

# Western Ontario Health Knowledge Network Project

Fall 2005 - Spring 2006

## Preliminary Report

Submitted by: Deb Miller, SJHC  
Eeva Munoz, UWO  
Peggy O'Neil, LHSC  
Elyse Pike, GBHS  
Harriet Rykse, UWO  
Linda Wilcox, SLS  
Karla Van Kessel, LHSC

March 8, 2006

## Table of Contents

A. Introduction and Context.....	3
A.1. Executive Summary .....	3
A.2. Project Overview and Definitions.....	3
A.3. Western Ontario Context, Assumptions, Risks and Opportunities .....	4
A.3.1. Western Ontario Context .....	4
A.3.2. Project Assumptions .....	5
A.3.3. Project Risks .....	5
A.3.4. Project Opportunities .....	5
B. Project Findings	
B.1. Project Alignment with Federal and Provincial Initiatives: Review of Relevant Reports .....	6
B.1.1. National and Provincial Health Reform .....	6
B.1.2. Ontario Health System Transformation .....	6
B.1.3. Ontario Higher Education Context: Health Disciplines.....	7
B.2. Benchmarking Exercise: Summary of Canadian and Ontario Health Knowledge Networks .....	7
B.3. Assessment of Current Library System: Health facilities with dedicated library resources/services .....	9
B.3.1. Discussion of Main Themes Identified in Assessment .....	10
B.4. Assessment of Current Library System: Health facilities without dedicated library resources/services .....	10
B.4.1. Discussion of Main Themes Identified in Assessment .....	11
B.5. Summary of Survey Findings .....	12
C. Western Ontario Health Knowledge Network Proposal and Options .....	12
C.1. Description and Estimated Cost of Options .....	12
C.1.1. UWO Affiliation Agreement .....	12
C.1.2. WOHKN .....	12
C.1.3. Purchasing Consortium .....	13
C.2. Summary of Options .....	13
C.3. Benefits and Limitations of Options .....	14
C.4. Recommendations & Next Steps .....	15
D. Summary .....	15

## Appendices

Appendix 1- Project Scope Document and Plan .....	16
Appendix 2- Steering Committee Membership List .....	28
Appendix 3- Literature Review: References .....	31
Appendix 4- Benchmarking Exercise: Provincial and Regional Models .....	33
Appendix 5- Current Library System: Facilities With Dedicated Library Resources/Services .....	45
Appendix 6-Current Library System: Facilities Without Dedicated Library Resources/Services.....	60

## A. Introduction and Context

### A.1. Executive Summary

In recent years, several Health Knowledge Networks have been established in Canada and Ontario in order to meet health information needs of patient care providers, clinical educators and health researchers. This project will examine health library services in Western Ontario, which broadly aligns to the MoHLTC's South West Local Health Integration Network (LHIN). The project scope initially includes the current clients and affiliates of the academic centres and hospitals that are geographically situated in the South West LHIN. Once established, this Network could consider extending health library services to community-based providers, non-affiliated, individual health practitioners, and the public/consumer in the Region. This report presents the project findings and suggests a plausible model for a South Western Ontario Health Knowledge Network.

### A.2. Project Overview and Definitions

Recent advancements in **technology** have made it possible to provide evidence-based information on the health practitioners' desktop and at point of care by taking advantage of distributed internet-based databases for the provision of information access as well as mediated **services**. Information professionals/health librarians can provide specialized expertise and play a key role in user training and support in clinical, evidence-based decision-making. Library **consortia** have evolved to take advantage of economies of scale to purchase access to knowledge-based information as a response to past fiscal challenges due to escalating prices. The project's **objectives** include:

- a literature review of national and provincial discourse relating to health information needs in hospitals and their education affiliates;
- benchmarking review of regional library networks across Canada and Ontario,
- an assessment of the existing Western Ontario health library services including supply budgets, contracts/purchased services (includes subscription/leasing agreements to make print and electronic information resources available), information technology, library database management systems, client satisfaction results, and library innovations and best-practices, and other key benchmarks as applicable,
- an analysis of the current system against library profession best-practices, and
- a summary of options and recommendations to address gaps and further enhance service quality.

A **Health Knowledge Network** is an integrated collaborative health information arrangement designed to link patient care providers, clinical researchers, health care decision makers and health sciences students to timely, equal-access health care information in a cost-effective, sustainable manner.

**Western Ontario** includes the geographic region identified by the MoHLTC as the South West Local Health Integration Network (LHIN 2). This area covers Elgin, Middlesex, Oxford, Perth, Huron, Bruce, and Grey counties.

**Health Care Practitioners** are defined as current affiliates of the facilities included in this report. Health care practitioners must have valid usernames/passwords at their affiliated institutions.

**Health Resources** includes electronic journals, electronic books, databases, and online clinical decision making tools. This definition excludes all print items.

### **A.3. Western Ontario Context, Assumptions, Risks and Opportunities**

#### **A.3.1. Western Ontario Context**

- Unlike other provincial models, such as the British Columbia Academic Health Council (BCAHC), Ontario has no formal infrastructure or well developed framework to support shared initiatives, planning and service delivery both a) among and between MoHLTC funded institutions and MOE/MTCU funded institutions and b) cross-ministerial issues in clinical education.
- The boundaries of the South West LHIN have been viewed to be too limiting and so current affiliates that are situated outside the LHIN are included. There may be pressure or interest from others outside the LHIN to be included,
- Other than current affiliates, Long Term Care, Mental Health and Addiction Agencies situated within the LHIN are not included at this time,
- The two community colleges, Fanshawe College of Applied Arts and Technology (FCAAT) and Georgian College of Applied Arts and Technology (GCAAT) will be kept abreast of the project and its developments as will Ryerson University based on its on-going direct relationship with GBHS and SLS,
- The Middlesex-London Health Unit Librarian will be invited to participate based on the shared client base and interests,
- Ontario hospitals are currently involved in the preparation of the first Hospital Accountability Planning Submission (HAPS), which are designed to achieve a two-part Ministry of Health and Long Term Care (MoHLTC) agenda of a) cost containment, and b) health system transformation (regionalization). There could be significant change, fear and anxiety among hospitals and their executives, unions and staff,
- The South West LHIN Chief Executive Officer, Tony Woolgar, plus his office staff, has been announced, however his role, mandate and other details are not known.
- There have been earlier initiatives locally and provincially for increased collaboration in the delivery of health library services. For various reasons, none of them have been fully implemented,
- Several regional and/or provincial health knowledge networks have successfully been in place for some time or are currently in implementation phase (e.g. Calgary, Saskatchewan, Winnipeg, Northern Ontario Virtual Library), which could provide useful examples and models. There are varying arrangements between regional health library network hospitals and their respective universities,

- Western Ontario executives might be particularly interested in the Kingston General Hospital and Hotel Dieu Hospital model in which library needs are met almost exclusively through a contract arrangement between the hospitals and the Bracken Health Sciences Library at Queens University. The project team will need to understand the benefits and limitations of this model, as questions are likely to be asked.

### **A.3.2. Project Assumptions**

- Western Ontario Health Knowledge Network project participants believe favorable, “do-able” enhancements to local health library services can occur as a result of the project,
- Project participants will be able to independently engage in a process, arrive at agreeable options and gain stakeholder support for enhanced local health library services,
- An independently and voluntarily lead initiative will be more palatable, and successful than a LHIN or province-imposed program.
- The Western Ontario Health Knowledge Network will evolve in a manner consistent with the LHINs’ guiding principles, and in particular accordance with the following principle: “...evolve progressively through a balanced use of evidence-based practice, continuous re-evaluation, together with flexibility for innovation and responsiveness to community, regional and provincial concerns.”

### **A.3.3. Project Risks**

- While there is an obvious health transformation/ regionalization agenda in the current political context, hospital executive and staff sentiments of fear, anxiety and survival may impede project progress and success,
- This project will be positioned as a cost-neutral quality initiative which may not receive executive “air time” given their other competing pressures and priorities. Often, in other settings, additional resources have been needed to successfully centralize health information services,
- Budget reductions within hospitals and regionally may result in even less money to fund health library services/programs,
- Members of the project team themselves may experience sentiments of fear, anxiety and survival as the HAPS activities progress,
- The Council of Academic Hospitals of Ontario or the Ontario Hospital Association, e-Health division may be preparing a provincial plan, or advocate their role in such an initiative.

### **A.3.4. Project Opportunities**

- If project objectives are achieved and successful, the Western Ontario Health Knowledge Network may achieve pace-setter status, prestige and profile locally, provincially and beyond,
- This project presents an opportunity to build greater awareness among executives of the role and purpose of health library services and the benefits to patient care, clinical education and health research,
- There is potential for increased funding over time, either from hospitals or the LHIN, for health library services.

## **B. Project Findings**

### **B.1. Project Alignment with Federal and Provincial Initiatives: Review of Relevant Reports**

The foundation for building a Western Ontario Health Knowledge Network has been established through various federal and provincial initiatives. These initiatives have identified gaps in current access to health information and enablers for a networked source of health information to come to fruition.

#### **B.1.1. National and Provincial Health Reform**

Alignment with Federal Objectives/Initiatives:

- Romanow report – “Provide better health information to Canadians, health care providers, researchers and policymakers – information they can use to guide their decisions”. (Romanow Report – Building on Values, The Future of Health Care in Canada, 2002 p.110)
- National Network of Libraries for Health ([www.chla-absc.ca/nnlh](http://www.chla-absc.ca/nnlh)) - The task force is currently developing a business plan to provide infrastructure and content to ensure that all health care providers in Canada will have equal access to the best information for patient care.

#### **B.1.2. Ontario Health System Transformation**

Ontario is presently engaged in extensive health system transformation. Some of the key goals of the Ministry of Health and Long-Term Care (MoHLTC) are to make the system more integrated, more person-centred and more responsive to local needs.

- The South West LHIN Integration Priority Assessment Final Report (February 2005) attaches the following high-level action plan to the primary health care (PHC) priority opportunity: “Develop and fund electronic integration strategies for primary health care services such as Telemedicine, E-Health, Community Health Information Network (CHINs), etc.” Section D, summarizes the essential role/responsibility of academic health science centres as providing:
  - The background to provide evidence-based care and health promotion

- Educational components to develop new health care professions and to allow physicians and others to remain current in their practices
- The components of a regional integrated healthcare system as listed in “Network Integration Activities in Southwest LHIN: A profile of regional and district integration initiatives and networks” (January 2005). For example: #6 – “Having the capacity to support program and service evaluation and to promote and share evidence-based interventions among service providers so that the consistency and quality of care across providers is as high as possible”.
- Section 5 of the Local Health System Integration Act, 2005 (pending approval) states: “The objects of a LHIN would be set out in the statute and would include...disseminating information on best practices.”
- Ontario eHealth Council’s (Hospital eHealth Council) July 2002 document: “An Ontario eHealth Blueprint and Strategic Agenda” (Blueprint) which recommends that a province-wide eHealth Library be recognized and supported.

### **B.1.3. Ontario Higher Education Context: Health Disciplines**

Recent publications, *Laying the Foundation for Change: A progress report on Ontario’s health human resources initiatives. December 2005.*, and *Ontario: A leader in learning. Report & Recommendations. February 2005.*, advocate the integration of health disciplines and education systems:

- “In the past, Ontario’s ability to develop the right people has been limited by lack of coordination between the education system that prepares health care providers and the health care system that employs them. For example, at a time when Ontario has a shortage of family physicians, general surgeons, and general internists, the medical education system continues to prepare an increasing number of subspecialists. In some cases there are not enough jobs for new graduates who have to leave the country to find work. To develop a health workforce with the knowledge and skills to meet the population’s health needs, Ontario’s education and health systems must collaborate.”
- “Recommended Action #7. Academic Renewal: Direct new investments towards teaching excellence and educational innovation so that students have increased opportunities for meaningful contact with faculty, and better facilities and equipment. A single Ontario digital library should be developed.”

Recommendations also include the development of a single digital library in Ontario:

- “The government should also work with institutions, the Ontario Council of University Libraries, the Ontario Library Association, the Colleges’ Bibliocentre, and community partners to create a province-wide Digital Library. Funding for existing digital resources should be maintained until this work is complete.”
- “Investments in library resources are needed to provide better access to learning resources and facilities for collaborative learning. There is a need to upgrade instructional equipment and access to laboratories.”

## **B.2. Benchmarking Exercise: Summary of Canadian and Ontario Health Knowledge Networks**

Several regional and provincial health knowledge networks have successfully been in place for some time or are currently in implementation phase. The appended inventory (Appendix 4) lists examples of Canadian and Ontario consortial arrangements and health knowledge networks. The geographical scope varies: some are purely regional, some are province-wide. The oldest model is the consortial model in which the partnership is concerned about consortial purchasing of electronic resources, and making them available to end-users. Services are not centralized and rarely are part of the arrangement. Examples of these arrangements are the Toronto Hospital Consortium and Atlantic Health Knowledge Network. Some rely on membership fees for funding (Alberta Health Knowledge Network, Newfoundland and Labrador Health Knowledge Information Network), some have provincial funding like the e-HLbc Consortium (the electronic health library in BC).

True Health Knowledge Networks, which provide services along the licensed resources, can be broadly divided in two types based on the relationship they have with the Academic Health Library. The province-wide Health Knowledge Network in Saskatchewan (SHIRP) is based on an agreement between the University and provincial health authorities, and a separate SHIRP office manages access and services to the membership outside the University; the affiliated hospitals continue staffing their libraries and providing local services. The other model is in place in Calgary and Winnipeg: there, the local academic health library manages all hospital library services either on site or via online; the hospital libraries are considered as university library branches. In this case local contractual and funding arrangements vary. The services may vary depending on the size of the affiliated institution. Essentially, there are three models as illustrated below:

Arrangement	Description	Examples
<b>1. University Affiliation Agreement</b>	-Fully integrated services and resources -Professional Staff employed by university and deliver services on hospital sites	-University of Manitoba, Neil John Maclean Health Sciences Library (NJMHSL) & 8 affiliate health facilities  -Queen’s University, Bracken Health Sciences Library (BHSL) & 5 affiliate health facilities
<b>2. Health Knowledge Network</b>	-Fully integrated service -Some integrated resources -Professional Staff employed by both university and hospitals	-Health Knowledge Network (HKN) – Alberta  -Saskatchewan Health Information Resource Partnership (SHIRP)

<b>3. Purchasing Consortium</b>	-Shared purchasing agreements with some integrated services	-Health Science Information Consortium of Toronto (HSICT)  -Atlantic Health Knowledge Network (AHKN)  -Newfoundland & Labrador Health Knowledge Information Network (NLHKIN)
---------------------------------	-------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### B.3. Assessment of Current Library System: Health facilities with dedicated library resources/services

Five health care centres and one academic centre in the South West Region were sent a survey to be completed by a designated library staff member, further detailed in Appendix 5. The purpose of the survey was to gather data about products and services, budgets, human resources, and clients in order to assess the feasibility of moving forward with a Western Ontario Health Knowledge Network (WOHKN).

Structure	Current State of Health Care Library Services	Recommended Options
<b>Relationships</b> (Hospitals; Academic Institutions; Region)	Limited inter-hospital collaboration Limited hospital-academic centre collaboration.	Regional collaboration between:  -Researchers -Students -Policymakers -Health Practitioners
<b>Products</b>	All sites maintain individual responsibility for journal, database and book collections. Separate database management systems and online catalogues across all sites. Varying quantity and quality of health information resources.	Single point of access to selected suite of electronic journals & databases for academic, clinical, and non-clinical staff. A single union catalogue including individual site print resources for member access.
<b>Services</b>	-reference services -literature searching -inter-library loan -client orientation -document delivery (to clients and other	Set of established practices for training, support and health resource selection. Access to the practice expertise of a professional Librarian.

	institutions) -database training -current awareness services -workspace and Internet access -circulation of books and journals	Current UWO affiliates will maintain access to UWO Libraries.
<b>Facilities</b>	All sites have one or multiple library facilities. All sites provide access to computers equipped with Internet access,	Maintain current sites. Possibly develop a multi-purpose computing facility.
<b>Information Technology</b>	IT services vary. Some hospital sites have off-site access; others only offer on-site access. Most library web sites are “buried” within larger hospital site.	Equal access (remote and on-site) to selected health resources for all affiliated members regardless of geography or budget.  Single virtual identity.
<b>Cost Sharing</b>	Limited consortial arrangements between some sites exist for a select set of resources.	Explore funding options and grant opportunities.  Develop a centralized purchasing strategy.

### B.3.1. Discussion of Main Themes Identified in Assessment

- **Collection quality varies across sites.** Current purchasing arrangements alongside annual inflation prevents regional hospital libraries (including teaching hospital sites) from meeting the standards required for a small medical library (*Doody’s Core Titles List*: <http://www.doody.com/dct/>). Health information needs are not being met. With the backing of UWO, hospital libraries have the opportunity to leverage purchasing power with vendor negotiations and license renewals.
- **Five data systems, 5 points of purchase, 5 points of access.** Decentralized management of library services translates into work duplication for all sites, extra maintenance costs for data management systems and accessibility barriers for clients. A single data management system, centralized purchasing and a single virtual identity will reduce duplication and financial burden while increasing client satisfaction.
- **Ability to deliver professional services** (literature searching, in-depth reference, information literacy education, etc.) is limited by the administrative and technical burden of operating in a de-centralized purchasing and catalogue environment.

## B4. Assessment of Current Library System: Health facilities without dedicated library resources/services

Hospitals in the South West Region without dedicated library resources were sent a brief survey that was completed by both clinical/patient care and administrative staff, as is outlined in more detail in Appendix 6 of this report.

#### **B.4.1. Discussion of Main Themes Identified in Assessment**

The main themes as evidenced by the survey findings indicate:

- **Health information needs are not being met.** Both clinical and non-clinical staff identified a need for current, relevant, authoritative health information. Many express frustration at the lack of health information currently available to them. The *Canadian Council on Health Services Accreditation Information Management* Standard 5.3 requires that the organization make education and reference material and research information available to staff, clients and families while Standard 5.4 requires that:
  - Systems must be in place to provide clear direction and timely access to education, reference and research materials that are evaluated against current and future needs.
  - A method for linking to relevant external databases, information networks and bodies of research knowledge must be provided.

To meet these requirements, the Library Information Service must be positioned to communicate with decision makers at the highest levels throughout the organization and/or health region.

- **Need for professional librarians.** Both clinical and non-clinical staff indicate a need for the services best provided by an accredited librarian, including: literature searching, database search instruction and research consultation. According to Section 3 of the *Standards for Library and Information Services in Canadian Healthcare Facilities 2006 (draft)*: “The Library and Information Service is staffed according to the Medical Library Association (MLA) staffing formula of Total Institution FTE divided by 700. Demand for information is driven by the size and complexity of the institution as well as factors such as:

- The number of medical residents, undergraduate medical students and other programs interns at the facility.
- The geographic size of the region and extent of regionalization in an area. Fully integrated health region libraries provide services not only to acute care facilities, but also to long term and continuing care, community health and emergency medical services, often across broad geographic areas.”

- **Need for traditional library services & support.** Clients concur that lack of time is one of the barriers associated with finding/retrieving relevant health information. These clients would readily make use of document delivery and inter-library loan services to help alleviate accessibility barriers. These clients would readily make use of librarian search expertise, document delivery and interlibrary loan service.

- **Clinical staff use Google and hope for the best.** Because clinicians at non-library sites have limited access to reliable information, many are sifting through free search engines hoping to find reputable health information. Randomly searching the Internet is not a good use of staff time and produces poor to mediocre results at best. According to Section 8 of the *Standards for Library and Information Services in Canadian Healthcare Facilities 2006 (draft)*: “As clinical decisions are often made outside of normal working

hours, knowledge-based information resources must be accessible at all times.

Depending on the size and complexity of the institution, this may mean:

- Resources are available through the organization's intranet or Internet.
- Mechanisms are in place for after-hours library access."

These themes can be expected from staff members at health facilities without library resources. Infrequent searching, lack of search skills and reliance on questionable internet resources are not the result of lack of effort on behalf of staff members, rather lack of products and services to support clinical and non-clinical health information needs.

## **B.5. Summary of Survey Findings**

The survey results from both library and non-library facilities identify gaps, duplications and inconsistencies in the current distribution of health information across the South West Region. These results indicate the critical need for a standardized system of access to health information and professional service delivery for researchers, clinicians, students and policymakers.

## **C. Western Ontario Health Knowledge Network Proposal and Options**

The Western Ontario Health Knowledge Network (WOHKN) aspires to make available high quality electronic resources to health practitioners, researchers, students and policymakers across the region. WOHKN will improve access to appropriate, relevant and reliable health information in a consistent and sustainable manner. WOHKN will enable the practice of evidence-based care, research and education made possible through the practice expertise of qualified professional librarians to ensure the best possible access to the tools essential for making informed decisions. Further explanation of products, services and costs aligned with each option are described in the following section.

### **C.1. Description and Estimated Cost of Options**

#### **C.1.1. UWO Affiliation Agreement**

Universal desktop access for all health practitioners from all Western Ontario health facilities to all UWO Libraries resources (which minimally includes existing resources in the hospitals), through a single web-based portal with some criteria-based remote access login option, supported by consistent professional health librarian services including: training, literature searches, consultation and teaching.

Estimated Cost: ~\$5 Million

#### **C.1.2. WOHKN**

On site and remote access to a customized subset of health resources tailored to the health care practitioners in Western Ontario health facilities including a suite of resources to meet the existing information-needs of health care decision makers. WOHKN will include a set of established practices for training, support and health resource selection. WOHKN will provide

health practitioners with sustainable and consistent standards of service delivery. Health practitioners will also have the opportunity to consult with a qualified professional librarian. Estimated Cost: Depends on digital resource combination.

### C.1.3. Purchasing Consortium

Purchasing consortium between Western Ontario hospitals for selected health resources. Estimated Cost: arrangement would match existing pricing

## C.2. Summary of Options

Structure	Option 1: UWO Affiliation Agreement	Option 2: WOHKN	Option 3: Purchasing Consortium
<b>Relationships</b> (Hospitals; Academic Institutions; Region)	Regional collaboration between:  -Researchers -Students -Policymakers -Health Practitioners	Regional collaboration between:  -Researchers -Students -Policymakers -Health Practitioners	Limited relationships between hospitals and academic centres.  Likely an annual meeting to determine wants/needs.
<b>Products</b>	Single point of access to journals & databases for academic, clinical, and non-clinical staff. Member access through UWO Libraries portal (proxy server).	Single point of access to selected suite of electronic journals & databases for academic, clinical, and non-clinical staff. A single union catalogue including individual site print resources for member access.	Subscriptions to selected databases and journals.
<b>Services</b>	Centralization of instructional, support, document delivery and other services. Access to the practice expertise of professional Librarians.	Set of established practices for training, support and health resource selection. Access to the practice expertise of professional Librarians. Current UWO affiliates will maintain access to UWO Libraries.	No specialized services or support.

<b>Facilities</b>	Maintain current sites. Possibility of developing a multi-purpose computing facility.	Maintain current sites. Possibility of developing a multi-purpose computing facility.	Maintain current facilities.
<b>Information Technology</b>	Equal access (remote and on-site) to all UWO resources for all affiliated members regardless of geography or budget.  Single virtual identity.	Equal access (remote and on-site) to selected health resources for all affiliated members regardless of geography or budget.  Single virtual identity.	Access to health information determined by individual sites.  No guarantee of remote/off-site access.
<b>Cost Sharing</b>	Explore funding options and grant opportunities.  Centralized purchasing strategy will be developed.	Explore funding options and grant opportunities.  Centralized purchasing strategy will be developed.	Consortial agreement among participants.

### C.3. Benefits and Limitations of Options

Examples of potential positive outcomes from moving forward with Option 1 or Option 2 can be readily identified. A few are listed:

- Increased and consistent Medical, Nursing and Allied Health information resources available to support evidence-based patient care, patient safety, informed decision-making and life-long learning;
- Improved and equal access to current, evidence-based information across the Region;
- Where applicable, shift distribution of library labour to include roles designed to expedite and refine clinical search strategies (asking answerable questions), retrieval (obtaining materials sourced), synthesis (reviewing and summarizing search results) and analysis (assessment of prevailing themes and dissenting views in search results) in order to support clinical decision-making.

The implementation of Option 3 will benefit member organizations in a consortial capacity by leveraging individual purchasing power through group commitment. This type of relationship does not directly benefit clinical and patient care staff and has limited applications. A suite of knowledge-based electronic resources, supported through user training and on going support, as proposed in Option 1 or Option 2, will result in:

1. Increased and more equitable access to health information resources to support evidence-based patient care, health research and clinical education.
2. More efficient allocation of resources: money, time, information technology, and remote delivery of services.

3. Potential for sharing and redistribution: dedicated resources to support care, teaching and research.

## C.4. Recommendations & Next Steps

Equal access to quality knowledge-based information is required for enhanced patient care and patient safety and for the provision of best practice throughout the region. It is recommended that the following high-level plan be considered in moving toward a Western Ontario Health Knowledge Network (Option 2):

- Confirm Steering Committee agreement of concept
- Confirm participation organizations' agreement of concept
- Determine digital resources and pricing
- Approval of digital resource selection and pricing
- It is recommended that a **letter of understanding** be created to outline terms and intent between participating organizations, including: collection development strategy; user support; service delivery/service expectations; product fee schedule; master contract; technical arrangements.

Timing and sequencing of project phases may be adjusted according to environmental pressures and economic priorities of key stakeholders. The project team has determined that the implementation of the Western Ontario Health Knowledge Network could occur as early as January 2007.

## D. Summary

The Western Ontario Health Knowledge Network will provide physicians, researchers, health care decision makers and allied health professionals across the region access to the most current and reliable electronic health information in conjunction with professional librarian expertise. The development of a Health Knowledge Network will streamline administrative processes such as individual contract negotiations with publishers/vendors and leverage purchasing power.

The creation of a single virtual identity ensures ease of use and availability of remote access to a wide variety of electronic journals, e-books, databases and evidence-based resources through a single online catalogue.

The Western Ontario Health Knowledge Network will achieve excellence by implementing common practices across all sites including service standards, business planning, policy development, resource allocation, and program evaluation. If project objectives are achieved and successful, the Western Ontario Health Knowledge Network may achieve pace-setter status, prestige and profile locally, provincially and beyond.

Appendix 1:  
Project Scope Document and Plan

---

## Western Ontario Health Knowledge Network Project Scope & Project Plan

---

**September, 2005**

**Prepared by: Deb Miller, SJHC  
Eeva Munoz, UWO  
Peggy O'Neil, LHSC  
Elyse Pike, GBHS  
Harriet Rykse, UWO  
Linda Wilcox, SLS**

# Western Ontario Health Knowledge Network Project Scope & Project Plan

---

## Table of Contents

	Page
<b>1. Project Description</b>	
I. Project Overview and Scope.....	1
II. Background.....	1
III. Assumptions.....	2
IV. Guiding Principles.....	2
<b>2. Project Structure</b>	
I. Project Team.....	3
II. Project Steering Committee.....	4
III. Key Stakeholders.....	4
<b>3. Estimated Resource Requirements</b>	
I. Estimated Direct Resource Requirements.....	4
II. Estimated Indirect Resource Requirements.....	4
III. Time Constraints.....	4
<b>4. Project Plan and Overview of Methodology.....</b>	<b>5</b>

---

# Western Ontario Health Knowledge Network Project Scope & Project Plan

## 1. Project Description

### I. Project Overview and Scope:

The development of a Health Knowledge Network for Western Ontario would have benefits for all health care providers across the continuum of care, students and researchers in the region.

Advancements in technology have made it possible to provide evidence-based information on the health practitioners' desktop and at point of care by taking advantage of distributed internet-based databases for the provision of information access as well as mediated services.

Information professionals/health librarians can provide specialized expertise and play a key role in user training and support in clinical, evidence-based decision-making. Library consortia have evolved to take advantages of economies of scale to purchase access to knowledge-based information as a response to past fiscal challenges due to escalating prices.

This project seeks to address health library services in Western Ontario, which broadly aligns to the MoHLTC's South West Local Health Integration Network (LHIN). Project participants initially will include the current clients and affiliates of the academic centres and hospitals that are geographically situated in the South West LHIN. Once established, this Network will consider extending health library services to community-based providers, non-affiliated, individual health practitioners, and the public/consumer in the Region.

The project's objectives include:

- a) a background review of regional library networks across Canada and Ontario,
- b) a description of the existing Western Ontario health library services including supply budgets, contracts/purchased services (includes subscription/leasing agreements to make print and electronic information resources available), information technology, library database management systems, client satisfaction results, and library innovations and best-practices, and other key benchmarks as applicable,
- c) an analysis of the current system against library profession best-practices, and
- d) a summary of options and recommendations to address gaps and further enhance service quality.

### II. Background:

There are approximately 26 hospitals, 1 university and 2 community colleges situated in the Western Ontario Region identified for the purposes of this project. Broadly, the academic institutions provide service to faculty and students and the hospitals to health practitioners. Overlap, duplication and inconsistencies exist for some clients. For example, hospital employees are students at the university or community college, hospital-university joint appointments are common, and students gain part-time and later permanent employment at hospitals. Currently several library websites and databases are managed, limited purchasing partnerships exist and very limited common business planning occurs. As a result, it is

reasonable to conclude that improvements could be made to enhance the continuum of service to health library clients and to begin to reduce gaps across this Region.

Examples of potential positive outcomes can be readily identified. A few are listed:

- increased and consistent Medical, Nursing and Allied Health information resources available to support evidence-based patient care, patient safety, informed decision-making and life-long learning;
- improved and equal access to current, evidence-based information across the Region;
- where applicable, shift distribution of library labour to include roles designed to expedite and refine clinical search strategies (asking answerable questions), retrieval (obtaining materials sourced), synthesis (reviewing and summarizing search results) and analysis (assessment of prevailing themes and dissenting views in search results) in order to support clinical decision-making and reduce the rate at which the same question is asked and searched multiple times.

### **III. Assumptions:**

Alignment with Federal Objectives/Initiatives:

- Romanow report – “Provide better health information to Canadians, health care providers, researchers and policymakers – information they can use to guide their decisions”. (Romanow Report – Building on Values, The Future of Health Care in Canada, 2002 p.110)
- National Network of Libraries for Health ([www.chla-absc.ca/nnlh](http://www.chla-absc.ca/nnlh)) - The task force is currently developing a business plan to provide infrastructure and content to ensure that all health care providers in Canada will have equal access to the best information for patient care.

Alignment with Provincial Objectives/Initiatives:

- The components of a regional integrated healthcare system as listed in “Network Integration Activities in Southwest LHIN: A profile of regional and district integration initiatives and networks” (January 2005). For example: #6 – “Having the capacity to support program and service evaluation and to promote and share evidence-based interventions among service providers so that the consistency and quality of care across providers is as high as possible”.
- Ontario eHealth Council’s (Hospital eHealth Council) July 2002 document: “An Ontario eHealth Blueprint and Strategic Agenda” (Blueprint) which recommends that a province-wide eHealth Library be recognized and supported.

Equal access to quality knowledge-based information is required for enhanced patient care and patient safety and for the provision of best practice throughout the region.

Creation of a suite of knowledge-based electronic resources to be supported through user training and ongoing “help desk” support by qualified library service providers.

Not all knowledge-based information resources required by health providers exist electronically.

The Electronic Patient Record system currently being designed for London Hospitals will offer an added portal to current evidence summaries for health care providers at the point of care. It is anticipated that this system will be implemented regionally in the future.

The project context and discussions are based on the current provincial environment as well as the existing Western Ontario health library structures, relationships and so on. Any environmental changes may necessitate a review of project assumptions and/or positioning.

#### **IV. Guiding Principles:**

The Health Library Network will be designed for eventual use by all health care providers and consumers in the Region to ensure equal access to quality health information.

The Western Ontario Health Knowledge Network will evolve in a manner consistent with the LHINs' guiding principles, and in particular accordance with the following principle: *"...evolve progressively through a balanced use of evidence-based practice, continuous re-evaluation, together with flexibility for innovation and responsiveness to community, regional and provincial concerns."*

This project is a cost-neutral quality initiative to improve library services, minimize gaps, and where applicable allow for the increased professional support to clinical staff and programs.

To form partnership arrangements between health care institutions for mutual benefit (fairness).

To make the best use of limited health dollars by volume-buying strategies (accountability).

To leverage existing/emerging infrastructures and models and minimize duplication.

To respect the unique needs of each participant and organization and be responsive to local needs, challenges and opportunities.

To collaborate with existing health library service providers and health libraries in an environment of trust (mutual respect).

Transparency will be promoted to maintain effective and continual communication among all stakeholders.

All phases of the project will be based on consensus and aim to ensure long-term sustainability.

## **2. Project Structure:**

### **I. Project Team:**

**The project team is comprised of library contacts from each of the following organizations and/or sub-regions. Team members are accountable for representing the interests of their geographic and political areas.**

#### **Health Centre Regions:**

Grey Bruce: Grey Bruce Health Services - Lion's Head, Markdale, Meaford, Owen Sound, Southampton, Tobermory and Wiarton **(Elyse Pike)**;

South Bruce-Grey: South Bruce Grey Health Centre - Chesley, Durham, Kincardine and Walkerton; Hanover & District Hospital. (no direct librarian contact, Elyse Pike to coordinate when ready to approach CEO level)

Huron-Perth: Huron-Perth Health Care Alliance - Clinton, Seaforth, St.

Marys, Stratford; Alexandra Marine & General Hospital, Goderich; Listowel & Wingham Hospitals Alliance; South Huron Hospital, Exeter  
**(Linda Wilcox)**

Oxford: Alexandra Hospital, Ingersoll (**Doreen Lewis**); Tillsonburg District Memorial Hospital (Linda Wilcox); Woodstock General Hospital (Linda Wilcox)

London: London Health Sciences Centre (**Peggy O'Neil**); St. Joseph's Health Care (**Deb Miller**)

Middlesex: Middlesex Hospital Alliance - Strathroy Middlesex & Four Counties, Newbury (no direct librarian contact, Peggy O'Neil will coordinate when ready to approach CEO level)  
Elgin: St. Thomas-Elgin General (no direct librarian contact, Linda Wilcox will coordinate when ready to approach CEO level)

Affiliate: Wellington: North Wellington Health Care - Mt. Forest and Palmerston (Linda Wilcox)

**Academic Centres:**

University of Western Ontario, **Eeva Munoz, Harriet Rykse**

**Other:**

Middlesex-London Public Health Unity Library, **Yvonne Tymi**

**II. Project Steering Committee:**

Steering Committee will be comprised of executives from each of the sub-regions/ organizations identified above. Steering Committee members will:

1. receive project options and recommendations,
2. enact final decisions by:
  - supporting and influencing project recommendations within respective organizations,
  - promoting project awareness across region and beyond.

**III. Key Stakeholders:**

**To be determined through additional consultation and discussion. A complete list will be included in the final report.**

<b>3. Estimated Resource Requirements</b>
-------------------------------------------

**I. Estimated Direct Resource Requirements:**

No direct funds have been allocated to this project.

**II. Estimated Indirect Resource Requirements:**

The project team members will attend meetings and support background activities to

- provide advice on the project plan, goals, methodology and development of specific questions.
- consult with stakeholders/ lead or participate in teams

- provide a two-way feedback loop to ensure project team is informed and has input into the process.
- provide technical knowledge

**III.** Time Constraints:

Estimated Start of Project: September , 2005

Estimated End of Project: target: mid-November, 2005

# Appendix 3:

## Literature Review: References

*Canadian Health Accreditation Report 2003.* Canadian Council on Health Services Accreditation Information Management Standard

*Laying the Foundation for Change: A progress report on Ontario's health human resources initiatives.* December 2005. Ministry of Health and Long-Term Care.

[http://www.health.gov.on.ca/english/public/pub/ministry\\_reports/hhr\\_05/hhr\\_05.html](http://www.health.gov.on.ca/english/public/pub/ministry_reports/hhr_05/hhr_05.html)

*Local Health System Integration Act, 2005 (pending approval).* Ministry of Health and Long-Term Care. [http://www.health.gov.on.ca/english/public/legislation/lhins/hu\\_lhins.html](http://www.health.gov.on.ca/english/public/legislation/lhins/hu_lhins.html)

*National Network of Libraries for Health* ([www.chla-absc.ca/nnlh](http://www.chla-absc.ca/nnlh))

*Ontario: A leader in learning. Report & Recommendations.* February 2005.

<http://www.raereview.on.ca/en/report/default.asp?loc1=report>

*Romanow Report – Building on Values, The Future of Health Care in Canada.* November 2002.

<http://www.hc-sc.gc.ca/english/care/romanow/index1.html>

*South West LHIN Integration Priority Assessment Final Report.* February 2005.

[http://www.health.gov.on.ca/transformation/lhin/reports/south\\_west.pdf](http://www.health.gov.on.ca/transformation/lhin/reports/south_west.pdf)

*Standards for Library and Information Services in Canadian Healthcare Facilities (draft).* 2006. Canadian Health Libraries Association.

[http://www.chla-absc.ca/documents/Standards\\_2006\\_Draft.doc](http://www.chla-absc.ca/documents/Standards_2006_Draft.doc)

## Appendix 4:

# Benchmarking Exercise: Provincial and Regional Models

## **Method**

An investigation of provincial and regional health network/consortial models was conducted to gather information on relationships/affiliations, products, services, facilities, information technology and cost models across Canada. The information required for this benchmarking exercise was gathered from a variety of sources including websites, press releases, annual reports, and listserves. A specific focus was placed on models within Ontario.

## **Instrument**

In order to better understand existing provincial and regional structures, a five-point framework was employed for the purposes of this benchmarking exercise. The following section explains in detail each of the structural components used in this study.

## **Structure**

### **Relationship to Academic Institutions**

Health knowledge networks are usually affiliated with regional or local academic centres and in most cases, the academic institution is involved through a contractual arrangement in the management of online subscription and member access for affiliated health care organizations. These arrangements vary in each case. Because many faculty and staff are cross appointed between health care facilities and neighbouring academic institutions, the creation of a health knowledge network helps to reduce duplication in the payment of subscription costs, because each end user is counted only once in the centralized licensing process. Similarly, by providing Health Knowledge Network (HKN) services at the academic level, all graduating medical and health practitioners are more likely to be knowledgeable users and early adopters of the HKN system. Once in the community as practitioners, they continue to access key health information through their affiliation with HKN member sites.

### **Relationship to Other Hospitals**

Depending on the network arrangement, hospital-to-hospital relationships vary. In purely consortial agreements, hospital libraries share in purchasing but maintain separate service delivery. Several health knowledge networks not only share in purchasing but also provide centrally managed service delivery such as: document delivery, inter-library loans, and library instruction. In these cases the service providers can be distributed on sites in a library type set-up.

### **Relationship to Region**

Across Canada, many regional and provincial initiatives have received grants or ongoing funding from interested Ministries or local health authorities. Professional associations play an important role in many arrangements by providing information to their members regarding access and services.

## **Products and Services**

The point at which a consortial arrangement becomes a health knowledge network is determined by the level of products and services included in the partnership. Where a consortial agreement is mainly a purchasing contract between organizations, a network offers a unique suite of services for all members.

## **Facilities**

While most health knowledge networks provide members with access to online resources, partnering libraries usually plan to maintain their physical space for book collections and staff workspace. There are also initiatives (e.g. Calgary) where the library space is converted into an "information commons" - a multipurpose computing facility with access to resources and personal help from trained staff.

## **Information Technology**

Technology assessment and collaboration are imperative to the delivery of health information across the region. The success of a health knowledge network is measured by its ability to provide seamless access to resources at the point of need. To this end, collaboration between the managers of the health knowledge network and IT support providers in the local health care facilities is of critical importance. Access management requires the design of an effective and user centered web portal as well as end user authentication in a way that is as seamless as possible, but still adheres to the requirements set by licensing agreements.

While most health care organizations have moved to an online environment, the complexity of maintaining regional access must be complimented by educational initiatives and ongoing technical support.

For remote/rural organizations with limited access to online resources, a regional initiative offers equal-access to health information resources 24/7.

## **Cost Sharing**

There are varying levels of cost sharing agreements in existing consortia and networks. Many consoritial arrangements are split according to relative size of each organization (number of FTEs).

Purchasing partnerships between health care organizations are becoming increasingly common and vendors are usually quite receptive to this idea. Other cost-sharing options existing nationally include the pooling of funds allocated to database and journal subscriptions and support from regional health authorities through grants and sponsorship.

In all cases a pricing strategy must exist in order to guarantee the sustainability of the network.

## Findings

Using the five-point framework noted in the Instrument section, models were separated into regional and provincial initiatives.

<b>Regional Models</b>					
<b>Name of Health Knowledge Network/Health Information Arrangement</b>	<b>Structure: Relationship to Academic Centre, Other Hospitals and Region</b>	<b>Products and Services</b>	<b>Facilities</b>	<b>Information Technology</b>	<b>Cost Sharing</b>
<p><b>Alberta:</b></p> <p><b><i>Health Information Network, Calgary Region</i></b></p> <p><b>Est: January 2006 (in process)</b></p> <p><b>Website: Not yet available</b></p>	<p>Suite of services and resources hosted by the University of Calgary in affiliation with the Calgary Health region.</p>	<p>Web-based health information available to health practitioners and staff from work or home.</p>	<p>There will be four Knowledge Centres located at various (existing) sites.</p>	<p>Username / password required for remote access.</p>	<p>The University Health Sciences Library will be given a budget for services annually.</p> <p>The budget is consistent with the current budget for library services at the Tom Baker Cancer Centre and the Calgary Health Region.</p> <p>Neither of these parties will profit from the other.</p>
<p><b>Manitoba:</b></p> <p><b><i>Neil John Maclean Health Sciences Library (NJMHSL)</i></b></p>	<p>Partners of the University of Manitoba's Maclean Health Sciences Library include 8 hospitals:</p>	<p>Regional services to partner hospitals provided by the NJMHSL include support for research and</p>	<p>Library space at each hospital site include: -Public Access Computers (PACs) Study carrels</p>	<p>The University of Manitoba Maclean Health Sciences Library manages on site and remote access to</p>	<p>Consortial arrangement among all participants</p> <p>Funding also</p>

<p><b>Est: 1998</b></p> <p><b>Website:</b>  <a href="http://www.umanitoba.ca/libraries/units/health/about.shtml">www.umanitoba.ca/libraries/units/health/about.shtml</a></p>	<ul style="list-style-type: none"> <li>-Concordia</li> <li>-Deer Lodge</li> <li>-Grace</li> <li>-Misericordia</li> <li>-Riverview</li> <li>-Seven Oaks</li> <li>-St.Boniface</li> <li>-Victoria</li> </ul> <p>Funding partnership with:          -Winnipeg Regional Health Authority</p>	<p>patient care at the University and teaching sites in Winnipeg and rural Manitoba</p> <p>Individual hospital sites manage their own document delivery and literature searching services</p>	<p>Video screening rooms (some sites)          Photocopiers</p> <p>All library sites hold books and provide workspace for staff</p>	<p>electronic journals and databases on behalf of partnering health care organizations</p>	<p>includes grants from regional health authorities and the Manitoba Health Information Network (MHINET)</p> <p>Purchasing is managed by NJMHSL</p>
<p><b>Ontario:</b></p> <p><b><i>Northern Ontario Virtual Library (NOVL)</i></b></p> <p><b>Est: 2000</b></p> <p><b>Website:</b>  <a href="http://www.novl.ca/">http://www.novl.ca/</a></p>	<p>Funded by:          Ontario Ministry of Health and Long-Term Care</p> <p>Operated by:          Northern Academic Health Sciences Network (NAHSN)</p> <p>Clinical learning sites include:</p> <ul style="list-style-type: none"> <li>-Dryden</li> <li>-Fort Francis</li> <li>-Kenora</li> <li>-Rainy River</li> <li>-Wawa</li> <li>-Parry Sound</li> <li>-North Bay</li> </ul>	<p>Provides Northern practitioners online access to health information</p> <p>Other services include:</p> <ul style="list-style-type: none"> <li>-Document delivery</li> <li>-Literature searching</li> <li>-Reference</li> <li>-Current awareness</li> <li>-Consultation</li> <li>-Training sessions</li> <li>-User support</li> </ul>	<p>Physical space available at Health Sciences North for training purposes</p>	<p>24/7 access to online journals and databases</p> <p>All practitioners are issued a username and password for remote access</p>	<p>Entirely funded by the Ontario Ministry of Health and Long-Term Care</p>

	-Little Current -Hearst -Sudbury				
<b>Ontario:</b>  <b><i>Bracken Health Sciences Library (BHSL) – Queen’s University</i></b>  <b>Est: 2001</b>  <b>Website:</b> <a href="http://library.queensu.ca/webmed/qhc.htm">http://library.queensu.ca/webmed/qhc.htm</a>	BHSL outreach partners include:  -Quinte Health Care -KFL&A Health Unit -Hotel Dieu Hospital -Northumberland Hills Hospital -Kingston General Hospital (including Kingston Regional Cancer Centre)	BHSL staff, located at Queen’s University, design custom services for all outreach partners, including: -Database training -Document delivery	Physical space in all library outreach sites maintained for book collections and staff workspace  The Centre for Health Electronic Education Resources (CHEER) is a state-of-the-art facility offering portable hardware in a wireless environment. Videoconferencing facilities are also available for outreach partners.	24/7 online access via proxy server (requires username and password)	Contract arrangement between Bracken and outreach partners
<b>Ontario:</b>  <b><i>Health Science Information Consortium of Toronto</i></b>  <b>Est: 1990</b>	Consists of 33 members, including the University of Toronto Libraries, and its geographic boundaries stretch from Oshawa in the east to Newmarket in the north and	Member access to online health information (databases, journals, etc)  Provide resource-sharing discounts for members	No central facility. All remote access.	Electronic access available remotely via username and password	The University of Toronto Libraries pay an annual fee not less than 50% of the Consortium’s total operating budget, to a maximum amount equivalent to the annual salary plus

<p><b>Website:</b>  <a href="http://www.library.utoronto.ca/hsict/profile.htm">http://www.library.utoronto.ca/hsict/profile.htm</a></p>	<p>Oakville in the west.</p>	<p>Currently working on a union catalogue</p>			<p>benefits of the Executive Director of the Consortium.</p> <p>All other members will pay such fees as are approved annually by the Consortium's Board of Directors. The total of the other member institutions' contribution should not be less than 40% nor greater than 50% of the Consortium's total operating budget.</p>
<p><b>Ontario:</b></p> <p><b><i>Hamilton &amp; District Health Library Network</i></b></p> <p><b>Est: 1970</b></p> <p><b>Website:</b>  <a href="http://www.hsl.mcmaster.ca/network/index.html">http://www.hsl.mcmaster.ca/network/index.html</a></p>	<p>Regional members include a mix of community health, hospital and academic libraries:</p> <ul style="list-style-type: none"> <li>-City of Hamilton Public Health &amp; Community Services</li> <li>-Hamilton District Health Council</li> <li>-Hamilton Health Sciences hospitals</li> <li>-Joseph Brant Memorial Hospital</li> <li>-Juravinski Cancer</li> </ul>	<p>Mainly a consortial agreement. Other services include:</p> <ul style="list-style-type: none"> <li>-Access to McMaster's online catalogue (MORRIS)</li> <li>-Remote access to online resources</li> <li>-Information literacy training and instruction</li> <li>-Inter-library loan</li> <li>-Document delivery</li> <li>-Staff/student</li> </ul>	<p>The Network Office and staff are located in the McMaster University Health Sciences Library.</p>	<p>Available resources vary by site. Technical support for e-resources is supported by the McMaster University Library</p>	<p>The Network is supported financially by members on a cost-sharing basis</p>

	<p>Centre  -McMaster University  -Mohawk College  -St. Joseph's Healthcare Hamilton  -St. Peters Hospital</p>	orientation			
<p><b>Nova Scotia/  Newfoundland:</b></p> <p><b><i>Atlantic Health Knowledge Network (AHKN)</i></b></p> <p><b>Est: 2002</b></p> <p><b>Website:</b>  <a href="http://www.library.dal.ca/kellogg/ahkp/ahkp.htm">www.library.dal.ca/kellogg/ahkp/ahkp.htm</a></p>	<p>Current members:  -Annapolis Valley Health  -South Shore Health  -South West Health  -Capital District Health Authority  -Cape Breton District Health Authority  -Dalhousie University Libraries  -IWK Health Centre  -Doctors Nova Scotia  -Memorial University of Newfoundland Libraries  -Newfoundland and Labrador Health Knowledge Information Network</p>	<p>Consortial arrangement that reviews and purchases online resources for the use of member institutions</p>	<p>Does not provide physical space / consortial agreement only</p>	<p>Remote online access available via proxy server</p> <p>Username and passwords are available to health care practitioners through their professional associations</p>	N/A

	-Nova Scotia Public Libraries -Pictou District Health Authority -Policy Watch -Nova Scotia Department of Health				
<b>Provincial Models</b>					
<b>Name of Health Knowledge Network/Health Information Arrangement</b>	<b>Structure: Relationship to Academic Centre, Other Hospitals and Region</b>	<b>Products and Services</b>	<b>Facilities</b>	<b>Information Technology</b>	<b>Cost Sharing</b>
<b>British Columbia:</b>  <b><i>Electronic Health Library of BC (e-HLbc)</i></b>  <b>Est: October 2004 (Effective April 1, 2006)</b>  <b>Website:</b> <a href="http://www.bcahc.ca/BCAHC_page.asp?pageID=700">http://www.bcahc.ca/BCAHC_page.asp?pageID=700</a>	Initiative of the BC Academic Health Council (BCAHC)  Participants include: -28 post-secondary education institutions -14 health authorities / health agencies -38 professional associations -3 "other" organizations / interested parties	Province-wide access to reliable electronic resources in both urban and rural areas	Strictly electronic / no physical space  e-Library administration office space only	Information provided via a single access point through a web browser available to urban and rural and remote areas of the province, from the workplace or from home, 24 hours a day, seven days a week	RFP was issued to evaluate best possible cost solution  A three-year licensing agreement with publishers EBSCO and OVID will cost \$1.4 million annually (to be split equally between the health care and advanced education sectors)  Significant financial donation received from the BC

					Ministry of Health
<p><b>Alberta:</b></p> <p><b><i>Health Knowledge Network (HKN)</i></b></p> <p><b>Est: 1993</b></p> <p><b>Website:</b>  <a href="http://library.ucalgary.ca/branches/healthscienceslibrary/">http://library.ucalgary.ca/branches/healthscienceslibrary/</a></p>	<p>Collaborative venture between: the University of Calgary and the University of Alberta. The two partners have equal decision-making power</p> <p>Provision agreements shared with:  Health authorities  Research institutions  Health boards  Majority of post-secondary educational institutions in Alberta and Saskatchewan</p>	<p>Services provided through the universities:</p> <ul style="list-style-type: none"> <li>-Online and classroom training</li> <li>-Document delivery</li> <li>-User support</li> </ul> <p>Services reach 80% of the health practitioner community in Alberta</p>	Physical space available for members at both university libraries	Remote access granted with a username and password	<p>A subscription to the databases provides unlimited access for a fixed price. Institutional rates are available upon request. Prices for document delivery are on a pay-as-you-go basis. Moving towards full cost-recovery through a pricing strategy and pursuit of external funding such as grants and sponsorships</p>
<p><b>Saskatchewan:</b></p> <p><b><i>Saskatchewan Health Information Resource Partnership (SHIRP)</i></b></p> <p><b>Est: 2003 (Phase I)</b></p> <p><b>Website:</b></p>	<p>Agreement between:</p> <ul style="list-style-type: none"> <li>-The University of Saskatchewan</li> <li>-Saskatchewan Academic Health Sciences Network (SAHSN)</li> <li>-Saskatchewan</li> </ul>	Province-wide access to online health resources available to all health care providers regardless of affiliation	Operates from the University of Saskatchewan Health Sciences Library	Remote access granted with a username and password	<p>Cost: 2.5M annually  1.2M for University of Saskatchewan Health Sciences Library  1.3M for implementation in health region</p>

<a href="http://www.usask.ca/medicine/shirp/">http://www.usask.ca/medicine/shirp/</a>	<p>Health Libraries Association (SHLA)</p> <p>Partnered with the Alberta Health Knowledge Network (HKN) to negotiate licenses</p>				<p>Initial funding provided by the provincial government</p> <p>Now in Phase III of IV, final funding information TBA</p>
<p><b>Newfoundland/ Labrador:</b></p> <p><b><i>Newfoundland and Labrador Health Knowledge Information Network (NLHKIN)</i></b></p> <p><b>Est: 2001</b></p> <p><b>Website:</b>  <a href="http://www.med.mun.ca/nlhkin/">http://www.med.mun.ca/nlhkin/</a></p>	<p>Sponsored by: Memorial University of Newfoundland (MUN) Health Sciences Library and Faculty of Medicine</p>	<p>Provides province-wide access to online databases and journals</p> <p>Membership options include:</p> <ul style="list-style-type: none"> <li>-Corporate</li> <li>-Associate</li> <li>-Personal</li> </ul> <p>Available to any individual / organization in the province</p> <p>Offers traditional library services such as:</p> <ul style="list-style-type: none"> <li>-Document delivery</li> <li>-Training</li> <li>-Technical support</li> </ul>	<p>Strictly a consortial arrangement managed by MUN</p> <p>Physical space is not provided</p>	<p>Offers option of on-site only access (IP address) or both on-site and remote access (both IP and proxy access)</p> <p>Those with off-site access will be provided with a username and password</p>	<p>Province-wide sharing of costs through membership fees</p> <p>Individual memberships start at \$150</p>

## Summary

Varying levels of arrangements exist regionally and provincially across Canada. Consortial agreements aim to meet the financial need of stakeholders while health networks leverage purchasing power in conjunction with meeting the professional needs of clients through a customized suite of resources and deliverable products and services.

This benchmarking exercise serves as an indicator not only of types of relationships but locations and circumstances of new and emerging relationships. These models will serve as guidelines during the construction and implementation of the Western Ontario Health Knowledge Network.