

**Consortium of Ontario Academic Health Libraries (COAHL)
report to Associated Medical Services, Inc.
March 2001**

1) HISTORY AND BACKGROUND

The Consortium of Ontario Academic Health Libraries (COAHL) grew out of an Associated Medical Services Inc. (AMS) initiative to “link” the five Ontario university libraries serving medical schools. A key component of the AMS commitment to enhance medical education throughout the province was the improvement of access to information for all practitioners, including those in non-urban and northern communities. The libraries were envisioned to be the catalysts. By applying technological and communication developments and by working cooperatively, the libraries could “link” their information resources such as electronic health sciences databases, and in turn provide the access needed by the individual health science student or practitioner.

In June 1994, AMS sponsored a meeting with the directors and systems staff of the Bracken Health Sciences Library (Queens, Kingston), the Gerstein Science Information Centre (Toronto), the Health Sciences Library (McMaster, Hamilton), the Health Sciences Library (Ottawa), the Allyn and Betty Taylor Library (Western Ontario, London). The purpose of the meeting was to discuss how access to health sciences electronic databases could be enhanced and to consider joint actions that could be undertaken to prepare for the future information needs of faculty and students. From the discussions, it became clear that the implementation of database networks varied between the institutions but that the libraries shared a common vision with AMS of making health sciences information available as widely as possible and integrating education into the model. At a subsequent meeting in October 1994, AMS recommended that a COAHL proposal for joint funding of access to additional resources be submitted to AMS, providing each library completed the networking of core services consisting of MEDLINE, HealthSTAR and CINAHL. A consortial licensing agreement for a common platform for core health sciences databases was negotiated by the libraries. By February 1995, letters of intent were signed by the universities and on June 19, 1995 the COAHL Constitution was formally adopted. In keeping with the AMS commitment to furthering support for bioethics and social education, COAHL developed a plan to share access to other databases such as Bioethics. AMS provided support for the development of COAHL and its activities by funding one meeting per year. The seventh COAHL meeting funded by AMS will be held April 4-5, 2001 in Toronto.

2) COAHL TERMS OF REFERENCE – VISION, GOALS, OBJECTIVES

The vision of COAHL is improved health care through enhanced access to information. Ontario's health practitioners are spread over a vast geographic area and many have limited access to information services and resources. Due to the high cost of health information resources and the technical infrastructure required, there is not uniform access across the province. COAHL fosters dynamic collaborative and cooperative activities among its member institutions to provide enhanced access to information for health professionals within the universities and their regional affiliations. COAHL is proactive in initiating resource sharing and funding partnerships to enable educational and outreach activities in Ontario.

The Consortium:

- Explores shared funding opportunities
- Fosters the adoption of standards which will promote resource sharing
- Fosters the implementation of electronic access to health information province-wide
- Plans cooperative activities
- Negotiates favourable pricing with vendors
- Fosters the development of educational initiatives and assessment tools

The Consortium works cooperatively with other university and health care organizations in Ontario such as the Council of Ontario Universities, the Ontario Hospital Association, the Ontario Medical Association and the Ontario Nurses Association.

3) COAHL MEMBERSHIP

Members are the directors of the five health sciences libraries and one other appointee representing each Ontario university with a medical school.

4) ACHIEVEMENTS RESULTING FROM AMS FUNDING

Each of the initiatives described below highlights the way in which AMS funding has allowed COAHL to move towards fulfilling its vision of improved health care through enhanced access to information throughout Ontario.

a) Equalizing Access to Information Resources for all Ontario Medical Students

A primary goal of COAHL when it was formed in 1994 was to ensure that all medical students in Ontario, regardless of where they were enrolled, would have access to core online information resources. In 1994, it was agreed that

MEDLINE , CINAHL and HealthSTAR were essential resources and that each institution should support and provide electronic access to these databases. With funding provided through AMS, COAHL then put into place a system that allowed all members to share other important databases without mounting them at each institution. Cancerlit, Bioethics and Aidsline were mounted at Western, Queen's and Ottawa respectively and transparent access was provided to medical and other health sciences students at each of the other institutions. This equalized access at a fraction of what it would have cost each institution to mount the databases separately.

In the course of implementing a shared database system, favourable consortial pricing arrangements were negotiated with OVID, a major vendor of health sciences information resources. OVID representatives have been invited to each of the COAHL meetings and issues having to do with performance, access and cost have been dealt with on a collective basis for the benefit of all five institutions since 1994.

Until 2000, the OVID databases were mounted locally at each of the COAHL institutions (or at one of the institutions in the case of the shared databases). In the Fall of 2000, at OVID's request, the COAHL sites began to access the databases online directly from OVID's Salt Lake City headquarters. This improved database currency but a number of performance and connectivity issues have been identified which COAHL is collectively working through with the vendor. In agreeing to move to an online system, COAHL also negotiated a new consortial pricing agreement. Finalization of this agreement is pending resolution of the performance issues. The collective voice that COAHL brings to the table in resolving these issues is of benefit to all five institutions.

Consortial pricing arrangements with OVID have resulted in lower overall costs for the five COAHL libraries. The expectation is that this will continue in the future, with OVID and with other vendors. In the Fall of 2000, a new agreement was reached with MDConsult to provide full-text journals, electronic textbooks, clinical guidelines and patient information to COAHL libraries at a substantial discount. In addition, COAHL members have been able to leverage very favourable pricing for access to OVID and MDConsult for their affiliated teaching hospitals and other affiliated institutions.

Quite clearly the funding provided by AMS has facilitated the equalization of access to information within the institutions, and has allowed COAHL libraries to deliver the full potential of the databases and information resources that it licenses to its user community and beyond.

This year nursing is a special focus. With special funding from AMS for 2001, COAHL is taking a leadership role to develop a proposal for electronic nursing resources to support the new baccalaureate nursing curriculum which will be introduced across the province beginning in September 2001. This is an exciting

undertaking and involves working with approximately 17 college libraries and 8 other Ontario university libraries that currently have nursing programmes but not medical schools. COAHL is also working with the Ontario Council of University Libraries to investigate long-term funding for this initiative through the Ministry of Training, Colleges and Universities. The other libraries acknowledge COAHL's past success and collective expertise in this type of undertaking and recognize an opportunity for widespread benefit to all nursing students and faculty.

b) Educational initiatives within the institutions

COAHL members have offered instructional support for undergraduate and graduate programmes in the medical and health sciences faculties for a number of years. However, societal changes requiring more accountability and cross functional team approaches, community-based education, evidence-based practice and the growing availability of electronic health information resources have influenced libraries to find new ways to address these emerging needs. COAHL members have received additional funding from AMS since 1998 in support of their initiatives designed to investigate new instructional approaches. The goal of each COAHL library has been to increase involvement in the health sciences curriculum through integrated health informatics instruction. In addition, COAHL fosters increased faculty outreach through a variety of programmes in order to increase faculty knowledge of electronic health information resources.

Faculty education programmes in the form of individual tutoring in faculty offices (House Call programmes) or workshops designed to address the needs of specific user groups have successfully been applied at all five COAHL sites. Both individual tutoring sessions and group instruction sessions are evaluated through the analysis of returned evaluation forms and feedback from the sponsoring departments. Feedback and evaluation results are regularly incorporated in the programmes so that they more closely respond to target audience needs. The outcomes of the individual sessions and group instruction show increased awareness of electronic information resources, incorporation of electronic information use in professional work and the acknowledgement of the need for student education in informatics.

The University of Ottawa's Health Sciences Library produced a video in both English and French called Basic principles in running a computerized bibliographic search on medical databases: Browsing MEDLINE to reach distance education students and students who are not able to attend in-house training sessions. The feedback from users, received through a formal evaluation process, has been positive: 100% of respondents would recommend the video to their peers and over 70% of them acknowledged that their searching skills had improved after viewing the video.

McMaster University's Health Sciences Library has carried out Informatics Mentorship Programmes in order to integrate information management skills into the problem-based, self-directed learning of the Faculty of Health Sciences. Extensive tutor and preceptor training has also taken place. In the MD student mentorship programme individual students volunteer as mentors of their peers and receive extensive training in the use of databases and other relevant resources. A nursing faculty informatics mentorship programme is also underway and results obtained through student surveys and faculty activity logs show improved skill levels in performance. As a result, the programme is being expanded. Formal evaluation of the nursing faculty informatics mentorship programme is being undertaken with the first year nursing students at McMaster. Pre and post intervention questionnaires were administered last year, and are being administered this year to test the instrument for validity. This summer a research project is being undertaken with the Health Sciences Center Library at the University of New Mexico to further develop the instrument and to test its validity in a number of settings.

AMS funding for educational initiatives in the COAHL institutions has had a tremendous impact. The COAHL participants have been able to expand their offerings of instructional programmes, and share their experiences, learning and evaluation materials, and marketing approaches between the five institutions. This has made it possible to increase instructional output (as measured by numbers of classes and participants) without any increase in permanent staffing. The following outcomes are apparent from the educational projects: increased faculty awareness of the importance of informatics; more integration of informatics instruction into the curriculum; expansion of instructional programmes to all health disciplines; more use of electronic resources by faculty and other practitioners and student awareness of the importance of medical informatics in practice situations.

COAHL libraries and their users benefit greatly from the sharing of information between the COAHL members. Much of this sharing focuses on the educational initiatives described above: how users are trained in information literacy; teaching and learning tools; integrating informatics-related educational programmes in medical and health sciences curricula. As a result of working together for many years on sharing teaching and learning programmes related to information literacy and evidence-based medicine, COAHL is well positioned to support another of the AMS funded initiatives, namely the development of a common Ontario curriculum across the medical schools.

c) Community Outreach

The same societal changes mentioned above impact on health care professionals practicing in the communities surrounding the five medical schools. The focus on evidence-based practice and the new accreditation requirements are encouraging practitioners to improve their information management skills and incorporate

these new skills in their daily practice. Through AMS community outreach funding since 1999, COAHL libraries have been able to be responsive and proactive in their communities.

Over the years, all COAHL libraries have had many requests from non-affiliated users to access information and library services. As well, the medical schools are relying increasingly on community physicians for instruction, effectively creating a new model of distributed medical education in each region of Ontario. These new adjunct faculty members are entitled to information resources, and their students, who have learned to rely on these while in the Academic Centres, are expecting this access to be available to them in community-based teaching locations. Easy access to reliable health care information resources from community or rural settings is, of necessity, becoming an increasingly important priority. In conjunction with this, there is an essential need to teach the research skills to help community health care professionals to be both efficient and successful in retrieving the desired information.

At each COAHL site, the librarians are involved in teaching information literacy skills to specific groups in their communities. This teaching can range from how to access free Internet resources such as PubMed to the use of electronic databases and other information resources through the libraries' licenses with commercial vendors. In the latter case, other services available at the academic centres are also offered, such as document delivery and reference services. AMS funding is used to launch these programmes and subsidize the initial training and services. On-going operating costs are borne by the participants. Informal evaluation shows that there is a great need for these services and participants particularly appreciate the training sessions. Where possible, participants receive continuing education credits for PEARLS (College of Family Physicians of Canada) or MOCOMP (Royal College of Physicians and Surgeons of Canada), through arrangements made by the libraries with the CME departments of their respective health sciences faculties.

The House Calls project at Western, described above, was extended to adjunct faculty located in the community and the local hospitals. This saves time for busy health professionals as they do not have to travel to attend a continuing education session. Also at Western, the academic librarians are training rural hospital librarians to take on the training role in their communities.

The University of Ottawa librarians planned and delivered a very successful workshop for palliative care workers in the community to learn Pubmed, Loansome Doc and OHeLP. Future sessions are in the planning stages.

Evidence-based practice workshops were given to physicians, nurses and other allied health professionals by the librarians at McMaster University. Following a survey of resources, skills and connectivity in Spring, 2001 a customized clinical desktop will be designed to offer online access to information resources to the

Department of Family Medicine Community Based Residency Training preceptors.

At Queen's University a number of small projects were carried out to offer access to information resources to community health care professionals in Southeastern Ontario. Four Community Health Centres gained access to MEDLINE and other databases, to teaching and reference services, as well as document delivery. After 15 months of subsidized access, Bracken Health Sciences Library offered to continue the services for a small fee. As a result of lack of funding only one Community Health Centre, in Merrickville Ontario, was able to continue in 2000 and is renewing for 2001. The health care professionals working at this site are delighted with the services and local training opportunities.

In June 2000, a small group of nurse managers from the VON also approached Queen's Bracken Health Sciences Library to discuss access to information resources as a means of enhancing their evidence-based practice. A pilot project was launched with great enthusiasm, and the participants are most grateful for the information services Queen's has been able to offer thanks to AMS funding.

A recent new initiative is worth mentioning in detail. The Quinte Healthcare Corporation has signed an agreement with the Bracken Health Sciences Library at Queen's, so that their four hospitals (3 are rural) can avail themselves of a "virtual library". Information services and resources will be provided from Bracken Health Sciences Library via the Internet: databases, full-text journals and textbooks, reference service, database research help, connectivity troubleshooting, and document delivery. Librarians will travel to the sites to offer training to small groups of health care professionals in all disciplines: medicine, nursing, OT, PT, social work, pharmacy, etc. During the first year of this agreement, AMS funding to Queen's will be used to support travel expenses and teaching.

The University of Toronto has developed a different service, also much in demand in the community. Using funding provided by AMS, the Library is offering document delivery to non-affiliated physicians at a subsidized price. The first phase of the pilot project ended in December 2000 and based on the number of requests received during the trial, the Library is continuing to offer the service and is even expanding it to include the participants of the NASHN project (see below).

Surveys and questionnaires are now being developed at each academic site to obtain feedback on the services, suggestions for improvements, or to help the COAHL libraries identify needs not covered with the present arrangements. All results of this evaluation process will be forwarded to AMS with our annual reports when the compilations have been completed.

d) Meetings

Since 1994 AMS has sponsored one meeting per year for COAHL. The importance of these meetings cannot be overstated. They provide a formal, structured framework for exploring and fostering common goals and objectives. They facilitate shared learning, information exchange, and sharing of ideas for new initiatives. They permit rigorous discussion regarding implementation of projects. The fact that this is a small group of like-minded people with a whole-hearted interest in collaborating with one another helps to ensure the effectiveness of these meetings. While the COAHL email listserv is used extensively for communication of information between meetings, it is well known that this is no substitute for the lively discourse made possible by a face-to-face meeting. In fact, meetings have proven to be so effective for COAHL that a second meeting per year now occurs as well, funded by the institutions. While the AMS funded meeting always occurs in Toronto, the venue for the second meeting rotates among the four other sites. This provides an excellent opportunity to view, first-hand, new and different resources and equipment and to promote further sharing of ideas. COAHL also takes advantage of the meeting setting to invite guests e.g. from OVID to provide information that will help with decision-making.

e) OHeLP–Ontario Health Link for Professionals

OHeLP has been supported with AMS funding since 1997.

The goal of OHeLP is to provide health care practitioners in Ontario with a single web-based source to locate health information resources and services. All web sites included have been evaluated for currency and accuracy, and are described with contact information, any restrictions on use, and whether or not costs are involved. The OHeLP site was developed with feedback from health care practitioners across Ontario, with full release in April 1998.

OHeLP began as a very basic web site and has evolved and changed over time. While the overall site architecture has not changed, many new services and categories of web resources have been added (e.g. drug information, clinical information). Because many practitioners have expressed an interest in locating quality web resources in alternative medicine, work is underway to create a new web resources category, *alternative and complementary health care*. Enhancements are based on input from practitioners and service providers. Feedback from community practitioners is very positive; comments include the fact that people really enjoy having a Canadian gateway to information. Statistics reflect a 100% increase in use from 1999 to 2000, with an average of 5000 successful requests per month in 1999 and over 10,000 in 2000.

Promotion plays an important role in the project. An OHeLP brochure was developed for distribution to the target groups from the outset. Major health professional associations in Ontario have been contacted and brochures have been

sent to the membership. Many of the associations have also included a short write-up about OHeLP in their publications. OHeLP has been presented at annual conferences, including those of the Association of Canadian Medical Colleges (ACMC) and the Canadian Health Libraries Association (CHLA). Hands-on sessions were available to attendees at the Ontario College of Family Physicians annual conference. Members of COAHL have been actively promoting the site to community practitioners, faculty and students in their respective regions through a variety of workshops. In addition, a link to OHeLP is made from all COAHL web sites. The Project Planner for the Northern Academic Health Sciences Network (NAHSN) has been promoting OHeLP to rural community practitioners in Northern Ontario (see below). An article about the project appeared in the official publication of the Canadian Health Libraries Association. (Bayley L. Bhatnagar N. OHeLP: Ontario health link for practitioners. *Bibliotheca Medica Canadiana*, 20(3):119-21, 1999 Spring)

As OHeLP approaches its third anniversary, it is time to re-evaluate the service to ensure that the delivery method, the structure and the content are meeting the needs of the target audience. Over the coming months, discussions with NAHSN, which began at the October 2000 COAHL meeting, will continue to explore how the two entities can work collaboratively towards meeting the needs of the Northern Academic Health Sciences Network for a web gateway to quality health resources.

OHeLP can be accessed at <http://ohelp.mcmaster.ca>.

f) Northern Academic Health Sciences Network (NAHSN)

In 1999, the Northern Academic Health Sciences Network (NAHSN) received Ontario government funding to develop on-site education for medical specialists and to expand education programmes for other health professionals in Northern Ontario. COAHL was contracted by NAHSN to coordinate the information services component of the project and COAHL hired the information services Project Planner in February 2000. This two-year project focuses on conducting needs assessments, implementing services and resources, and evaluating the outcome in Northern Ontario. The pilot project started with four sites strategically located in the eastern and western sectors of Northern Ontario.

One of the primary responsibilities of the Project Planner is to design, conduct and evaluate information needs assessments on behalf of NAHSN, initially looking at how Northern Ontario health practitioners access information in support of patient care, education and research. Baseline data is required about the kind of information needed, circumstances for seeking information, what would facilitate acquiring the needed information, and the barriers to obtaining the desired resources. Throughout Northern Ontario, health practitioners face information service challenges: unreliable technological infrastructures, limited

computer equipment and Internet access, poor information searching skills, lack of a professional health sciences librarian, slow document delivery, and the overall sense of isolation experienced by those who live in rural or remote locations world-wide.

Technology infrastructure was upgraded to facilitate information access. Building on COAHL's relationship with OVID, access to a suite of electronic resources, including health sciences databases, journals and textbooks, with a focus on evidence-based practice, was purchased. Beginning in early 2001, the Pilot Expansion Period added seven new pilot learning sites. The Project Planner provides on-site training in searching the OVID system and other Web-based resources. The NAHSN Project is now conducting an Internet-based (Ariel) document delivery pilot through McMaster University, and an OVID electronic document ordering pilot through the University of Toronto, for health practitioners at seven of the pilot sites. While it is planned that many of the resources provided in the North will be in electronic format, it will also be important to provide efficient access to print-based resources held at libraries in Southern Ontario and beyond.

COAHL is committed to collaborating with NAHSN to establish a state-of-the-art Regional Library Service for all health practitioners and learners in Northern Ontario. Further information on this project can be obtained via the NAHSN web site which is available at: <http://www3.sympatico.ca/joanne.muellenbach>

5) RECENT DEVELOPMENTS IN THE FIELD

There have been many developments in the library and information science, health care delivery, education and research fields since COAHL was formed in 1994, resulting in changes in the scope and focus of projects being undertaken by the Consortium.

Library and Information Science: Academic libraries in general and academic health libraries in particular have a long tradition of collaboration. Various organizations and groups are working to develop a national vision of health information. COAHL directors are members of the Association of Canadian Medical Colleges (ACMC), and keep abreast of projects in other provinces.

Examples such as the Health Knowledge Network in Alberta (<http://www.ucalgary.ca/HKN/>) and the Health Knowledge Information Network in Newfoundland and Labrador (<http://www.med.mun.ca/nlhkn/>) have been used as models when COAHL has submitted proposals for access to resources by health care practitioners in Ontario. COAHL submitted a proposal to the Ontario Government for an Ontario Digital Library of Healthcare (ODLH), which is now on hold. COAHL members are involved in the Canadian National Site Licensing

Project, (<http://www.uottawa.ca/library/cnslp>) spearheaded by the Canadian Association of Research Libraries, which is using Canada Foundation for Innovation monies to provide access to electronic full-text journals, unfortunately restricted at this point to the university community. COAHL members are taking an active role in the development of the National Network of Libraries for Health, an important initiative currently being led at the federal government level, by Health Canada (<http://www.med.mun.ca/chla/nmlhrev.html>). The technological environment for libraries has changed and continues to change rapidly, and the move from local mounting of databases to Internet-based access to information has improved, and will continue to facilitate, the sharing of information resources. As the Internet continues to develop, COAHL will continue to monitor and respond to advances in information delivery methods.

Health Care Delivery: Health care delivery in Ontario has also changed in the past seven years. Primary Care Reform will result in interdisciplinary health teams and COAHL has therefore broadened its audience to include not only physicians but also nurses and other allied health professionals. As health care moves from the hospital to the community, COAHL has responded by carrying out community-based projects. OHeLP (Ontario Health Link for Practitioners) was set up expressly to meet the needs of practitioners in the community. The Ontario government has recognized the shortage of physicians and specialists in the North, and has funded the Northern Academic Health Sciences Network (NAHSN). As has been described earlier, COAHL is taking the lead role in planning for library services for NAHSN.

Health Sciences Education: Through its educational projects, COAHL has worked to prepare health sciences students for their roles in an evidence-based practice environment. By 2005, all nurses being licensed for practice in Ontario must be graduating from baccalaureate nursing programmes. As a result, universities and community colleges in the province are collaborating to offer integrated programmes. A key element will be access to resources, and, as described above, COAHL is taking a leadership role to facilitate consortial licensing of core nursing resources Ontario-wide. As health care moves out into the community, training of health care practitioners also moves from institutional to community-based settings. Increasingly faculty, preceptors and students are off-site, resulting in the need to provide remote access to resources and to training and support. COAHL libraries are building their electronic resources through collaborative licensing and are sharing their training documents. COAHL is now recognized as an important component in the planning of the health sciences curriculum. For example, COAHL directors were invited to attend the 2nd Annual Education Conference: "The Ontario Curriculum" held in Ottawa November 9-10, 2000.

Health Research: The federal government has recently made major changes to the structure and funding of health research. The Canadian Institutes of Health Research (CIHR) (http://www.cihr.ca/about_cihr/who_we_are/fold_e.shtml) seeks

to provide an interdisciplinary approach with a number of “virtual” institutes. COAHL continues to work with other ACMC libraries to ensure that they play a key role in the provision of information resources to support research and in the dissemination of that research.

6) FUTURE DIRECTIONS

The original vision shared by COAHL members of delivering health information resources and services to all health care practitioners in Ontario will remain the driving force behind future projects. While COAHL has made significant progress across a broad front, there remains much to be done that will need funding. COAHL’s partnership with AMS is a key element that will help to leverage this funding.

Future projects will continue to address information content and access. COAHL will work more closely with other provincial consortia to negotiate access to existing and new resources for health practitioners. With emerging technologies, publishing patterns are changing (for example, pre-publishing on the web, image digitization and electronic theses archiving and distribution). COAHL will need to investigate shared solutions to issues that arise from these initiatives, with the goal of providing wider availability with integrated and seamless access.

Future projects will also address education. As faculty develop and implement strategic plans for e-learning which involve common resources, COAHL will focus on providing tools that link course content to information resources. COAHL will pursue the development and sharing of web-based educational tools and other health informatics-related educational programmes.