear that the circulations dropped subsequent to the electronic purchase (see Fig. 8). In 59 instances, there is no discernable change in the pattern of use. Fourteen cases are questionable, in that the usage changed, but the usage had been variable enough in the previous years to make attributing the decline to the acquisition of the electronic version problematic. Surprisingly, there are four instances where usage of the

print increased in the year of acquisition of the electronic subscription, or the subsequent year.

#### *Overall Print versus Electronic*

An overall comparison of the average use of the resources clearly reveals that the electronic books are used more than the print books (Fig. 9). Each print text receives an average of 3 uses per year, compared to 8 uses per year for *Books@Ovid*, and 173 uses per year for *STAT!Ref*, over the last five years when all three resources were available. Even if the print usage were doubled to account for in-library usage, it is still less than the *Books@Ovid* numbers. It is also quite apparent that *STAT!Ref* is much more popular than *Books@Ovid*, although a large portion of this can be attributed to the different mix of titles. There are no titles in the *Books@Ovid* collection that have major usage when compared to the other titles in the collection, unlike with the *STAT!Ref* collection, where exceptional use of a handful of titles skew the statistics. *STAT!Ref* contains the popular drug reference texts such

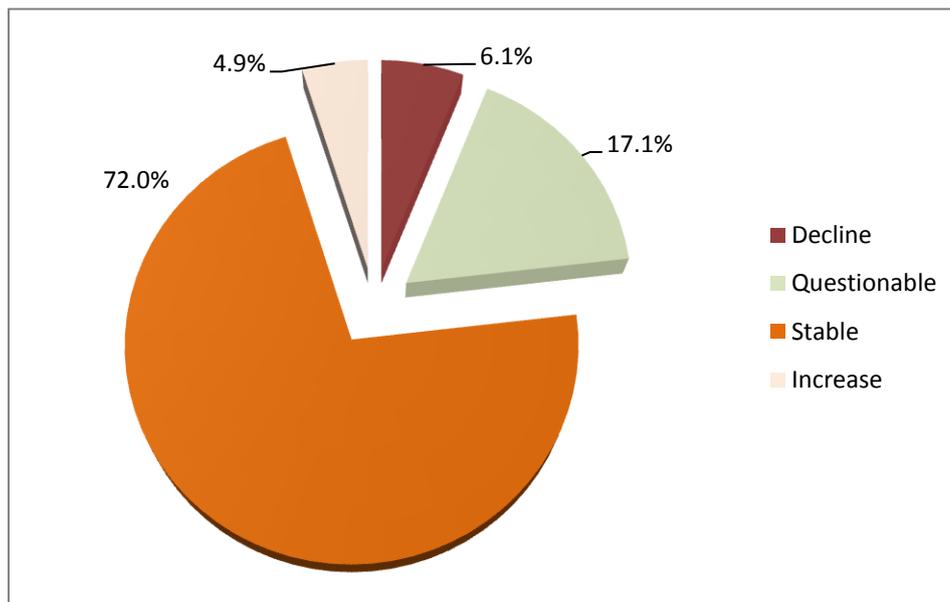


Fig. 8  
Change in print usage with acquisition of electronic version

as the *USP DI* and *AHSF Drug Information*, as well as the *Merck Manual* and *Harrison's Principles of Internal Medicine*. In addition, it must be noted that the different resources do not count usage in exactly the same way making a direct comparison invalid. Of greater interest is the comparison of trend lines.

It can be seen that *Books@Ovid* usage is holding steady, while *STAT!Ref* usage has dropped substantially after years of constant increase. One might expect average use of a text to go down as more titles are added, thus distributing the usage across more titles, however titles have been added to both of these electronic packages in the past few years. With added titles, one would also expect that total usage would remain stable or would increase. This is the case for *Books@Ovid*, indicating stable use of the collection. *STAT!Ref*, however, is showing a substantial drop in 2007 and is now only beginning to show signs of recovery. It would appear that the titles added to *Books@Ovid* are receiving usage that is more consistent with the overall

average use of the database, thus the added titles are not dissipating the previous average.

The 2007 name change of the most highly used title in the collection has had an effect on the *STAT!Ref* usage. Combined usage for the old and new titles accounted for only half the previous usage, and it halved again in 2008, a total drop of over 2200 uses, or 387%, from 2006 to 2008. As users become familiar with the title change, usage is recovering and is over 1000 uses in 2009. However the *STAT!Ref* decline in usage cannot be attributed solely to this title change, as removing this title from the statistics still results in a decline in usage. The trend is still consistent, but not as sharp as with this title included (Fig. 9). New titles added to *STAT!Ref* are receiving considerably lower usage than the previous average use, indicating that some high-use titles have been removed from the collection, and that their replacements are not as popular. This is often the result of a publisher pulling its title from an aggregator such as *STAT!Ref* for exclusive access via their own database.

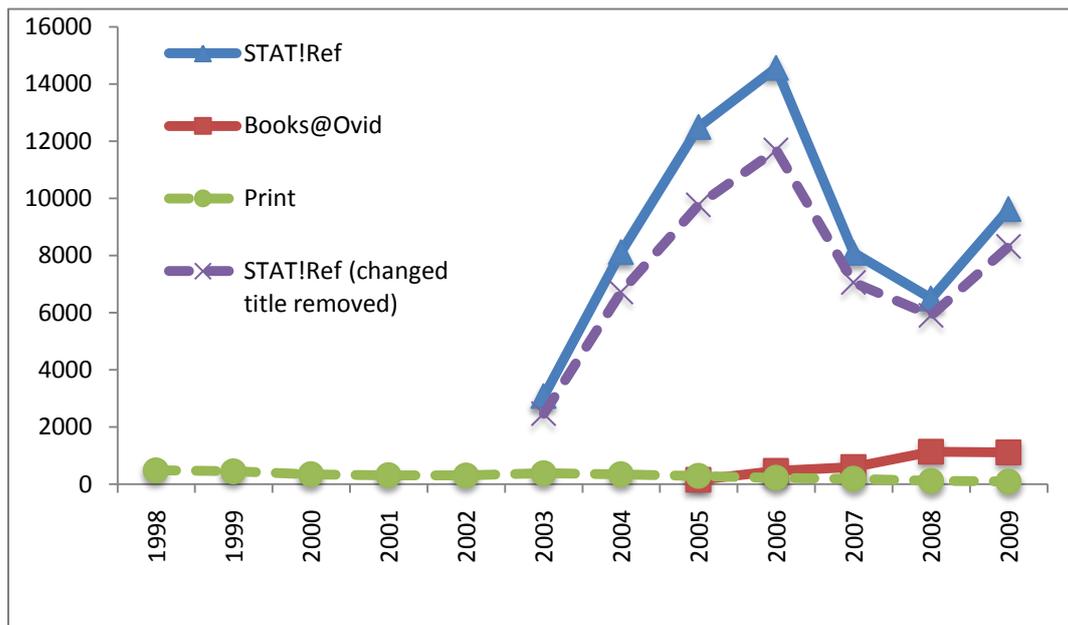


Fig. 9  
Total use of resources

## Discussion

It is clear that substantial use is being made of the electronic monographs. The trend demonstrates higher use for the electronic version than for the print, and electronic usage figures are increasing steadily from year to year. These numbers indicate that e-books have their place and that they are becoming more popular. As e-books become more prevalent and students become more familiar with them, their usage and acceptance can be expected to grow. This is particularly true if their use is promoted in class, as can be seen from the high use of the pharmacy texts at this university. This would imply that librarians' promoting e-books through information literacy instruction classes and reference services would positively affect the use of electronic resources. However, since professors have direct control over assigned grades, consideration must also be given to whether a professor's opinions would have a greater impact on student use of resources than those of a librarian.

As with previous studies, the acquisition of electronic versions has had little impact on the

use of the print version of a given text in the general collection. Only five of the titles examined from the general collection have a downward trend that may be correlated to the acquisition of the electronic version, and the change is minor. With print usage staying consistent over time, there is yet a place for print titles in the health sciences fields.

Similarly, it appears that electronic versions are not having an effect on the usage of print titles in the reserve collections. However, overall usage of print reserves is lower than might be anticipated. Texts are generally placed on reserve due to a high anticipated demand, but with the exception of two titles, demand for reserve titles has dropped considerably since 2004. Given the small number of titles examined and the low circulations for those titles, a comprehensive review of titles on reserve is in order, as it appears that many titles are not being used.

Since the acquisition of the electronic edition has had little impact on the usage of the print edition, further study is needed of overall usage patterns of both the reserve and general print collections where there is no electronic

equivalent. This can determine if the usage of print monographs is in decline. Moreover, given the low overall usage of the print titles, further study is also needed to determine what constitutes good usage of a print monograph. It is not believed that the non-inclusion of in-house statistics skewed the results significantly. Hardesty's study on patterns of book usage cited several studies which his own study confirmed, that "recorded circulation is a good indicator of the total use of books..." (1988, p. 75). In his study, in-house usage was approximately 40% that of total use and unused books remained unused over time (p. 67). Given the low average of print usage in this study, doubling this average does not impact significantly on the results. Further studies of electronic usage, such as the *netLibrary* or *ebrary* titles in subject areas of interest to our users, and the recently added Springer e-book collection could bolster the case for increasing electronic collections.

More detailed statistics, as well as statistics collected over long time frames are needed. Several vendors can only supply data for a rolling twelve month period, which is not helpful for detailed statistical analysis.

COUNTER standards

([www.projectcounter.org](http://www.projectcounter.org)) are helpful in ensuring that electronic resources from different vendors are counted consistently, but COUNTER-compliant reports for monographs are slow in becoming available and are not available for historic data. Without a method of ensuring that different systems are counting usage in the same manner, it is not possible to do direct comparisons of packages. As well, the problem of matching electronic usage to print circulation remains. First is the problem of defining a "use". Print titles are tracked by charge out, with no reference to the uniqueness of the user, renewals, the use being made, or the number of chapters consulted during the circulation. Electronic titles are tracked by clicks into a document/chapter with no reference to the motives behind the click, for example whether the wrong item was accidentally clicked, a quick skim to see whether or not the item is useful, or an in-depth perusal (Sottong, 2008, p. 45).

And there is no consideration to whether it was one person with multiple accesses or many people accessing one document/chapter. While a usage by chapter count gives a better idea of the actual usage of a text than a circulation count, it also exaggerates the usage of a text when compared to the print circulation count, as the circulation count cannot measure the number of times a user consulted a chapter while they had the book checked out, or if a colleague consulted the text another had signed out. A more accurate measure might be to count on the basis of IP address, counting one usage for each uninterrupted access to a resource. The difficulty would be in determining if the access was uninterrupted or whether a user had changed at a public station, and would still not account for one person continually using the resource over the same time period for which the print version was checked out, or a person who has had to log back in because of a system error or time-out. A qualitative study such as a focus group or survey could address this difficulty and provide insight into how a user utilizes electronic resources.

## Conclusion

The study posed two questions: 1) Should a health sciences library acquire medical e-books? 2) Can electronic versions of standard medical texts replace the print versions on reserve? In the first instance this study has found that medical and health sciences libraries should acquire electronic books. The high and increasing use being made of electronic texts indicates that medical e-books are being sought by users of medical collections. While the difference in counting can account for some differences in the numbers of e-book usage versus print book circulation, it cannot negate the static trend for print titles and the positive trend for electronic resources. Electronic versions can provide multiple user access to the most recent edition, which is generally updated on a regular basis. In contrast to printed volumes, users do not have to settle for an older edition because the

current edition is signed out for a significant period of time. However the selection of titles is critical to usage, as seen from the differing use of the two electronic packages. Simply because a text is available electronically does not mean that it will be used any more than all print titles on the shelf are used. Titles that are more popular in print will also be more popular in electronic format. Also critical is the required use or promotion of electronic texts by faculty. This can be supplemented by librarians using electronic resources in instruction and reference services.

Secondly, in relation to replacing the print reserve collection with an electronic one, the higher use of the electronic texts that have print versions on reserve, coupled with the low print circulations of reserve texts, suggests that libraries can be more selective in the items that are placed on reserve and could replace many print reserves with electronic texts. Users are becoming more familiar with electronic texts and more comfortable with reading text on screen, particularly when reading selectively as is more usual with reserve reading. The text is readily available at all times of the day and users do not have to settle for a short reserve loan period. Reserve desks are now pointing to electronic versions of journal articles rather than photocopies, and students are coming to expect that reserve items will be available electronically.

However, the importance of the print collection cannot be ignored. The acquisition of the electronic version has little impact on the circulation levels of print versions, and so any decision to move from one to the other cannot be based on statistics alone. Qualitative studies will be needed to inform and reinforce any decision. However the apparent low overall use of the print collection and the accessibility of e-resources strongly suggest that electronic texts should replace much of the print collection. An overall examination of the print collection would prove helpful in confirming that the low use is consistent throughout the collection and provide the impetus to fully develop the electronic monograph collection.

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## Appendix A: Electronic Book Packages

### Books@Ovid

[http://www.ovid.com/site/products/books\\_landing.jsp](http://www.ovid.com/site/products/books_landing.jsp)

Books@Ovid is an online collection of clinical texts using the Ovid interface. Lippincott, Williams & Wilkins is the main publisher represented and it has a strong medical/nursing clinical collection.

### Canadian Health Research Collection

[http://www.canadianelectroniclibrary.ca/Cdn\\_health\\_research\\_collection.html](http://www.canadianelectroniclibrary.ca/Cdn_health_research_collection.html)

The Canadian Health Research Collection is an electronic collection of health monographs and reports published by Canadian research institutes and universities as well as various government agencies. The documents are made available on the ebrary platform.

### ebrary

<http://www.ebrary.com/corp/libraries.jsp>

ebrary is an e-book vendor / platform. It offers packages as well as hosting services for electronic titles purchased elsewhere. It has over 150,000 e-books available from over 400 publishers. Medical texts are generally not the current edition of clinical texts.

### Essential Evidence Plus

<http://www.essentialevidenceplus.com/>

Formerly known as InfoPOEMS, Essential Evidence Plus is a clinical reference tool, providing point-of-care summaries for clinicians.

### MD Consult

<http://www.mdconsult.com/php/208599885-2/homepage>

MD Consult is a full-text database offering a package of Elsevier journals, monographic series, and books online through its own search interface.

### netLibrary

<http://library.netlibrary.com/Home.aspx>

netLibrary is an e-book vendor. It has over 200,000 e-books available from a wide selection of publishers. Until recently, medical texts were generally not the current edition of clinical texts.

### Springer e-book Collection

<http://www.springer.com/librarians/e-content/ebooks?SGWID=0-40791-0-0-0>

The Springer e-book collection provides online access to all texts published by Springer Publishing. Titles can be purchased individually or as subject or yearly packages.

### Stat!REF

<http://www.statref.com/>

Stat!REF is a full-text aggregator database of many of the top clinical monographs from a wide variety of publishers.

### UpToDate

<http://www.uptodate.com/home/index.html>

UpToDate is a clinical reference tool, providing point-of-care summaries for clinicians.