

THE HIA PROJECT PORTFOLIO

EXECUTIVE SUMMARY

In the fall of 1999, by agreement of the Council of Atlantic Premiers, a collaborative venture known as Health Infostructure Atlantic (HIA) was created to develop greater levels of cooperation in health information technology and information management activities across Atlantic Canada. After an initial visioning and common opportunities assessment in March 2000, HIA pursued and was successful in receiving funding under the Canada Health Infostructure Partnership Program (CHIPP) for three specific initiatives: Case Management, Common Client Registry and Tele-i4.

HIA was awarded \$12 million by CHIPP to implement the HIA Project Portfolio over the period from July 1, 2001 to December 31, 2002. The \$12 million award was matched with \$12 - \$18 million from Atlantic Canada for a total project budget approaching \$30 million dollars. The HIA Project Portfolio consists of three initiatives and eight project components. The three initiatives are: Common Client Registry (PEI), Case Management (NF, NS and PEI) and Tele-i4 (all four provinces). Each of the initiatives and project components is described below.

Common Client Registry Initiative

A Common Client Registry (CCR) will be implemented in Prince Edward Island during the CHIPP time frame. HIA worked together to create a common vision, five-year plan, definitions and attributes for the CCR initiative. The HIA vision for the Atlantic Provinces is one logical registry that spans the continuum of health care, and is able to provide accurate information by linking to all health encounters that an Atlantic resident has received. HIA will create information standards for the CCR to ensure interoperability. Standards will be created collaboratively across Atlantic Canada and with the Canadian Institute for Health Information (CIHI).

The definition of a CCR is one main database per province that is created, maintained and administered at the provincial level. This is the database that maintains the “master” client index for all residents in the province plus it includes out-of-province clients and out-of-country clients when health services have been provided to them.

A provincial CCR must have the ability to link with regional health databases, in order to provide a level of integration between all components of the health care system. It must also have the ability to link with health systems provided directly by the province, such as community health and social services programs. Correct and secure linkages to all these databases creates a virtual database and supports the client through the continuum of care, at all organizations included in the delivery of health care.

A CCR is to be developed for each province with a future opportunity to electronically link these databases together. The CCR is not only seen as a building block for the

electronic health record, it is the essential integration component of the electronic health record. An electronic health record must be able to positively identify a client and provide all the correct and appropriate links to health encounter information that in most cases will be available in a multitude of databases and computer systems. If a CCR does not exist, information is fragmented and incomplete.

Like the vision for the Canada Health Infoway, it is recognized that a complete structure of an electronic health record is built upon several integrated databases, and that the CCR is the link that binds them together.

Case Management Initiative

Case Management applications will be implemented in three of the four Atlantic Provinces as part of the HIA Project Portfolio. HIA also created a vision, definition and attributes for Case Management applications across Atlantic Canada. In addition, HIA will develop a number of information standards for Case Management applications in home care. All standards development work will be in collaboration with CIHI.

The Atlantic vision for Case Management “is a collaborative process which assesses, plans, implements, coordinates, monitors and evaluates services to meet an individuals needs through communication and available resources to promote quality, cost-effective outcomes”.

Case Management is usually the term applied to the management of health service delivery in the community health sector. The scope of case management can be very broad, as it encompasses many community-based programs such as home care, child health services, and mental health clinics to name just a few.

As some provincial ministries of health also include the social services portfolio, Case Management programs may also include financial assistance, child welfare, and similar programs. As well, in some instances Case Management may involve working with other social sector partners such as justice and education. Such multi-disciplinary approaches may be required at times to meet the client’s overall needs.

A Case Management application will be deployed in Newfoundland and Labrador to a multi-jurisdictional government program that targets children and youth at high risk. This is a joint effort by several government departments to improve communication and collaboration across staff of several government departments: Health and Community Services, Education, Justice, Human Resources and Employment. This deployment to the “Children in Need” Program builds on an existing Case Management system that is currently in use in the Department of Health and Community Services, the Client Referral and Management System (CRMS).

Prince Edward Island and Nova Scotia are also implementing Case Management applications in their home care programs. In Nova Scotia, a provincial Single Entry

Access System is being implemented which includes intake, assessment, care planning and waitlist management. In Prince Edward Island, the software application will cover the full range of functionality including intake, assessment, care planning, discharge planning and financial management.

Tele-i4 Initiative

Tele-i4 stands for the *inter*-provincial *integration* of *images* and *information*. It refers to the deployment of tele-radiology or Picture Archiving Communication Systems (PACS) equipment across Atlantic Canada. All four Atlantic Provinces are implementing selected deployments of Tele-i4.

HIA will bring together expertise from across Atlantic Canada to create technical and information standards to ensure that information can be transmitted from rural to urban facilities and to tertiary care facilities for consultation and referral. This work will build on the work of CCR standards committee. A key piece of this work is to create a patient identification standard to ensure that patient information and images that are transferred from one province to another province electronically, to support good clinical care, can be correctly and accurately assembled in the receiving province.

An HIA Vision, five-year plan, definitions and attributes document were created. The Tele-i4 Vision for the Atlantic Provinces is to deliver clinical information (diagnostic images and reports) in the most expeditious and cost-effective manner to all segments of the health enterprise. To achieve this vision, advanced information and communication technologies that collectively comprise PACS will be deployed in selected sites in all four Atlantic Provinces. Based on a thorough assessment of specific provincial requirements, experiences and priority needs, Tele-i4 is being implemented in selected rural and small urban hospitals, provincial and Atlantic tertiary referral centres, regional hospitals, health centres and a pilot site in a physician clinic. All four provinces will implement key components of a PACS infrastructure. A chief feature of the Tele-i4 Initiative is inter-provincial sharing of diagnostic images and reports.

Tele-i4 will maximize the use of many advanced communications and information technologies. Through the deployment of *Computed Radiography Readers* (CR Readers) and *Film Digitizers*, diagnostic images can be captured in digital format, or converted from film to digital format. Once digitized, this information can be transmitted over communications networks from one location to another, such as a rural facility in one province to a tertiary referral centre in another province. The Tele-i4 initiative will facilitate remote consultations, better utilization of scarce radiology and other speciality resources, and significantly reduce patient and provider travel. Instead of physically moving patients and providers, Tele-i4 will move the information.

Through the deployment of *Advanced Software* and *Diagnostic Workstations*, radiologists can magnify and manipulate radiology images, thereby improving diagnostic quality. *Clinical Review Stations* and *Web-based Technologies* will make it possible for other

specialists, primary care physicians, and other members of the multi-disciplinary team, to access and use radiology images and reports when and where needed. To better manage, store, retrieve, share and integrate radiology information and reports into other components of the patient record, *Archiving Technologies* will be deployed at the regional and provincial levels. Collectively, the technologies and enterprise-wide processes deployed in Tele-i4 are “break-through” components for building the Electronic Health Record.

During the CHIPP time line, provincial networks will be connected to ensure that patient information and images can be electronically transferred from the Tele-i4 sites, across provincial networks to support current referral patterns for referral, diagnosis, and consultation.

It is important to note that once the Tele-i4 project is fully deployed in Atlantic Canada, it will be the largest inter-provincial implementation of PACS equipment in Canada.