

Saskatchewan Residents' Use of *The Cochrane Library*

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Abstract

The Cochrane Library is a source of reliable information on the effects of healthcare interventions for health care practitioners and consumers. In July 2004, Saskatchewan became the first province in Canada to provide all residents with access to *The Cochrane Library*. The purpose of this study was to evaluate the use of *The Cochrane Library*. Training sessions were offered to promote the use of *The Cochrane Library*. Attendees were informed of the evaluation study and invited to participate. Those who consented to participate were telephoned and audio-taped interviews were conducted at three (n=94), six (n=71), nine (n=79), and 12 months (n=72) following the sessions. Usage of *The Cochrane Library* was also tracked using data available from Wiley-Blackwell. Most participants were librarians (n=31.5%), between 40 to 65 years of age (71.6%) and female (92.4%). Data from Wiley-Blackwell revealed that from October 2004 to September 2007, the component of *The Cochrane Library* most frequently accessed was *The Cochrane Database of Systematic Reviews* (abstracts=26,016; full texts =15,934). Telephone interviews with participants revealed that the majority (65.2%) used *The Cochrane Library* at the three month interview, however this proportion fell to 27.4% at the twelve month interview even though most (83.6%-88.2%) reported that *The Cochrane Library* was somewhat to very helpful.

Most respondents claimed to have learned something from *The Cochrane Library*; others reported that the knowledge gained helped in their decision-making or confirmed their beliefs. Respondents accessed *The Cochrane Library* in response to patron requests for information on a variety of health care topics. Information was used to support changes in health care practice and policy and for the preparation of educational papers and presentations. The reported reasons for not using *The Cochrane Library* were lack of time, limited access to an internet ready computer in the work setting, reliance on dial-up internet in some rural areas, forgetting how to find and navigate the website, and being disappointed with information available. The plain language summaries were well received, however, some reported that the sophisticated language and length of the reviews were more appropriate for researchers and healthcare providers than the general public. This study provides evidence that given the opportunity and appropriate training, people other than medical professionals will also make use of *The Cochrane Library*.

Keywords: The Cochrane Library, Cochrane Collaboration, use of research evidence, mixed methods approach.

Saskatchewan Residents' Use of *The Cochrane Library*

The Cochrane Library is a source of reliable information on the effects of healthcare interventions for health care practitioners and health consumers. Saskatchewan has been a leader in providing access to *The Cochrane Library* for all Saskatchewan citizens since 2004. The purpose of this study was to evaluate the use of *The Cochrane Library* by librarians, health care providers and consumers residing in Saskatchewan.

The Cochrane Library

The Cochrane Collaboration is an international organization that aims to help practitioners and consumers make well informed decisions about health care by preparing, maintaining and promoting the accessibility of systematic reviews of the effects of health care interventions (Cochrane Collaboration 2007). These reviews are made available through *The Cochrane Database of Systematic Reviews* contained in *The Cochrane Library*, published electronically by Wiley-Blackwell. As of November 2007, there were 3,298 completed reviews and 1,755 protocols in *The Cochrane Library*. These reviews are considered the gold standard of systematic reviews as they are based on rigorous, transparent methodology, and are updated regularly. Abstracts and plain language summaries are accessible electronically worldwide (Canadian Cochrane Centre 2007). In addition, there are six other databases of research evidence in *The Cochrane Library*: Database of Abstracts of Reviews of Effects (DARE), Cochrane Central Register of Controlled Trials (CENTRAL), Cochrane Methodology Register, National Health Service (NHS) Economic Evaluation Database, Health Technology Assessment Database, and Cochrane Database of Methodological Reviews (CDMR).

Full text reviews are provided free of charge to people in developing countries in both English and Spanish through projects such as the Health InterNetwork Access to Research Initiative (HINARI; Canadian Cochrane Centre 2007; Grimshaw 2004; 2007). However, full text reviews are available in developed nations only through the purchase of a license. Australia, Denmark, England, Finland, India, Ireland, New Zealand, Northern Ireland, Norway, Poland, Scotland, Spain, Sweden, and Wales have national licenses (Canadian Cochrane Centre 2007). To date, The Canadian Cochrane Centre's efforts to secure a national license in Canada have been unsuccessful. Access to *The Cochrane Library* has been available for some time through universities, large health institutions and some libraries (Canadian Cochrane Centre 2007); however, the only means of access for health care providers and consumers who do not have affiliations with these organizations is an individual subscription. Indeed, an estimated 29,000,000 Canadians are currently without access to this important resource (personal communication, Mary Ellen Schaafsma, Executive

Director, CCN/C, May 7, 2007). A Canadian national license would cost approximately \$546,900 which translates into \$0.015 per Canadian (personal communication, Mary Ellen Schaafsma, Executive Director, CCN/C, May 7, 2007), as compared to an individual subscription rate of \$285.00 CAD annually (Wiley-Blackwell 2007). While waiting for a Canadian license, several provinces and territories have negotiated their own licenses for *The Cochrane Library*.

In July 2004, Saskatchewan became the first province in Canada to achieve access to *The Cochrane Library* for all residents. Saskatchewan's Health Quality Council provided funding not only for the provincial license but also educational programs and evaluation of the use of *The Cochrane Library* over three years. Since Saskatchewan has received their license, the residents of Yukon, Northwest Territories and New Brunswick; health care professionals in Nova Scotia, Newfoundland and Labrador; and registered nurses who have access to the Canadian Nurses Association One Nurse Portal have gained access to *The Cochrane Library*.

The Saskatchewan Cochrane Library Project

The process for obtaining a provincial license for *The Cochrane Library* began in November 2003 with the signing of a Memorandum of Understanding between the Health Quality Council and the Saskatchewan Site Co-Representatives of the Cochrane Network. The timing of the initiation of the project occurred during the ownership transfer of *The Cochrane Library* to Wiley-Blackwell from the former vendor. The transfer took longer than anticipated and problems with implementation coupled with a new and unfamiliar interface resulted in a delayed release of *The Cochrane Library* in 2004. Regional Health Authority (RHA) computers were IP authenticated with Wiley-Blackwell, allowing access to *The Cochrane Library* without a user name or password at <http://www.thecochranelibrary.com>. *The Cochrane Library* was also made available at Saskatchewan's public libraries, and through library websites. Public library memberships were available free of charge. Thus, health care practitioners and residents who did not have direct access to an RHA computer, could access *The Cochrane Library* by acquiring and using a public library card.

Several strategies were put in place to promote the use of *The Cochrane Library*. *The Cochrane Library* was launched simultaneously in several locations across the province, which combined with news releases from the Health Quality Council, resulted in coverage of *The Cochrane Library* by the news media. Information about *The Cochrane Library* was also reported in provincial newsletters, and presentations and training opportunities were held in conjunction with provincial conferences.

Training

Training sessions were provided upon request by a librarian from the Health Quality Council with assistance from Wiley-Blackwell, and the Saskatchewan Site Co-Representatives of the Cochrane Network. Forty-six training sessions for approximately 300 health practitioners and 100 public library staff, located primarily in rural areas, were conducted between October 2004 and December 2006. The majority of public library staff who attended the training sessions were not professional librarians.

Training sessions included background information on *The Cochrane Library*, the nature of systematic reviews, literature searching principles and techniques such as keyword vs. subject heading searching, Boolean operators, phrase searching, and truncation. The didactic portion of the session was followed by working through practical examples together as a group, and using the databases on their own. Assistance from the instructor was available during this time. Sessions largely followed the same format for each group, but examples were chosen with the specific audience in mind.

Method

Prior to conducting the evaluation of the use of *The Cochrane Library*, ethical approval was obtained from the University of Saskatchewan Behavioural Research Ethics Board. Attendees at the training sessions were informed of the research project (verbally and in writing), and invited to participate. The information letter provided to the attendees included a description of the purpose of the study, procedures, strategies to maintain their confidentiality, a statement regarding their right to withdraw for any reason, at any time, without penalty and their right to refuse to answer any question or to have the tape recorder turned off at any time, and contact information should they have any questions about the study. Consent was obtained at the beginning of each telephone interview. The audio-taped telephone interviews were conducted by trained research assistants (graduate students) at three, six, nine and twelve months following the workshops. Demographic information (e.g., age, sex, profession, health region, and rural or urban residency) and data on use of *The Cochrane Library* were collected (e.g. frequency of access in last three months, reason(s) for using, helpfulness [1=unhelpful, 4=very helpful], how information was used, and the impact this information had on the respondent or someone else [no impact, learning, confirmation, decision-making enhanced, other]; Appendix A). Usage of *The Cochrane Library* was also tracked using data collected by Wiley-Blackwell at the provincial level. Wiley-Blackwell tracked the following statistics on a monthly basis: user sessions (visits to *The Cochrane Library* from Saskatchewan), number of searches (actual searches run), full-text article requests (number of times the full text of an article was accessed) and abstracts (visits to abstracts of articles as a result of a search). The findings from both sources of data (i.e., the qualitative data that provided the context and in-depth

subjective perceptions of use of *The Cochrane Library* and the quantitative aggregate provincial data) are described below.

Sample

Attendees from the training sessions who signed up to participate in the study were interviewed by telephone at three months (n=94), six months (n=71), nine months (n=79), and 12 months (n=72) following the session. The decreased sample size over time reflected an inability to follow-up with all of the original participants due to participants' relocating, retiring, taking a leave of absence, or choosing to withdraw. Most of the participants were librarians (n=31.5%), followed by nurses (16.3%), therapists (7.6%), library support staff (5.4%), pharmacists (4.3%), physicians (3.3%), other health care providers (20.7%) and other (9.8%). Most were between 40 to 65 years of age (71.6%) and female (92.4%).

Findings

Most respondents included in the telephone interviews had accessed *The Cochrane Library* at the three-month (65.2%) and six-month (64.2%) follow-up interviews. However, this percent fell to 45.2% at the nine-month interview and 27.4% at the twelve-month interview. Data collected by Wiley-Blackwell from October 2004 to September 2007, revealed that the component of *The Cochrane Library* most frequently accessed was *The Cochrane Database of Systematic Reviews* (abstracts=26,016; full texts =15,934). *The Cochrane Central Register of Controlled Trials* (5,640) and *the Database of Abstract Reviews of Effectiveness* (1,612) were accessed less frequently. The number of user sessions, abstracts and full texts retrieved each month from *The Cochrane Library* can be found in Figure 1. Periods of low usage occurred during summer and Christmas breaks. Periods of high usage may correspond to times when students are attending classes and health practitioners are less likely to be on vacation.

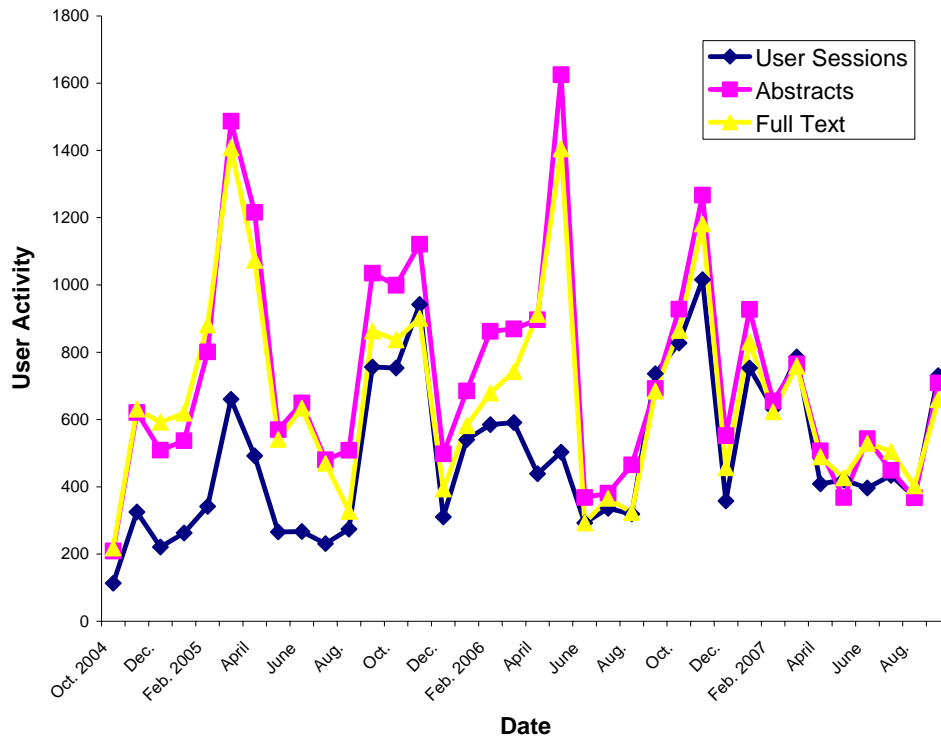


Figure 1: User Sessions, Abstracts, and Full Texts

There were differences in the types of search strategies used by those accessing *The Cochrane Library* (Figure 2). The initial relatively high number of Medical Subject Heading (MeSH) searches may have been the result of the focus of the training sessions - the use of MeSH searches was emphasized in training sessions for both health professionals and library staff. The drop in MeSH searches may reflect the loss of the Health Quality Council Trainer in mid December 2006. Unfortunately, the occupation of the person (e.g., student, librarian, health care practitioner, consumer) accessing *The Cochrane Library* was not tracked by Wiley-Blackwell.

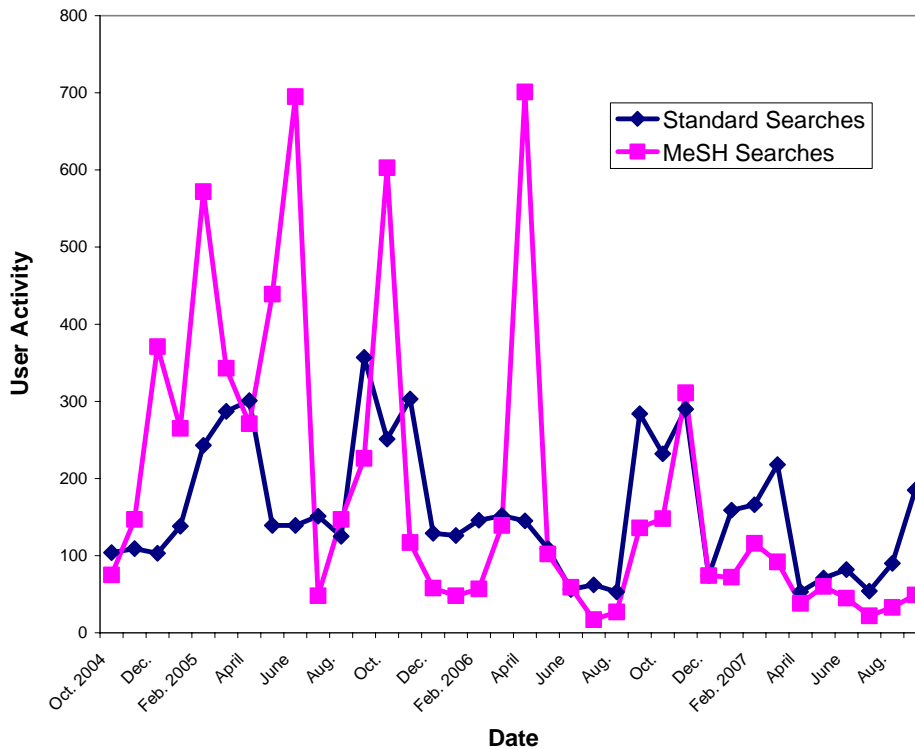


Figure 2: Standard and MeSH Searches

At the three-month interview, 16.4% did not find *The Cochrane Library* helpful. However, this percent decreased to 11.6% by the six-month interview, 7.7% in the nine-month and 11.8% in the twelve-month interview. The remainder found *The Cochrane Library* somewhat to very helpful. Most respondents (57.5%) claimed to have learned something from *The Cochrane Library*; others reported that the knowledge gained helped in their decision-making (32.6%) and/or confirmed their beliefs (26.1%), and a few (11.1%) reported that *The Cochrane Library* had no impact. Respondents reported accessing *The Cochrane Library* in response to patron requests for information on medications, herbal therapies, lifestyle modifications, injury prevention, assessments, and treatments related to chronic conditions such as diabetes, heart condition, cancer, and arthritis. Information from *The Cochrane Library* was used to support changes in health care practice and policy and for the preparation of educational papers, handouts, and presentations. The reasons for not using *The Cochrane Library* were lack of time, limited access to an internet ready computer in the work setting, reliance on dial-up internet in some rural areas, forgetting how to find and navigate the website, and disappointment with the information available in *The Cochrane Library*. The plain language summaries were well received, however, some reported that the sophisticated language and length of the reviews were more appropriate for researchers and healthcare providers than the general public.

Limitations of the Study

Even though more health practitioners attended training sessions than library staff, most of the study participants were librarians and support staff (36.9%). As a result, the interviews indicated how library staff used *The Cochrane Library*, but there was very little information available from those who used the resource on their own. In addition, most participants were female (92.4%). Future studies should attempt to capture the perspectives of practitioners, consumers and males. Other strategies such as on-line surveys may also be useful in capturing users' perspectives. Additional usage data related to the person accessing *The Cochrane Library* on the Wiley-Blackwell website such as location (e.g., health region, hospital, home), occupation, discipline, and satisfaction with the website would be helpful information in understanding attributes of those who use and do not use *The Cochrane Library*.

Conclusion

The Cochrane Database of Systematic Reviews, considered the gold standard of systematic reviews, is an excellent resource for consumers and health care providers. Since the fall of 2004, all Saskatchewan citizens have had access to this resource, and training sessions on the use of *The Cochrane Library* have been offered across the province. Use of *The Cochrane Library* continues to fluctuate depending on the season. At the three month interview 83.6% of the respondents reported that *The Cochrane Library* was somewhat to very helpful, but by the twelve month interview this proportion had increased to 88.2%. However, the proportion of respondents who used *The Cochrane Library* at the three month interview (65.2%) fell to 27.4% at the twelve month interview. How to sustain the use of *The Cochrane Library*, particularly by librarians, requires further research.

This study contributes to our understanding of the frequency of use, reasons why librarians and consumers do or do not use *The Cochrane Library*, and their satisfaction/dissatisfaction with *The Cochrane Library*. Although further research is needed, this study provides evidence that given the opportunity and appropriate training, people other than medical professionals will also make use of *The Cochrane Library*.

Works Cited

“Canadian Cochrane Centre.” *The Cochrane Library*. Canadian Cochrane Centre. 4 May 2007. <<http://www.cochrane.org>>.

“Cochrane Collaboration.” About *The Cochrane Library*. Cochrane Collaboration. 4 May 2007. <<http://www.cochrane.org>>.

Grimshaw, Jeremy. “The Cochrane Collaboration in Canada.” Paper presented at the 5th Canadian Cochrane Symposium: Knowledge for Health. Ottawa. 12 February 2007.

Grimshaw, Jeremy. “So What Has The Cochrane Collaboration Ever Done For Us? A report card on the first ten years.” Canadian Medical Association Journal 171.7 (2004) : 747-749.

“Wiley-Blackwell” *The Cochrane Library*. Wiley-Blackwell. 7 May 2007. <http://www3.interscience.wiley.com>.

Appendix A

The Use of *The Cochrane Library* Province-Wide Telephone Interview Questions

1. What is your position?
 - 1) Physician
 - 2) Pharmacist
 - 3) Nurse
 - 4) Therapist
 - 5) Other Health Care Professional
 - 6) Educator
 - 7) Librarian
 - 8) Library Support person
 - 9) Consumer
 - 10) Other

2. In which Health Region do you reside?
 - 1) Sun Country
 - 2) Five Hills
 - 3) Cypress
 - 4) Regina Qu'Appelle
 - 5) Sunrise
 - 6) Saskatoon
 - 7) Heartland
 - 8) Kelsey Trail
 - 9) Prince Albert
 - 10) Prairie North
 - 11) Mamwatin
 - 12) Keewatin Yatthe
 - 13) Athabasca

3. Do you reside in a rural or urban area?
 - 1) rural
 - 2) urban

4. Have you accessed The Cochrane Library in the last three months?
Yes Go to question 5
No Go to question 6

5. In the last 3 months, how often have you accessed The Cochrane Library?

6. Please explain why you have not accessed The Cochrane Library?
Terminate telephone interview.

7. What prompted you to access The Cochrane Library?

8. Which database did you access:

- 1) Cochrane Database of systematic Reviews
- 2) Database of Abstracts of Reviews of Effects (DARE)
- 3) The Cochrane Central Register of Controlled Trials (Central)
- 4) Health Technology Assessment Database (HTA)
- 5) NHS Economic Evaluation Database (NHS EED)
- 6) Other

9. Was the information helpful?

- 1) not at all helpful
- 2) somewhat helpful
- 3) helpful
- 4) very helpful

10. How did you use the information?

11. What, if any, difference did this information have on you or someone else?

- 1) no impact
- 2) learning (ie., I learned something new or updated my knowledge)
- 3) confirmation (i.e., I was doing the right thing)
- 4) decision-making was enhanced (i.e., my practice/life style improved)
- 5) other
- 6) learning and decision-making
- 7) learning and confirmation
- 8) decision-making and confirmation
- 9) all

12. Are you:

- 1) 65 years or older
- 2) 50-64
- 3) 40-49
- 4) 30-39
- 5) 20-29
- 6) ≤ 19

13. Sex

- 1) male
- 2) female

Thank you for answering these questions. I will be contacting you again in 3 months to determine if your use of The Cochrane Library has changed.