

# Ministry of Health Services

## Information Resource Management Plan 2008/09

Health Sector IM/IT Division





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Health Services

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# Message from the Assistant Deputy Minister

In accordance with the *Budget Transparency and Accountability Act* and the *Government Core Policy*, I am pleased to present the 2008/09 Information Resource Management Plan for the Ministry of Health Services.

*...health information needs to be centred on and organized around individual people and patients...*

The Ministry of Health Services continues to be committed to improving the availability of timely, integrated health information to aid clinical and management decision making across British Columbia's health system, and to enhancing electronic health service delivery. Consistent with its mandate to provide health care system leadership, the Ministry is building a culture in which both clinical and management decisions are always made on the basis of reliable evidence. Substantial progress has already been made towards improving the quality of health data and information.

The Health Sector IM/IT (HSIMT) Division - previously known as the Knowledge Management and Technology Division - underwent a strategic business shift in October 2007, when the Health Information and Modernization Branch, and five of the branch's seven sections, moved to a newly established Health System Planning Division. This new planning division develops and articulates the direction and long term vision for the overall health system, and guides planning activities taking place across the Ministry and Health Authorities. The restructured HSIMT Division contains six branches.

The Ministry's HSIMT Division has been given the mandate to ensure a unified approach to the provision of accurate, relevant and timely health information, and to help build an effective and robust health information infrastructure through provincial and national partnerships. This task is challenging, but the past year has seen material progress. We have focused the scope of our organization, continued to streamline internal operating processes, and strengthened our relationships with external partners and stakeholders, including the government CIO's office.

HSIMT has made progress in improving data quality in our existing systems and in the integration of those systems, in improving the input of ministry program areas into systems development planning, and in enhancing the access of decision makers to the timely and relevant information they require. These achievements have bolstered the Ministry's ability to analyze and use reliable data as a foundation for its decisions.

To be truly useful on a more personal level, health information needs to be centred on and organized around individual people and patients, rather than the places where the services are delivered (hospitals, clinics, local medical practices, etc). eHealth will support and enable a more effective, integrated and coordinated approach to communication and information sharing across the entire spectrum or continuum of health care. We have renewed and strengthened our efforts to lead and facilitate the delivery of the Ministry's eHealth vision across the Province.

The eHealth Strategy Council has replaced the eHealth Steering Committee, which was formed in 2005. The eHealth Strategy Council provides impetus and strategic direction to the development and deployment of eHealth in British Columbia. This council works to ensure the coordination and integration of initiatives across the Province aimed at improving clinician and patient access to critical personal health data. The eHealth Deployment Task Group works under the guidance of the council to ensure an efficient, effective and coordinated deployment of eHealth across BC. The various initiatives when taken together represent the comprehensive development of an interoperable Electronic Health Record along with an effective Telehealth capability.

*...fundamental to the efficient delivery of modern health services.*

We work closely with the Health Authorities and the health care provider communities to identify and refine our evolving eHealth delivery strategy. The Ministry has concluded a number of related joint funding agreements with Canada Health Infoway. We also continue to work with the Western Health Information Collaborative to advance our common information technology objectives.

The year ahead will be one of sustained effort on eHealth development and deployment, while ensuring that the broad underlying gains of past years are maintained, extended and suitably embedded within the Ministry's culture. All of this must be accomplished within a secure technical environment that properly manages timely access by authorized health care professionals to patient information intended to support clinical requirements, at the same time maintaining consistent and appropriate protection of each citizen's privacy.

Two of the major ongoing issues for eHealth are firstly, the efficient deployment of the related technology once each of the many eHealth elements are fully developed, and secondly, continuing effective overall system governance. This ongoing governance is aimed at each major component following its initial deployment, as well as addressing the more comprehensive long-term governance required for the entire eHealth endeavour as an integrated system. Meaningful progress in dealing with these two pivotal issues is critical to the ultimate success of eHealth in British Columbia.

The rapidly growing demand for high-quality, timely and relevant data, along with the information derived from that data is increasingly recognized as fundamental to the efficient delivery of modern health services. Our ongoing challenge, and opportunity, is to increase the capability of the Ministry and the wider health sector to generate, assimilate and efficiently utilize the vast array of health data and information that will be available to us.

We must be able to help bolster the capacity of the health care system to properly accommodate new medical interventions and new drugs, its ability to meet underlying accountability requirements, and the consequences of growing demographic pressures, as well as the system's capacity to properly manage the impact of uncertain or largely unforeseen future events. Wide-reaching potential crises, such as the sudden arrival of a major pandemic, could severely strain the health system's capacity to mount a timely and effective response.

The tasks that lie ahead will definitely be challenging. However, I am confident that with clear objectives and strategies, prudent planning, and the support of our senior leadership, ministry staff and stakeholders, we will ultimately be successful in fully meeting our goals and objectives. We will continue to make significant improvements in the delivery of health information together with the supporting services and technology to meet the changing business priorities of the Ministry and the needs of the overall health system in British Columbia.

Original signed by,

Elaine McKnight  
Assistant Deputy Minister  
Health Sector IM/IT Division

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## Executive Summary

The Ministry's 2008/09 Information Resource Management Plan (IRMP) accommodates provincial and health system redesign priorities in the context of an increasing interest in and demand for Electronic Health Record and electronic health delivery solutions (eHealth), as well as global information security and privacy concerns. For 2008/09, and likely much of the next decade, eHealth will be a major focus for the Ministry's information management/information technology (IM/IT) efforts. Many of the associated initiatives are extremely complex and will require several years to develop and fully deploy on a province-wide basis.

*...eHealth will be a major focus for the Ministry's information management/information technology (IM/IT) efforts.*

In its Annual Service Plan, the Ministry's objective that relates directly to IM/IT is "strategic investments in information management and technology to improve patient care and system integration." The Ministry's five key IM/IT strategies reflect its business drivers and information resource management priorities, as well as support the Ministry's health goals. The IM/IT strategies are:

- Enhancing patient care by implementing a secure electronic health record system across the Province which will allow medical practitioners to easily access information (such as test results or medication histories) that will assist treatment while protecting personal privacy.
- Working with the British Columbia Medical Association and the College of Physicians and Surgeons to coordinate, facilitate and support information technology planning and implementation for physicians, including supporting the use of electronic medical record systems by physicians.
- Expanding telehealth to improve rural and remote residents' access to health services and specialists.
- Improving the availability of quality data and analysis to assist clinical and management decision making.
- Expanding public access to health services and health information through web-based applications.

The health information and technology management environment is complex, but its central principle is straightforward and clear – business needs determine information processing requirements, which in turn determine the appropriate technology infrastructure.

In developing the IRMP, ministry program areas were engaged in identifying their information management and technology requirements. In addition, there is a Capital Planning Executive Committee, composed of senior ministry program representatives, that reviews and ranks proposed ministry initiatives in terms of their strategic value, urgency, cost saving, cost sharing and risk. The committee's assessment is critical to the approval and funding of the various candidate projects.

Major eHealth initiatives with work planned for 2008/09 include:

*Aggregated Health Information Project (AHIP)* – this project will create an integrated provincial health information management infrastructure capable of quickly supporting new types of analyses.

*BC Public Health Information Project (PHIP)* – provides better access, delivery and integration of health care services for managing communicable diseases in BC, as well as improved systems to support public health field operations, and health related research and surveillance activities. It includes the implementation of an improved environmental health/health protection system.

*Connecting Diagnostic Imaging (CDI)* – supports and facilitates the storage and exchange of digital diagnostic images and reports across the Province.

*interoperable Electronic Health Record (iEHR)* – a combination of computer applications that will link care providers at the point-of-care with health information held elsewhere. The iEHR viewer will provide clinicians, working in most care settings, with access to a range of clinical information including laboratory test results, medication histories and diagnostic images.

*Provincial eDrug Project* – improves clinical access to patient medication profiles, expands the content of the profiles, and introduces the ability for a physician to electronically generate prescriptions (ePrescribing or eRx) linked to PharmaNet.

*Provincial Laboratory Information Solution (PLIS)* – a system designed to support laboratory test result sharing, which can provide medical test information to care providers across the Province right at the point-of-care.

Additional initiatives with work planned for 2008/09 include:

***Data Stewardship and Access Management (DSAM) Project*** – is intended to develop a comprehensive solution for the management of access to personal information banks maintained within the Ministry. Once implemented, the solution will allow the Ministry to more effectively manage its workload as data steward by providing a centralized repository of data access and data sharing information. It will also assist the Ministry in responding to enquiries from the Office of the Information and Privacy Commissioner related to the status of requests for access and data sharing agreements.

***Medical Services Plan (MSP) Public Website Redesign*** – will update the structure, content and navigation of the MSP public website, improving user access to information and ensuring the information is current and relevant for its intended audience.

*...sound and consistent, system-wide health information management.*

The HSIMT Division is the information technology and information management arm of the Ministry of Health Services. It is also responsible for the operation of the BC Vital Statistics Agency. HSIMT provides leadership and ensures that IM/IT strategies, policies, standards and technology initiatives support the integrated delivery of sound and consistent, system-wide health information management. The division is responsible for the overall strategic development, implementation and evaluation of the Ministry's IRMP, and for supporting the ongoing development of a decision-making culture in the Ministry that is based on reliable evidence. Implementation of eHealth across the Province over the next several years is a major focus of division efforts.

In 2008/09, the HSIMT Division, including the Vital Statistics Agency, has an estimated operating budget of \$95.58 million, a capital budget that has yet to be determined, and a projected staff complement of 224 full-time equivalents.



## Introduction

*...the sustainability of our publicly funded health care system.*

Provincial, national and even global developments continue to influence this year's Information Resource Management Plan (IRMP). Provincially, the Ministry of Health Services' 2008/09 – 2010/11 Service Plan articulates the goals, objectives and strategies on which the Ministry and our partners will be focusing as we continue the redesign and reform of the health system. In February 2008, the Government released its 2008/09 – 2010/11 Strategic Plan, which outlined five Great Goals for a Golden Decade. The current Ministry information management/information technology (IM/IT) plan is congruent with those five Great Goals for the Province.

A number of socio and macro-economic pressures threaten the sustainability of our publicly funded health care system. These pressures or business drivers are:

- A growing and aging population, foreshadowing a steadily growing demand on health care (e.g. from the impact of chronic diseases).
- A shortage of health care professionals that threatens to limit the supply of skilled practitioners and extend waitlists for some health care services.
- Emerging threats to public health, like SARS and avian flu.
- Citizens are increasingly expecting the same consistent and equitable health care access across remote regions as in densely populated urban centres.
- New treatments and technologies whose higher costs strain health care budgets.
- Silos of care that fail to provide patients and service providers with timely and seamless access to the information they require, causing delays and needless duplication.

*Better use of information and communications technology is vital...*

The overarching Ministry goal is to build a sustainable, publicly funded health system that will meet the needs of today's and future generations. To do this, the health system is being redesigned to address the needs of the population in more effective, efficient and innovative ways. Adopting cost effective technology and information system solutions is a key component of the Ministry's strategic approach.

Globally, security issues have resulted in an increased emphasis on protection for the integrity of British Columbia's vital records and personal medical histories. In addition, the Canadian experience with SARS in 2003, along with the more recent outbreak of avian flu, centred largely in Asia, have heightened the awareness of the need for a Pan-Canadian mechanism to collect, share and analyze public health information that is critical for managing communicable diseases.

Even with our heightened concern, indicators of population health and medical outcomes from BC Stats and the Vital Statistics Agency (VSA) still suggest that British Columbia's health system continues to meet its primary challenges. Life expectancy is rising every year, while mortality rates for conditions like cancer and chronic heart disease tend to be falling<sup>1</sup>. However, pressure on the system is growing. Individual demand for medical services rises steadily with age, and the first of the "baby boomers" are now entering their early sixties. British Columbians are living longer, and they expect good health, along with the medical support required to remain physically active well into their senior years.

Better use of information and communications technology is vital, if we are to continue to meet the health and medical needs of British Columbians over the coming decades. Development of an Electronic Health Record (EHR) capability has been identified as a key to health system renewal. In British Columbia, the April 2005 report by the Premier's Technology Council reiterated its direction, first stated in 2002, for the development of a provincial EHR. This priority has also been stated in a number of other directional documents, including the Ministry's service plans. Improved information collection and management has been widely recognized as a priority area to assist health reform.

The health information and technology management environment is complex, but its underlying principle is simple and clear – business needs determine information processing requirements, which in turn, determine the appropriate technology infrastructure.

The Basic HSIMT Business Model (Figure 1) shows the planning and process flows which are key areas directly under management control. There are three broad components, or levels, in the business model: business needs, information processing, and the underlying technology. The business needs

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<sup>1</sup> Vital Statistics Agency; Annual Report 2006 ([www.vs.gov.bc.ca/stats/annual/index.html](http://www.vs.gov.bc.ca/stats/annual/index.html))

determine the nature of the information required, and the technology makes the data from various sources available for the provision of this information. Clear goals, appropriate strategies, adequate resource allocations and specific performance measures underpin the plans at both the strategic and operational levels, and provide the basis for the HSIMT Division to stay properly focused on its mission.

*Information resource planning is an ongoing process...*

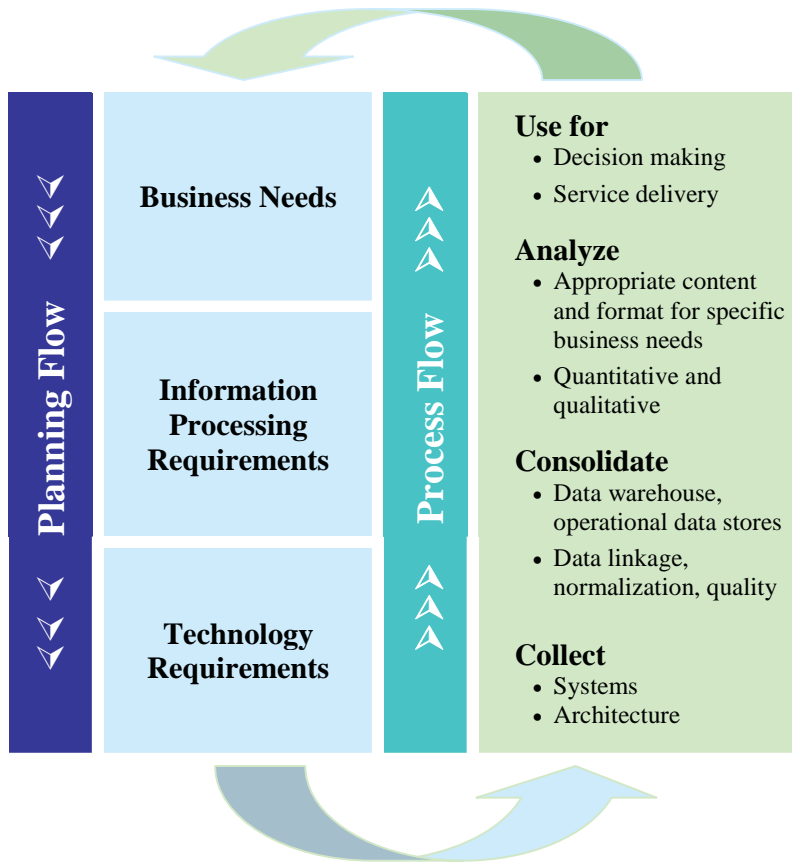


Figure 1 - Basic HSIMT Business Model

The Basic IM/IT Business Model is designed to support both the decision making needs of the health system and the day-to-day operations of the Ministry of Health Services. Information resource planning is an ongoing process, with the IRMP published annually. Well-defined and integrated processes, along with effective tools and project management methodologies, facilitate the disciplined execution of the Ministry's IM/IT plans.

A more detailed depiction of the business environment, including stakeholders and specific HSIMT enabling features (as shown in pull-out boxes), is illustrated by means of Figure 8 in Appendix 1.

*...a unified approach to the provision of accurate, relevant and timely health information...*

## The Health Sector IM/IT Division

The HSIMT Division (previously Knowledge Management and Technology) was created in November 2003 to consolidate the Ministry's IM/IT systems into one portfolio in order to ensure a coordinated approach to this critical component of the Ministry's overall service delivery and business management environment.

The division's mandate is to ensure a unified approach to the provision of accurate, relevant and timely health information, and to help build an effective and robust health information infrastructure through provincial and national partnerships. HSIMT provides leadership to ensure that IM/IT strategies, policies, standards and technology initiatives support the integrated delivery of effective and efficient system-wide health information management. The division is responsible for the overall strategic development, implementation and evaluation of the information management plans of the Ministry of Health Services.

The Assistant Deputy Minister (ADM), HSIMT, is the chief advisor to the Minister and the Deputy Minister of Health Services on information management and related technology issues. The ADM bears the ultimate management responsibility for the HSIMT Division. The Assistant Deputy Minister is supported in this role by the HSIMT Executive Committee, which includes the division's executive directors, and is chaired by the ADM. The HSIMT basic organization structure is shown as Figure 7 in Appendix 1.

## Ministry Core Businesses

The Ministry of Health Services has three core business areas:

- *Leadership and Corporate Management*
- *Services Delivered by the Ministry*
- *Services Delivered by Partners*

*The Ministry sets the overall strategic direction for the health system...*

### Leadership and Corporate Management

As steward of the health system, the Ministry provides leadership and support for its health system partners, including Health Authorities, physicians and other care providers.

The Ministry sets the overall strategic direction for the health system, provides the appropriate legislative and regulatory frameworks to allow it to function smoothly, and plans for the future supply and utilization of health professionals, technology and facilities.

As part of its leadership role, the Ministry evaluates health system performance against clearly articulated expectations. The Ministry monitors and evaluates system performance and the overall health of the population of the Province by collecting and analyzing health system data. By monitoring and evaluating the overall health system, the Ministry is able to take evidence-based corrective action when necessary, and stay well informed concerning evolving requirements for the development of appropriate performance expectations and effective service plans.

As part of the Ministry's corporate management role, it manages ministry budgets, as well as its human resources and ongoing information needs. In order to properly fulfill its leadership role, it is important for the Ministry to administer its underlying corporate functions in the most efficient and cost effective manner possible.

*Our partners deliver, by far, the majority of health services to the public.*

## Services Delivered by the Ministry

This core business area encompasses two important public services: the BC Ambulance Service (BCAS), which is currently delivered through the Emergency Health Services Commission, and the Vital Statistics Agency (VSA).

The BC Ambulance Service is responsible for providing effective, efficient and equitable emergency health services for the Province. Approximately 1,100 full-time and 2,200 part-time paramedics and dispatchers, and 100 management and support personnel provide emergency and medical transport services. BCAS is a provincial service with 190 stations and 450 ambulances across BC. It responds to about 530,000 calls annually, including more than 8,800 air evacuations.

The Vital Statistics Agency is a special operating agency that is responsible for documenting vital events for BC citizens such as births, marriages, and deaths. It maintains registries and records of those events back to 1872. There are two primary outputs of the VSA's vital event registration activities: (1) the production of accurate, timely and relevant health statistics and information, and (2) the issuance of certified documents pertaining to an individual's vital events (e.g. a birth certificate). The VSA also has the responsibility to secure and protect personal identity records by taking appropriate measures to prevent identity theft and any associated frauds that relate to British Columbia vital event records and documents.

## Services Delivered by Partners

Our partners deliver, by far, the majority of health services to the public. These services span the continuum of health care, from population health programs to end-of-life care. Accordingly, this core business area accounts for the greater portion of health expenditures, and is ultimately the main focus of the system redesign efforts reflected in this plan. The key services operated by partners are:

### *Regional Health Sector*

The Province's six Health Authorities are the Ministry's primary partners in delivering services to British Columbians. More than 90 per cent of the regional health sector funding is provided to the six Health Authorities for the delivery of most local health services, including health promotion and protection services, primary care, hospital services, home and community care, mental health and addiction services, and end-of-life care. The remaining funds are provided to other health agencies for health operations such as the delivery of blood services, out-of-province hospital services, post-graduate medical education, health care risk management, and some palliative care services.

### *Medical Services Plan*

The Medical Services Plan (MSP) funds medically necessary services provided by physicians, surgeons, midwives and other practitioners, as well as diagnostic services. These services are funded in a variety of ways: through fee-for-service, contracts (including contracts with health authorities), and salaried positions or sessions. MSP funding also provides supplementary benefits to low-income British Columbians for a range of services, including physical therapy, naturopathy and chiropractic care.

### *PharmaCare*

PharmaCare is the Province's prescription drug insurance program and includes several benefit plans. The main plan is Fair PharmaCare, which provides insurance to BC families for prescription drug costs. Several other plans exist to address the health needs of individuals, including seniors in long-term care facilities, severely disabled children who are cared for at home, enzyme treatment for people with cystic fibrosis, and clients on provincial income assistance.

### *Health Benefit Operations*

Health Benefit Operations provides administrative services for BC's PharmaCare Program and MSP. These services do not involve direct health care delivery, but include registering beneficiaries, processing medical and pharmaceutical claims from health professionals, and responding to inquiries from the public. Since April 1, 2005, these administrative services have been delivered by Health Insurance BC through an operating agreement.

The Province's health authorities, health agencies and the various direct care providers are the Ministry's key partners, and deliver the majority of health services to the public. Although the Ministry does not directly deliver many of the services that influence health outcomes, it bears ultimate responsibility for the overall health system.

Collaboration and sharing with its partners is a fundamental priority for the Ministry of Health Services. With the demand for services increasing, collaboration is not only an effective strategy to facilitate the broad adoption of standards and best practices, it is essential to maximizing the value obtained from the use of public funds. Appendix 2 briefly describes the Ministry's major partners and stakeholders, and also indicates the basic nature of their collaboration with the HSIMT Division.

*Collaboration  
and sharing with  
its partners is a  
fundamental priority...*

## Strategic Context

### Vision

The Ministry's vision is:

"A health system that supports people to stay healthy, and when they are sick provides high quality publicly funded health care services that meet their needs."

### Goals

The Ministry's three goals are:

#### ***Goal 1: Improved Health and Wellness for British Columbians***

"British Columbians are supported in their pursuit of better health through health promotion and disease prevention activities."

#### ***Goal 2: High Quality Patient Care***

"Patients receive appropriate, effective, quality care at the right time in the right setting. Health services are planned, managed and delivered in concert with patient needs."

#### ***Goal 3: A Sustainable, Affordable Publicly Funded Health System***

"The public health system is affordable, efficient and accountable, with governors, providers and patients taking responsibility for the provision and use of services."

In support of Goal 3, (*A Sustainable, Affordable Publicly Funded Health System*), the Ministry has determined that its IM/IT objective is to make:

"Strategic investments in information management and technology to improve patient care and system integration."

The Ministry's performance measure for Goal 3 is the "percentage of physicians implementing electronic medical record systems." The Physician Information Technology Office (PITO) is a jointly sponsored Government / BC Medical Association (BCMA) operation that will provide physicians with approved vendor options, give them technical and change management support, and serve as a source for provincial funding of 70% of their relevant technology acquisition costs. The support provided by PITO helps cover a physician's cost for necessary computer equipment, secure email access, software, network connectivity, and access to the provincial eHealth systems.

*...implementing a secure electronic health record system across the Province...*

The PITO operation reflects the recent agreement between the BC Government and the BCMA, which set out a responsibility framework for the transformation of physician offices and practices. The uptake of endorsed Electronic Medical Record (EMR) systems has been selected as the performance measure, because of the underlying importance of eHealth in transforming the health care system, and in recognition that such a fundamental transformation can only take place if physicians actively and enthusiastically adopt and utilize the related technology.

## IM/IT Strategies

The Ministry has adopted five key strategies that relate to its IM/IT objective (i.e. to make strategic investments in information management and technology to improve patient care and system integration) and support ministry goals:

1. Enhancing patient care by implementing a secure electronic health record system across the Province which will allow medical practitioners to easily access information (such as test results or medication histories) that will assist treatment while protecting personal privacy.
2. Working with the British Columbia Medical Association and the College of Physicians and Surgeons to coordinate, facilitate and support information technology planning and implementation for physicians, including supporting the use of electronic medical record systems by physicians.
3. Expanding telehealth to improve rural and remote residents' access to health services and specialists.
4. Improving the availability of quality data and analysis to assist clinical and management decision making.
5. Expanding public access to health services and health information through web-based applications.

*...efficient delivery of health care services over the full continuum of care...*

Figure 2 below, illustrates the basic linkages between the Ministry vision, Ministry goals, the Ministry’s basic IM/IT objective, and its five associated IM/IT strategies, along with the related performance measure.



Figure 2 – Strategic Linkages

Applying the five key IM/IT strategies to support the cost effective provision of health services gives rise to the use of an integrated EHR and a broad system of electronic health service delivery (eHealth). In the British Columbia eHealth Strategic Framework, eHealth is defined as:

“An integrated set of information and communication technologies, together with related health delivery process enhancements, that:

- Enables the efficient delivery of health care services over the full continuum of care through the provision of integrated, interoperable health information systems, tools and processes;
- Transforms the health sector decision-making culture into one that is firmly supported by accurate, timely and relevant information in a manner that protects individual privacy, respects clinical practice requirements and sustains the long-term viability of the health care system; and
- Encompasses the interoperable electronic health record and telehealth.”

The underlying vision for eHealth in British Columbia can be summarized as:

*...patients are the focal point of health care delivery.*

“An integrated, interoperable eHealth system in which health care information is accessible, when and where it is needed, to support personal health, health care decision making and health system sustainability.”

Figure 3 shows the key components of health care that will be interconnected through eHealth, and which will lead to the transformation of health service delivery across the continuum of care in British Columbia. Reliance on an interoperable Electronic Health Record (iEHR) will be one of the most critical features of eHealth, facilitating the timely communication of reliable patient health information throughout the entire spectrum of health service delivery.

In this eHealth vision, citizens (i.e. the public) and patients are the focal point of health care delivery. Health information needs to be centred on and organized around citizens and individual patients, rather than the places where the services are delivered (hospitals, clinics, individual medical practices, etc.).

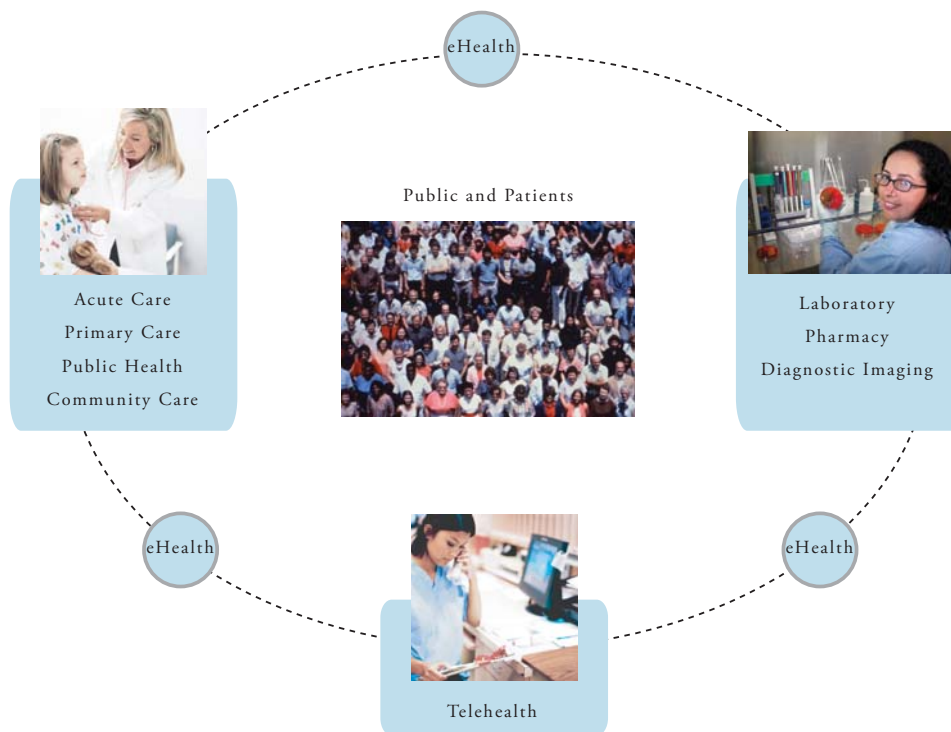


Figure 3 – eHealth Vision

...will only be fully realized over the longer term.

Implementing eHealth across the Province requires an immediate as well as an extended investment of substantial human and financial resources. The resulting efficiencies, generated throughout the system, will only be fully realized over the longer term. Figure 4 below succinctly highlights some of the key eHealth initiatives or projects that are planned for deployment over the next one to two years.

<i>Key Initiatives</i>	<i>Descriptions</i>
<b>interoperable Electronic Health Record</b>	<ul style="list-style-type: none"> <li>• Infrastructure supporting the provision of comprehensive health information at the point-of-care</li> <li>• iEHR viewer, access control</li> </ul>
<b>Electronic Medical Record</b>	<ul style="list-style-type: none"> <li>• The Electronic Medical Record (or EMR) systems in the doctor's office – with technology funding and integration support provided for physicians through PITO to integrate with the provincial EHR system</li> </ul>
<b>Provincial eDrug Project</b>	<ul style="list-style-type: none"> <li>• Information system medication profiles, enhanced content, and ePrescribing</li> </ul>
<b>BC Public Health Information Project</b>	<ul style="list-style-type: none"> <li>• Implementation of the Pan-Canadian Public Health Communicable Disease Surveillance and Management Project (Panorama), with subsequent local deployment of a tailored application of the Panorama system in British Columbia</li> </ul>
<b>Provincial eLab System</b>	<ul style="list-style-type: none"> <li>• Provincial Laboratory Information Solution (PLIS)</li> <li>• System will provide laboratory test results at the point-of-care</li> </ul>
<b>Connecting Diagnostic Imaging</b>	<ul style="list-style-type: none"> <li>• Provincial diagnostic imaging (DI) - storage and reports using a picture archive and communications system (PACS)</li> </ul>
<b>Registries Readiness</b>	<ul style="list-style-type: none"> <li>• Enhance the Provider and Client Registry systems to meet the performance levels required to support a provincial EHR.</li> </ul>
<b>Telehealth</b>	<ul style="list-style-type: none"> <li>• A portfolio of provincial Telehealth initiatives including TeleThoracic, TeleOphthalmology, TeleOncology, TeleHomecare, TeleWoundcare and First Nation Telehealth Infrastructure</li> </ul>
<b>Aggregated Health Information Project</b>	<ul style="list-style-type: none"> <li>• Integrates currently separate health data sources and systems into a more accessible, knowledge-based, corporate decision support framework</li> </ul>

Figure 4 – Key eHealth Initiatives

In a 2005 document setting out Canada Health Infoway's 10-year investment strategy, Booz Allen Hamilton estimated that the acquisition cost for a Pan-Canadian EHR delivered over a 10-year period would be approximately \$10 billion. This is made up of: \$1.4 billion for Physician Practice Systems, \$3.9 billion for Inpatient Systems, \$1.8 billion for a Long-term Care System, \$0.05 billion for a Home Health extension, and \$2.9 billion for the Infrastructure costs.

*...benefits for the entire health system.*

Booz Allen Hamilton also estimated that as a result of implementing a Pan-Canadian EHR, the following savings would be achieved over a 20-year period: \$3.6 billion from the reduction of duplicate and unnecessary radiological tests, \$10.4 billion from the reduction of duplicate and unnecessary laboratory tests, and \$48.3 billion from reduced ambulatory, hospital and long-term care due to adverse drug reactions.

Canada Health Infoway makes strategic investments in the provinces and territories to develop and implement iEHR and telehealth solutions across the country. As of March 2008, Infoway had signed legal agreements with British Columbia to invest close to \$160 million in eHealth initiatives within the Province.

In November 2005, British Columbia completed its eHealth Strategic Framework. It outlined how eHealth initiatives will improve overall patient care, and help health professionals to deliver faster, better and safer care, as well as provide a number of benefits for the entire health system. As indicated in the framework, the six basic steps designed to implement and realize British Columbia's vision for eHealth were to: establish strong governance and leadership; foster collaboration and joint procurement; leverage available financial resources; fully safeguard privacy and security; build on British Columbia's existing health information technology foundation; and implement eHealth in incremental phases.

eHealth governance was initially provided through the introduction of an eHealth Steering Committee. The eHealth Steering Committee was a partnership between the Ministry of Health Services, the Health Authorities and the health provider community. It reported to the Ministry's Leadership Council, with a mandate to govern the introduction of eHealth across the Province. In late 2007, it was replaced through the introduction of an eHealth Strategy Council along with an eHealth Deployment Task Group.

The eHealth Strategy Council (eHSC) is a partnership between the Ministry of Health Services, the Health Authorities, a number of health service provider representatives (i.e. the physician and pharmacy communities) and other key groups (e.g. representatives of the government CIO, First Nations, public health). The council provides leadership and is responsible for ensuring the eHealth Deployment Task Group and supporting committees are aligned with the approved eHealth strategy. Members are expected to provide health system leadership and not just organizational representation. The eHSC is chaired by the Chief Operating Officer of the Ministry of Health Services and includes members from the executive of each of the six Health Authorities, physician representatives, and several members drawn from the Ministry executive.

*...ongoing governance of eHealth as an integrated system...*

The eHealth Deployment Task Group (eHDTG) focuses on the design, build, and implementation across the Province of eHealth initiatives identified and approved by the eHSC. A number of steering committees work with the eHDTG, including the Health CIO Council, the Provincial Lab Information Solution Executive Steering Committee, the eDrug Project Steering Committee, the BC Public Health Information Project Steering Committee, and the Telehealth Steering Committee. The eHDTG has members from the Ministry, the Health Authorities, and the health care provider community (i.e. physician, pharmacy, nursing, and public health representatives).

Two major current issues for eHealth, the eHSC, the eHDTG and supporting committees are finding solutions for the efficient deployment of each component across the Province once developed, and the ongoing governance of eHealth as an integrated system after the initial deployment. Figure 5 depicts the overall structural environment of the eHSC, the eHDTG and most of the related steering committees.

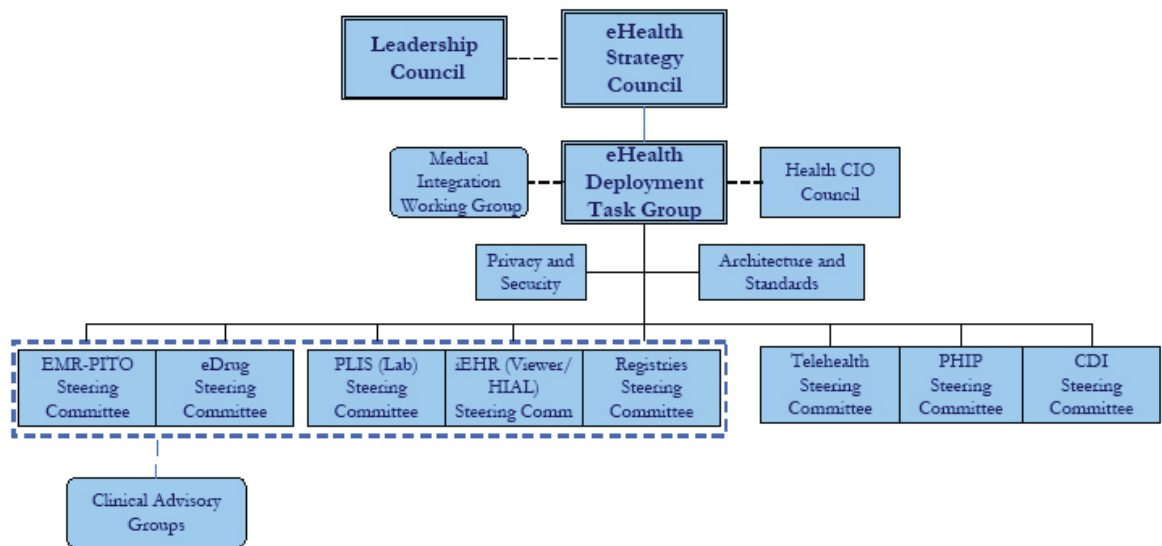


Figure 5 - eHealth Strategy Council

## Ministry IM/IT Strategies

*...a substantial improvement to the effectiveness of patient care...*

The Ministry's five IM/IT strategies are not only fully congruent with its efforts to implement eHealth, but each of the core components of the eHealth initiative can be directly related to one or more of these key strategies. In addition, the five ministry IM/IT strategies also support broader government IM/IT goals.

The following section of the IRMP examines the five IM/IT strategies in terms of the basic nature of those strategies, and also provides some examples of the projects being undertaken as a direct result of each.

***Strategy 1: Enhancing patient care by implementing a secure electronic health record system across the Province which will allow medical practitioners to easily access information (such as test results or medication histories) that will assist treatment while protecting personal privacy.***

There is general agreement among governments in Canada that an EHR system, offering secure access to a patient's health history and care events, would provide a substantial improvement to the effectiveness of patient care and enable system-wide efficiencies in health delivery. The EHR has the potential to provide patients with safer, higher quality care; reduce duplication of tests and information collection; and improve access to authoritative general health information and to an individual's personal health record details.

Improved access to personal health records must be balanced with diligent protection of personal health information. Information privacy is fundamental to the vision for an interoperable eHealth system. In the EHR environment, personal health information could flow through many interconnected databases and reside in multiple systems and locations. eHealth will place the utmost importance on the protection of personal health information and must comply with provincial government requirements to protect privacy and assure the security of systems.

For many years, governments, health organizations and health service providers have been collecting information about the operation of the health system. While some of this information is general in nature (for example, the total numbers of orthopaedic surgeries performed in a region or in a specific hospital), much of it can also be patient specific. However, when it is patient specific, it is typically provider or facility centric (for example, patient records held in a particular physician's office or a list of prescriptions provided from a local pharmacy for a specific patient).

*...actively developing a province-wide EHR capability.*

Much of the current patient-specific information is associated with a number of different medical offices or locations, and scattered across multiple data systems. As a result, critical person-specific information is not always readily available to individual physicians or other service providers at the time when related health care decisions are being made. An iEHR system offers the ability to electronically link together person-specific health information to directly support clinical and management decision making, and help move the health care system towards a more seamless, integrated continuum of care.

British Columbia is actively developing a province-wide EHR capability. It is a cornerstone of government's comprehensive strategy to deliver safer, faster and more effective treatment to patients. Enabling care providers to access clinical information, such as patient medication profiles, lab test and other diagnostic results using web-based technology, is a high priority. British Columbia's approach to implementing an iEHR system is to build on, and adapt over time, our existing technology infrastructure, systems and data repositories.

Both the provincial and federal governments have committed to the development of an EHR, and a substantial part of recent federal health funding is targeted at improving health data, including the development of a Pan-Canadian EHR capability. The Province formed an executive-level eHSC to lead the development and implementation of electronic health systems for British Columbia.

The EHR is ultimately more about changing business practices in health care service delivery than it is about adopting information technology. Building an EHR represents a major business challenge to health administrators. It involves change management for service delivery processes and related information flows, as well as participation from a wide array of business managers and clinical experts. It also requires innovative new systems development, along with integrated linkages between previously isolated systems and geographically separated communities.

Two important issues currently facing the eHealth initiative are: (1) the smooth and efficient deployment of each key component after it has been developed, along with continuing governance for the major components, once deployed, and (2) the overall ongoing governance for eHealth as a comprehensive, integrated system. Addressing these two major concerns is critical to successfully delivering eHealth for British Columbia.

A complete listing of IM/IT business initiatives and requirements is contained in Appendices 3 and 4. The following briefly highlights some of the major projects being undertaken during 2008/09 in support of this eHealth or EHR strategy:

*...timely access to  
laboratory information  
at the point-of-care...*

### ***Connecting Diagnostic Imaging (CDI)***

BC has developed a provincial diagnostic imaging strategy to use information technology to increase the value of imaging services for health care delivery. CDI will develop a solution to deliver diagnostic imaging results to end users via the iEHR and EMR systems. In this way, the design and operation of the Provincial Diagnostic Image repository (PDI-r) will be implemented in the broader context of the Electronic Health Record. The PDI-r will use the EHR architecture and controls, but will be designed and implemented at a somewhat higher level in the overall system and with a broader scope. Features that deliver such common services as privacy and security will, therefore, be addressed in a consistent and comprehensive fashion across the whole provincial eHealth initiative, and each of the domain projects such as CDI will avoid creating their own solutions.

### ***interoperable Electronic Health Record (iEHR)***

The iEHR is a combination of computer applications that will link care providers with electronically held health information at the point-of-care. The iEHR viewer will provide clinicians, working in most care settings, with access to a range of clinical information including lab results, medication histories and diagnostic images.

### ***Provincial eDrug Project***

British Columbia will leverage the existing capability of PharmaNet and further enhance it to improve clinician access to patient medication histories, and increase the scope of medications recorded to include drugs dispensed in physician offices and acute care settings. This project will also set the foundation for and introduce ePrescribing, which will permit a physician to electronically generate prescriptions, and have them available at the patient's pharmacy of choice. The system will be designed to minimize the possibility of preventable adverse drug reactions resulting from allergies or inappropriate prescription combinations.

### ***Provincial Laboratory Information Solution (PLIS)***

This project will support health care providers with a standardized view and timely access to laboratory information at the point-of-care, anywhere in the Province. It will provide physicians and other health care providers with more complete, timely and relevant lab test information to support medical decision making.

*...transition to a digital office...*

***Strategy 2: Working with the British Columbia Medical Association and the College of Physicians and Surgeons to coordinate, facilitate and support information technology planning and implementation for physicians, including supporting the use of electronic medical record systems by physicians***

In their 2006 agreement, the BC Government and the BCMA agreed to work collaboratively to coordinate, facilitate and support physician adoption of information technology related to eHealth, as described in the British Columbia eHealth Strategic Framework. This included the development and implementation in BC of standardized EMR systems. The agreement took effect on April 1, 2006.

For the great majority of the approximately 6,000 doctors who are members of the College of Physicians and Surgeons and in private practice in BC, this means first moving from paper-based offices to an EMR system that is compatible with the provincial laboratory, DI, pharmacy and iEHR systems.

The agreement with the BCMA provides for a shared investment, with the government covering 70% of a physician's eligible cost to acquire EMR systems, computers, secure network connectivity and secure email. As well, the Ministry of Health Services and the BCMA established the Physician Information Technology Office (PITO) to coordinate the implementation of the information technology products and services with vendors and physicians. PITO will provide information, advice and support for physicians who are making the transition to a digital office using one of the up to six recommended Electronic Medical Record systems. The Physician Information Technology Office will operate for the term of the 2006 agreement with the BCMA, which expires in early 2012. Through PITO, the BC Government has committed more than \$107 million for physician adoption of relevant information technology over that period.

The following briefly outlines a major project planned for 2008/09 in support of this EMR strategy:

***Electronic Medical Record (EMR)***

The purpose of this project is to facilitate the implementation of EMR systems and other related information technology services in physician offices throughout BC, and thereby support primary health care and specialist medical practices across the Province.

This initiative will provide EMR and practice management systems for physician offices to replace today's largely paper-based health records and to facilitate access to the provincial iEHR system. In this way, they will be provided with such information as lab test results, medication profiles, hospital reports and diagnostic images.

Through this project, BC will actively participate in, and contribute to the creation of, national EMR standards, together with the other provinces and Canada Health Infoway. The project will also support underlying physician connectivity by providing secure network access for health service providers across British Columbia.

*...improve patient access to a number of medical services.*

### ***Strategy 3: Expanding telehealth to improve rural and remote residents' access to health services and specialists***

Telehealth is the use of communications and information technology to enable clinical consultation, health care management, general health promotion, and continuing professional education when the participants are in separate locations. It can be used to collect, organize and share information for patient assessment, diagnosis, and treatment by remotely linking medical practitioners to patients and their health care information. Telehealth can be especially useful in remote or under-served areas by helping to improve patient access to a number of medical services.

British Columbia's Telehealth strategy has a strong focus on First Nations communities, building on the principles outlined in the *New Relationship Document*<sup>2</sup> (May 2005), the *Transformative Change Accord: First Nations Health Plan*<sup>3</sup> (November 2005), the *First Nations Health Plan Memorandum of Understanding*<sup>4</sup> (November 2006), and the *Tripartite First Nations Health Plan*<sup>5</sup> (June 2007), which affirmed a commitment to close the gap between First Nations and other British Columbians, in health and other areas, over the next ten years. For Telehealth, the objective is to have all 70 First Nations communities that have a health centre fully integrated as part of a robust province-wide clinical Telehealth network within ten years.

In support of these commitments, the eHealth program is collaborating with Population Health and Wellness to establish a comprehensive and sustainable Telehealth system in BC that supports both First Nations and rural/remote communities.

A project submission has been approved by Canada Health Infoway for funding to strengthen BC's Telehealth service delivery foundation and to expand the breadth of available Telehealth clinical services. This phase 1 planning project will continue throughout 2008. In addition, the Ministry will work with BC's Health Authorities to identify five high-priority clinical areas for Telehealth expansion.

<sup>2</sup>. See [www.gov.bc.ca/arr/newrelationship/default.html](http://www.gov.bc.ca/arr/newrelationship/default.html)

<sup>3</sup>. See [www.gov.bc.ca/arr/social/health/plan.html](http://www.gov.bc.ca/arr/social/health/plan.html)

<sup>4</sup>. See [www.health.gov.bc.ca/library/publications/year/2006/first\\_nations\\_mou.pdf](http://www.health.gov.bc.ca/library/publications/year/2006/first_nations_mou.pdf)

<sup>5</sup>. See [www.health.gov.bc.ca/library/publications/year/2007/tripartite\\_plan.pdf](http://www.health.gov.bc.ca/library/publications/year/2007/tripartite_plan.pdf)

*...now available to communities in the Northern Health Authority...*

A number of Telehealth services are currently available in BC or are being planned, including:

- Virtual thoracic surgery clinics use videoconferencing to connect a surgeon in Kelowna with patients in Cranbrook, Trail and Kamloops for pre- and post-operative consultations. This service is now available to communities in the Northern Health Authority, and consideration is also being given to expansion to Vancouver Island.
- The Vancouver Island Health Authority, 'Namgis First Nation and the Inter Tribal Health Authority (ITHA) have signed an agreement to jointly develop First Nation chronic disease prevention and health promotion educational programming that will be delivered via videoconferencing to clinicians and health workers throughout their territories.
- The expansion of the University of British Columbia Medical School from 128 to 224 first-year students by September 2010, will involve extensive use of technology enabled learning. Teaching hospitals and community sites will serve as distributed learning centres to support students with their clinical training.
- The Victoria Cancer Centre is expanding its successful gastrointestinal cancer clinical consultations from Nanaimo to sites throughout Vancouver Island. A similar service is being delivered between the Cancer Centre in Kelowna and clients in Cranbrook, Kamloops and other Interior Health Authority communities.
- The Vancouver Coastal Health Authority (VCH) is planning expansion of TelePsychiatry services to Bella Bella, including delivery of cognitive behavioural therapy. This will be a partnership between VCH, First Nations and Inuit Health Branch, and the Heiltsuk Nation in Bella Bella. VCH will also be providing counselling services on diabetes and weight control through the use of a nurse for both Bella Bella and Bella Coola.
- Planning is underway to implement TeleMental health for the northern communities (e.g. Mt. Waddington) in the Vancouver Island Health Authority.
- The Provincial Health Services Authority will use videoconferencing to carry out court ordered psychiatric assessments.

#### *Strategy 4: Improving the availability of quality data and analysis to assist clinical and management decision making*

*...meet an expanding management requirement for data and information...*

Much of the health data currently collected has been maintained at local sites for use in managing the local operation, whether it is personal patient information to assist with the management of care delivery, or organizational, financial and staffing records to assist with the management of the institution.

The collection of much of the health data at the regional, provincial or national level has primarily been related to epidemiological studies (incidence of disease in a large population) or life events (births, deaths, and cause of death). Much of this data has been used for long-term studies of health status, and whether that status is improving or declining in various areas and as a result of specific causes. The collection of this data has often been performed on an annual or even less frequent basis, where the timeliness of the data was not a major issue.

There continues to be an increasing expectation that management decisions in the field of health service delivery are to be made in a transparent manner, and should be based on clear and credible data or evidence. The emergence of major service demand and access issues, coupled with an understanding that funding for the health care system would not grow at the same rate as service demands, has heightened the recognition of the need for faster, more responsive management of the overall system.

The resultant demand for improved and more timely data continues to drive the review of existing data and clinical systems. The overall objective is to meet an expanding management requirement for data and information to support sound, timely, evidence-based decisions.

As in previous years, the initiatives in support of this strategy tend to involve two areas:

- Enhancing existing systems or developing new systems to provide authoritative clinical health information to service providers and patients, related to care areas such as chronic disease management, emergency services and patient safety, especially in more remote locations.
- Significantly modifying existing management information systems or developing new systems to accommodate the transition of the Ministry from program delivery to health system leadership. The aim is to improve the health system's human resource planning and monitoring, and improve access to and reporting from health databases, while ensuring appropriate security for organizational and personal information.

*...providing high quality, timely health surveillance data...*

The following highlights some of the major projects with work planned during 2008/09 in support of this strategy:

### ***Aggregated Health Information Project (AHIP)***

The purpose of this project is to create an integrated provincial health information management infrastructure capable of quickly supporting new types of analyses, as the need arises. Through a staged and iterative process, AHIP will provide a strategic information management framework for the Ministry of Health Services and the Health Authorities.

AHIP will integrate currently separated health data sources and systems into a more accessible, knowledge-based, corporate decision support framework.

### ***BC Public Health Information (PHIP)***

BC is leading the Pan-Canadian Public Health Communicable Disease Surveillance and Management Project that will deliver the Pan-Canadian Public Health Surveillance System, providing high quality, timely health surveillance data at the regional, provincial/territorial and Pan-Canadian levels. The BC Public Health Information Project encompasses the implementation of the Pan-Canadian Public Health Surveillance System (Panorama) in BC as well as the implementation of an improved environmental health/health protection system, and systems to support family health. It will provide improved support for public health field operations as well as health-related research and surveillance activities.

### *Strategy 5: Expanding public access to health services and health information through web-based applications*

*...improve the quality of client service by using the web...*

The advent of the Internet has contributed to greatly expanded familiarity of citizens with the use of computers. Increasingly, people rely on the web to gather information, conduct day-to-day business, and to help handle their personal affairs.

Many commercial organizations in the service sector have recognized and taken advantage of major opportunities to improve the quality of client service by using the web, while at the same time, achieving substantial operating efficiencies. There is an ongoing need for the health care system to achieve similar benefits.

The IM/IT initiatives in support of this strategy focus on two distinct service aspects:

- Improving the delivery of specific health services by providing electronic access to health support through the ongoing redesign of the Ministry website.
- Improving general information delivery through electronic access to basic health related information aided by the ongoing redesign of the Ministry website, as well as seeking new electronic delivery systems for BC HealthGuide and surgical wait list information.

The following briefly highlights two of the projects with work planned during 2008/09 in support of this strategy:

#### *E-Team Implementation - Phase 3: Obtain Alternate Service*

This project is set up to replace TELUS subscription services by upgrading ministry owned E Team licenses to Enterprise Licenses, and using IT services provided by WTS (Workplace Technology Services) and the CGI group. The outcome will be a standardized model for a province wide health sector web-based emergency information management tool. The Ministry will continue to share knowledge gained throughout the implementation phase and with the provincial Emergency Management Information System (EMIS) team.

#### *Formulary Management Drug Submission Review Database and Web Page*

The Formulary Management and Drug Submission Review Database is an upgraded storage system designed to enhance the capturing of drug review

*...readily available to both the public and various stakeholder groups ...*

data for its eventual posting to a revised website. By converting a series of legacy spreadsheets into an advanced database, many information based benefits are realized. User entry is simplified, data quality is improved, and drug review progress results with a range of timely information extracts are readily available to both the public and various stakeholder groups through a web page.

## In Closing

An earlier section highlighted how key, proposed initiatives are aligned with the five ministry IM/IT strategies. In turn, the Ministry IM/IT strategies support the four key government IM/IT goals: to enhance service and access for clients; to contain and reduce IM/IT costs across government; to improve internal operational efficiency and decision making; and to create an environment that supports provincial economic development.

*...improvements to data quality, timeliness and reliability...*

Many of the current projects represent continuations of the work described in the Ministry's 2007/08 IRMP. These projects will continue to be shown until they are fully implemented. New projects will be introduced as and when they receive the appropriate ministry approvals.

The capital base budget covers a range of IT projects and upgrades. The biggest is the Aggregated Health Information Project, with a 2008/09 investment of \$4 million. AHIP will integrate currently separated health data sources and systems into a more accessible, knowledge-based corporate decision support framework. This new integrated provincial health information management infrastructure will be accessible by more health system managers than the present mix of legacy databases and applications. It will also be able to quickly support new types of analyses to meet emerging management information needs.

Other projects included in the base budget involve improvements and innovations in tracking and reimbursing for services provided by physicians, other health care providers, and various public and private sector institutions. Still others offer enhanced security provisions for a number of ministry data collection systems; improvements to data quality, timeliness and reliability; and more effective, comprehensive licensing systems for community care and other health facilities.

In developing the 2008/09 IRMP, an extensive consultation and planning process was undertaken with ministry program areas to identify their information management and technology requirements. In addition, a Capital Planning Executive Committee, composed of senior ministry program representatives, was established to review those requirements and proposed initiatives in terms of their strategic value, urgency, cost saving, cost sharing and risk.

*Each potential project is thoroughly scrutinized...*

The Ministry of Health Services evaluates the critical aspects of each IM/IT initiative along with its partners, before making the decision to invest its limited resources. Each potential project is thoroughly scrutinized for the strategic value it offers to the Ministry, its partners and stakeholders; its urgency; its cost and return on investment; how it supports the Ministry Service Plan; and how much potential risk is inherently associated with the project.

Once fully reviewed by the Ministry's Capital Planning Executive Committee, a well-founded IM/IT investment decision can be properly justified, and the work funded and undertaken with confidence.

# Appendix 1: Health Sector IM/IT Division

## Resource Summary

Financial and Human Resource Estimates		
	2007/08 Budget (Restated)	2008/09 Budget
<b>HSIMT Division (excluding Vital Statistics)</b>		
Operating Expenditures	\$ 53,520,000	\$ 58,217,000
FTEs	165	135
Capital Expenditures		
Information Systems and the Electronic Health Record	\$ 63,900,000	\$ TBD
Total Capital	\$ 63,900,000	\$ TBD
<b>Health Benefit Operations</b>		
Operating Expenditures	N/A	\$ 29,633,000
<b>Vital Statistics Agency</b>		
Operating Expenditures (net of recoveries)	\$ 7,812,000	\$ 7,730,000
FTEs	89	89
Capital Expenditures		
Information Systems	\$ 405,000	\$ TBD
Furniture/Equipment	\$ 25,000	\$ TBD
Total Capital	\$ 430,000	\$ TBD
Revenue	\$ 10,900,000	\$11,346,000
<b>HSIMT Division - Total</b>		
Operating Expenditures	\$ 61,332,000	\$ 95,580,000
FTEs	254	224
Capital Expenditures	\$ TBD	\$ TBD
Revenue	\$10,900,000	\$ 11,346,000

Figure 6 – Resource Summary

Notes:

1. This chart summarizes the financial and human resources within the Ministry allocated to Health Sector IM/IT Division operations for 2007/08 and 2008/09.
2. 2007/08 figures have been restated for comparative purposes to reflect inter-ministry and intra-ministry transfers.
3. In addition to the above estimates for capital expenditures, BC Ambulance Services and the Provincial Lab Coordinating Office are each allocated capital budget for information systems capital expenditures.
4. In addition to the above estimates for capital expenditures, the six Health Authorities are each allocated capital budget for information systems capital expenditures.

# Health Sector IM/IT Division Organization Structure

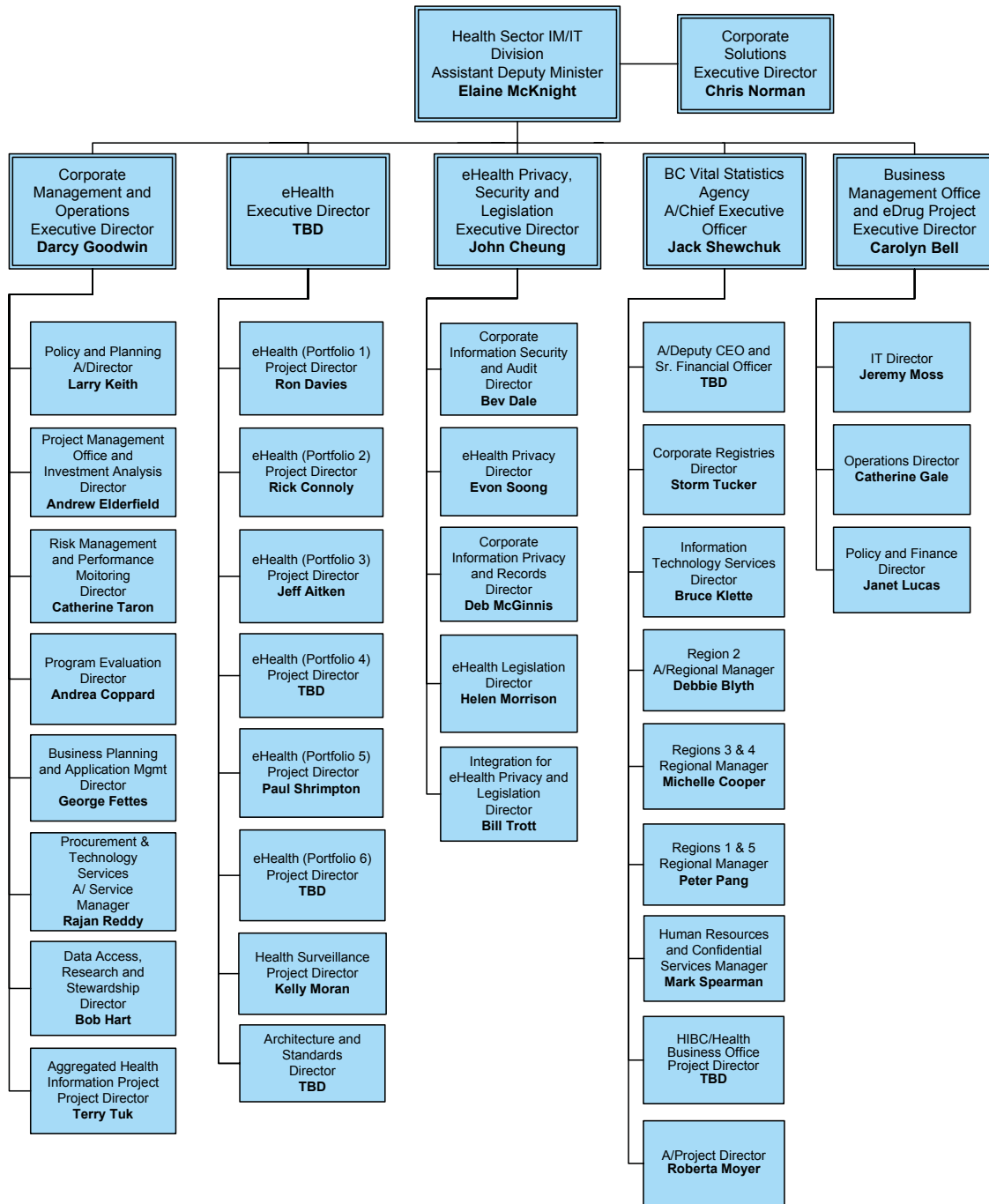


Figure 7 - HSIMT Organization Structure

## Accountability Statements

I am the Assistant Deputy Minister of the Health Sector IM/IT Division. I am accountable for the following overall results:

- Enable the consolidation and transformation of information management and information technology systems into one portfolio to ensure a coordinated approach in this critical area;
- Build the capacity for the integration of data into daily operations and policy, and support the Ministry's leadership role;
- Provide leadership for eHealth and all other ministry IM/IT initiatives, ensuring that the IM/IT strategies, policies, standards and technology initiatives support the integrated delivery of high quality system-wide health information management; and
- Ensure the overall strategic development, implementation and evaluation of the Ministry of Health Services and health sector information resource management plans.

In addition to my more general responsibilities, I am accountable for the following specific deliverables in 2008/09:

### *eHealth*

Lead the work to acquire the necessary data and information infrastructure to support successful health outcomes for the future. In advancing the eHealth agenda, ensure that priority setting and sequencing are treated as key factors. In addition, ensure that the provincial objectives for interoperability, privacy protection, security, access management and authorization are achieved. Key eHealth initiatives and deliverables include:

- Provincial Laboratory Information Solutions
- interoperable Electronic Health Record
- eDrug (PharmaNet)
- Public Health Information Project (Panorama)
- Telehealth

### *Citizen Access, Data Security and Protection of Privacy*

Prepare an IM/IT strategy that will facilitate appropriate citizen access to personal health information. Implement Freedom of Information and Protection of Privacy Act (FOIPPA) policy regarding access to and security of health data and information.

### *Shared Services IM/IT*

A comprehensive new shared services model will focus on common Health Authority technology services: desktop, service desk, network services and other information technology opportunities.

Original signed by,

Elaine McKnight

I am the Executive Director of the Corporate Management and Operations Branch in the HSIMT Division. I am responsible for strategic business planning and policy, provision of business solutions to the Ministry including outsourced services, the project management office, divisional financial management oversight, project risk management, and Health Authority IM/IT plan reviews. In addition to my overall responsibilities, I am accountable for the following specific deliverables in 2008/09:

- In collaboration with the Project Management Centre of Excellence, develop a framework for delivery of project management training and services that will enable and promote best practices in project management;
- Develop and implement budget management processes and procedures for eHealth projects that will reflect appropriate management accountability consistent with the organizational structure;
- Develop a resource capacity to evaluate project and program proposals, and their associated business cases;
- Develop and implement a plan for review of existing ministry IM/IT policy in the context of government-wide core policy;
- Develop and publish the annual Ministry Information Resource Management Plan;
- An eHealth (enterprise-wide/ program-level) Risk Management Plan;
- Provide ongoing leadership, standards and architecture development for the Aggregated Health Information Project;
- A program assurance (risk “audit”) policy and procedures document/manual, including a business process diagram, and definition of roles and responsibilities;
- Organize and staff the Ministry’s operation for the management of the government-wide iStore technology procurement system, and manage the associated ministry-wide technology services and equipment procurement budget; and
- Develop and implement a business consulting and resource allocation model, and planning process.

Original signed by,

Darcy Goodwin

I am the Executive Director of eHealth in the HSIMT Division. I am responsible for the effective development and implementation of eHealth projects across the province by working closely with the Health Authority CIOs. In particular, I am responsible for ensuring development of the Electronic Health Record and ensuring its interoperability across BC, while protecting privacy and security, as well as its compliance with provincial standards. I also work with other jurisdictions to advance national eHealth strategies.

For eHealth projects, as identified and approved by the eHealth Strategy Council, the Health Leadership Council, and the Ministry, I am accountable for the following specific deliverables in 2008/09:

- Develop and coordinate project charters and comprehensive project business plans;
- Provide ongoing leadership for standards and architecture development both within HSIMT and across the eHealth program, which includes the eLab, Physician EMR, and First Nations Telehealth initiatives;
- Ensure that eHealth projects comply with the provincial eHealth architecture and standards;
- Provide ongoing project management support and coordination;
- Ensure the execution of projects within timeline and budget, resolving or escalating any related issues where necessary;
- Monitor and report progress of the eHealth initiative;
- Work with the Health Authorities and other health agencies to determine and implement appropriate information systems with secure views of data for analytical requirements to support enhancement of the health care system;
- Negotiate with Canada Health Infoway regarding project funding;
- Identify and promote joint procurement and shared services within the health sector; and
- Coordination with other Canadian jurisdictions, Health Authorities and public health professionals to develop and test Panorama, the Pan-Canadian public health surveillance system, and integrate and implement PHIP, the British Columbia instance of the Panorama system.

Original signed by,

eHealth Executive Director (TBD)

I am the Executive Director of the eHealth Privacy, Security and Legislation Office in the HSIMT Division. The Office works with all eHealth project teams and plays the lead role in the development of privacy, security and records management policies and standards for provincial eHealth projects. In addition, I am also responsible for information privacy protection, freedom of information (FOI), records management and data/system security and audit for the Ministry.

I am accountable for the following specific deliverables in 2008/09:

- Identify and draft any new legislation required to reflect eHealth privacy or security policies or other legislative implications related to eHealth;
- Support the Minister in putting forward new privacy and security legislation for eHealth;
- Prepare Designation Orders pursuant to amendments to the eHealth (Personal Health Information Access and Protection of Privacy) Act regarding Health Information Banks and manage related consultation and information sharing processes;

- Work closely with the Ministry's Legislation Office to provide input and direction on privacy and data security matters related to legislative issues and requirements;
- Establish a Data Stewardship Committee to govern secondary use of eHealth data;
- Work with the Ministry of Labour and Citizens' Services to develop new processes for managing changes to FOI and protection of privacy legislation and implementation of Ministerial Orders affecting the Ministry and Health Authorities;
- Develop, deploy and maintain the Ministry's privacy protection, FOI, records management and security policies and procedures;
- Lead ministry information privacy and security system audits;
- Provide privacy, FOI, records management and data security advice and support to ministry program areas and services, including external partners such as health authorities;
- Liaise with other government agencies, ministries and external stakeholders with respect to matters related to privacy, FOI, records management and data security;
- Maintain governance framework for eHealth privacy and security including supporting the Privacy and Security Steering Committee, and managing working groups, related consultation and information sharing processes; and
- Develop and deliver an eHealth privacy and security framework that will enable establishment of eHealth systems in BC, and liaise with Canada Health Infoway on privacy issues relating to their funded eHealth projects.

Original signed by,

John Cheung

I am the Acting Chief Executive Officer of the Vital Statistics Agency (VSA) in the HSIMT Division. I am accountable for the overall management of the VSA, and to ensure the integrity and cost-effective operation of the related data registries. I am accountable for the following specific results in 2008/09:

- Continued effort to reduce the time delays in the birth reporting process with a target of 45 days for 90% of births by March 2009, from a level of 50 days for March 2008 (time from the date of birth to receipt of the Registration of Live Birth form from the parents);
- Continue to work with federal government departments and other provinces in setting up a federal/provincial/territorial network that will allow vital event data to be delivered from "producing" organizations (the VSA) to authorized "subscribing" organizations (federal departments and the vital statistics organizations of other provinces and territories), including verification of key information. This year will see Manitoba, Nova Scotia, and Prince Edward Island included in the network;
- Implement a birth certificate verification for Social Insurance Number services provided through Service Canada;

- Develop new data sharing agreements with users of vital statistics data to ensure compliance with recent legislative changes;
- Facilitate the uptake of the Ministry Provider Registry by all Health Authorities;
- For Lost and Stolen Certificates, the Agency will implement a system whereby certificates can be marked as having been reported as stolen or lost. This information will be instrumental to any verification service offering;
- Development of web based Application for Service system and Marriage Licence Issuing system for Government Agents offices;
- Issue the 2007 VSA Annual Report by October 2008; and
- Work with the BC Coroners Service to develop an electronic medical certification of death for implementation in fiscal 2009/10.

Original signed by,

Jack A. Shewchuk

I am the Executive Director, Business Management Office and eDrug Project in the HSIMT Division. I am responsible for the management and oversight of the eDrug project and the Master Services Agreement between Maximus BC and the Ministry. Maximus BC is the Ministry's private sector service provider responsible for the daily operations of the Medical Services Plan (MSP), PharmaCare and associated programs and systems. In addition to my overall responsibilities, I am accountable for the following deliverables in 2008/09:

- The ongoing strategic measurement of the Master Services Agreement between Maximus BC and the Ministry, including expansion of services and on-boarding opportunities development.
- Providing timely advice and direction for major projects involving Maximus BC and new government initiatives – for example, eDrug, the Revenue Management System (for the transfer of the billing and collections functions of the Registration and Premium Billing System to the Ministry of Small Business and Revenue) and corporate government initiatives under the leadership of the Ministry of Labour and Citizens' Services.
- Provide on-going leadership for the design/build phases of PharmaNet2 (upgrades and enhancements) and deployment planning for new functionality under the eDrug project.

Original signed by,

Carolyn Bell

I am the Executive Director of Corporate Solutions in the HSIMT Division. The Corporate Solutions Office provides an enterprise perspective/advisory capacity and leads a strategic solution approach (solution architect) to support the achievement of priority business and strategic objectives, including identifying governance, policy and/or strategic requirements and opportunities. The Office also provides a strategic link to key stakeholder and partner organizations, including ongoing liaison with the Office of the Chief Information Officer for BC. The Office also provides a focus for evidence and value based approaches to business priorities and policy decision making to support the achievement of desired government and ministry outcomes.

Original signed by,

Chris Norman

# Business Environment

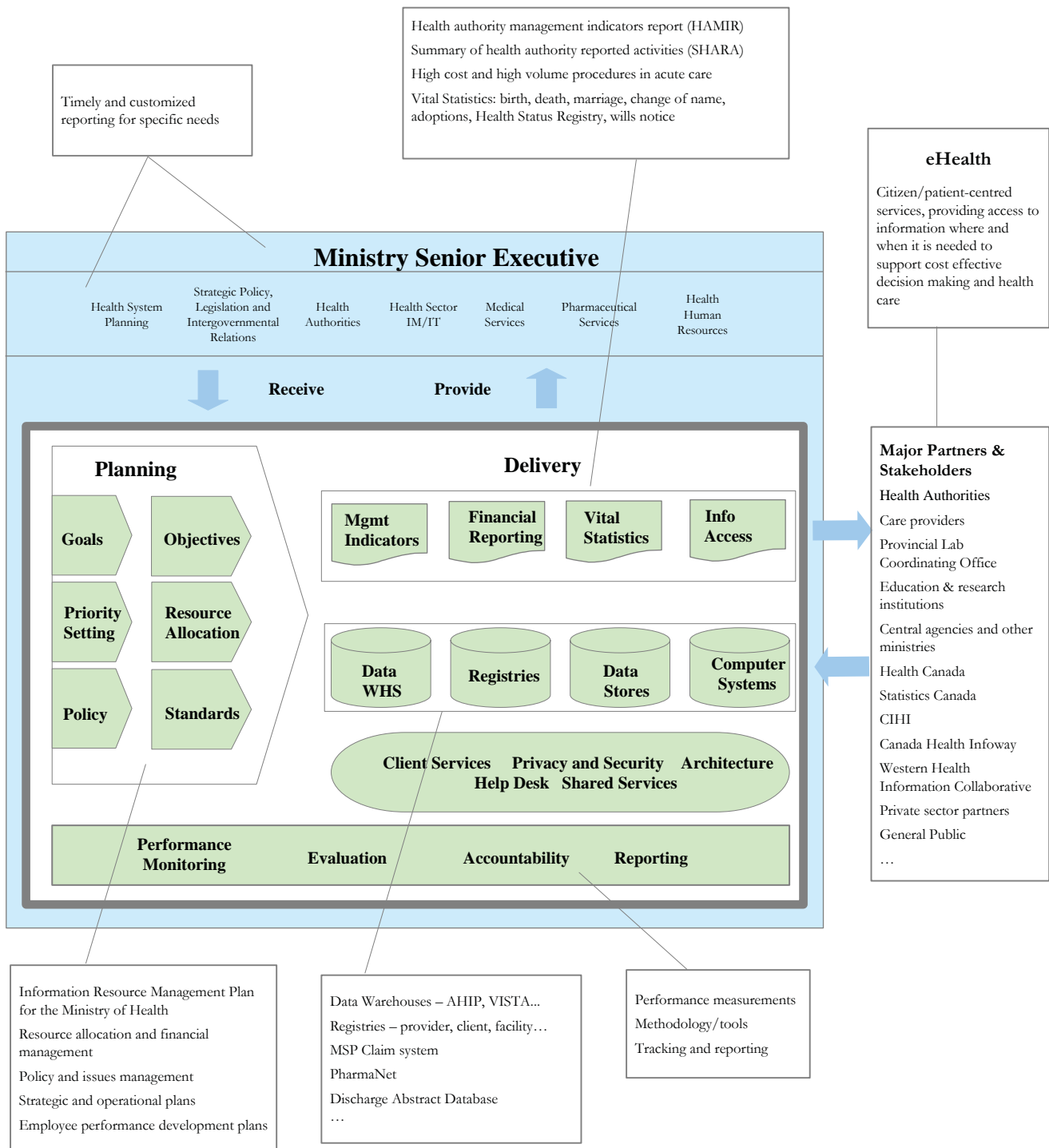


Figure 8 – Business Environment

## Appendix 2: Key Stakeholders and Partners

The Ministry's information resource management activities involve a broad range of public and private partners – both national and provincial (in addition to other parts of the British Columbia government). Key stakeholders and partners include:

### National

#### *Canada Health Infoway (Infoway)*

Infoway's mandate is to accelerate the development and adoption of electronic health information systems within Canada. An independent, not-for-profit corporation, Infoway is a partnership of federal, provincial, and territorial governments. It has \$1.5 billion in capital to invest with partners to develop and deploy robust, reusable, interoperable Electronic Health Record solutions, and replicate them throughout Canada's health care system.

As of March 2008, Infoway had signed legal agreements with British Columbia to invest close to \$160 million in eHealth initiatives within the Province. In addition, Infoway has invested approximately \$5 million in the multi-jurisdiction Provider Registry project led by BC, and has committed over \$40 million towards the development of a Pan-Canadian Health Surveillance solution (Panorama) by British Columbia.

Infoway's approved and anticipated BC investments are allocated between initiatives as follows:

- Provider Registry BC Implementation - \$1.8 million
- BC Healthcare Client Identity Management - \$9.1 million
- Provincial Laboratory Information System - \$21.4 million
- interoperable EHR - \$37.2 million
- Connecting Diagnostic Imaging - \$15.7 million
- eDrug Solution (PharmaNet upgrade) - \$22.7 million
- Public Health Information Project - \$9.8 million
- End User Strategy - \$1.3 million
- Interior HA Regional Picture Archive and Communications System - \$8.8 million
- Fraser HA Regional Picture Archive and Communications System - \$15.4 million
- BC Telehealth Strategic Plan - \$384,000
- Telehealth Business Terminology Project - \$22,000
- Telepathology Solution - \$1.2 million
- Telehealth Governance - \$1.1 million
- eHealth Coordination and Integration Project - \$9.3 million

- Patient Safety Learning System - \$2.6 million
- Decision Support Tools supporting Mental Health and Addictions Services - \$1.8 million
- Registries Readiness - \$316,000

The ministry, in conjunction with the Health Authorities, continues to work collaboratively with Infoway and to explore other opportunities for Infoway investment in the province.

### *Canadian Institute for Health Information (CIHI)*

CIHI is an independent, Pan-Canadian, not-for-profit organization working to improve the health of Canadians and support the health care system by providing high-quality, reliable and timely health information.

The Ministry works with CIHI, and makes extensive use of its health information functions to develop and manage health databases and registries; conduct research and analysis; help develop national health indicators; coordinate and promote the development of national health information standards; and disseminate health information.

### *Health Canada*

Health Canada is the federal government's internal focal point for eHealth, and multi-channel government service delivery.

The Ministry works with Health Canada in a number of areas, including eHealth.

### *Identity Council for Canada*

The Identity Council provides support for the Vital Statistics Council Committee for Standards Development, oversight of the National Routing Pilot project, and is responsible for adoption of a national identity framework at the federal level.

### *Statistics Canada*

Statistics Canada has two main objectives: to provide statistical information and analysis concerning Canada's economic and social structure, and to promote sound statistical standards and practices. The registration of all live births, stillbirths, deaths, and marriages that occur in the Province of British Columbia are submitted to Statistics Canada for the compilation of national statistics for these vital events. The Ministry, through the VSA, identifies and reports problems and errors using automated coding systems for generating International Classification of Disease (ICD) codes.

### *Vital Statistics Council for Canada*

The Vital Statistics Council for Canada is an advisory group composed of the heads of the vital statistics divisions/agencies from the provincial and territorial governments and the Health Statistics Division of Statistics Canada. The council provides a forum for developing common approaches for collecting vital statistics, sharing information with external parties (e.g. social services departments, law enforcement agencies, individuals), and for facilitating problem solving by sharing experiences, research findings and expertise among the jurisdictions.

### *Western Health Information Collaborative (WHIC)*

A process initiated in 1999 by the Western Premiers and Deputy Ministers of Health; WHIC explores collaborative opportunities with respect to health infostructure initiatives.

One of the major successes of WHIC has been the joint development of the Provider Registry, led by BC. Additional functionality for the registry is currently being added through funding by Canada Health Infoway. The Ministry has ongoing engagement with WHIC through the WHIC Leaders Forum.

## **Provincial**

### *BC eHealth Information Standards Council (eHISC)*

The eHISC is intended to facilitate and oversee the provincial health information and technology standards management and approval process. In doing this, it is to support the strategic direction of the British Columbia eHSC in its province-wide implementation of eHealth, and encourage timely information sharing and constructive dialogue with health information stakeholders and with the broader public. eHISC brings together an informed and experienced group of health system experts, including physician, dentist, nurse and pharmacist representatives, BC university representatives, ministry and health authority staff, as well as other technical specialists.

### *British Columbia Medical Association (BCMA)*

The BCMA is a voluntary association which represents more than 95% of the doctors practicing in British Columbia. The mission of the BCMA is to promote a social, economic, and political climate in which members can provide the citizens of British Columbia with the highest standard of health care while achieving maximum professional satisfaction and fair economic reward.

The Ministry of Health Services and the BCMA have formed an Information Technology Advisory Committee to be the key communication forum for the strategic direction and application of IM/IT.

### *College of Pharmacists*

The College of Pharmacists of British Columbia is the licensing and regulatory authority for the profession of pharmacy and its practice environment. The college obtains its authority from the *Pharmacists, Pharmacy Operations and Drug Scheduling Act*, and is accountable to the public.

### *College of Physicians and Surgeons*

The College of Physicians and Surgeons of British Columbia is a statutory body established by the Provincial Legislature in 1886. It is composed of physicians registered in the province to practice medicine and surgery.

The functions of the college are to: protect the public, maintain the standards and honour of the profession, establish rules for the proper professional conduct of its members, determine qualifications for registration and licensure, and to evaluate the competence and conduct necessary to maintain registration and licensure.

### *eHealth Strategy Council (eHSC)*

The eHealth Strategy Council (eHSC) is a partnership between the Ministry of Health Services, the Health Authorities, a number of health service provider representatives (i.e. physician and pharmacy community) and other key groups (e.g. representatives of the government CIO, First Nations, public health). The council provides leadership and is responsible for ensuring the eHealth Deployment Task Group and supporting committees are aligned with the decided eHealth strategy. Members are expected to provide health system leadership and not just organizational representation. The eHSC is chaired by the Chief Operating Officer of the Ministry of Health Services and includes members from the executive of each of the six Health Authorities, physician representatives, and several members drawn from the Ministry executive.

### *eHealth Deployment Task Group (eHDTG)*

The eHealth Deployment Task Group (eHDTG) focuses on the design, build, and implementation across the Province of eHealth initiatives identified and approved by the eHSC. A number of steering committees work with the eHDTG, including the Health CIO Council, the Provincial Lab Information Solution Executive Steering Committee, the eDrug Project Steering Committee, the BC Public Health Information Project Steering Committee, and the Telehealth Steering Committee. The eHDTG has members from the Ministry, the Health Authorities, and the health care provider community (i.e. physician, pharmacy, nursing, public health representatives).

### *Health Authorities*

The Health Authorities have the main responsibility for delivering health services for the Province. The six Health Authorities are: the Northern Health Authority, Interior Health Authority, Fraser Health Authority, Vancouver Coastal Health Authority, Vancouver Island Health Authority, and the Provincial Health Services Authority.

The Ministry receives data from and provides information to BC's Health Authorities. It also works with the Health Authorities at the IM/IT planning and project level, largely through the leadership of the eHSC and its steering or subcommittees.

### *Health CIO Council*

The Health CIO Council is comprised of the Executive Director of the Ministry's eHealth program and the chief information officers of the six Health Authorities. The purpose of the council is to establish and implement a unified provincial IM/IT vision and plan for the provincial health care system, and to ensure that collaboration mechanisms and common IM/IT approaches, where practical, are in place to foster underlying business success.

### *Office of the Chief Information Officer*

The office provides government-wide leadership and strategic direction in the management of IM/IT initiatives and resources. It establishes and manages British Columbia's IM/IT governance framework. The office leads the transformation of government operations to electronic service delivery, and develops IM/IT strategies to help position British Columbia's citizens and businesses to better participate in the global economy.

The Ministry of Health Services commits significant resources to cross-government IM/IT activities, including sharing methodologies (e.g. project management) and information (via advisory committees).

### *Office of the Information and Privacy Commissioner (OIPC)*

The OIPC for BC is independent from government. It monitors and enforces British Columbia's FOIPPA and the Personal Information Protection Act (PIPA). FOIPPA allows access to information held by public bodies (such as ministries, universities and hospitals) and determines how public bodies may collect, use and disclose personal information. PIPA also sets out how private organizations (including businesses, charities, associations and labour organizations) may collect, use and disclose personal information.

In addition to ongoing regular communication between HSIMT and the OIPC, HSIMT's eHealth Privacy, Security and Legislation Office is actively sharing information and consulting with the OIPC on privacy issues pertaining to implementation of eHealth projects and ministry operations.

### *Physician Information Technology Office (PITO)*

The Physician Information Technology Office will provide physicians with approved vendor options, give them technical and change management support, and serve as the source for provincial funding of 70% of their eHealth system acquisition costs. The support provided by PITO helps cover a physician's cost for the necessary computers, secure email access, EMR software, connectivity, and access to the provincial eHealth systems.

The PITO operation reflects the 2006 agreement between the BC Government and the BCMA, which sets out a responsibility framework for the eHealth-related transformation of physicians' offices and practices. The PITO is expected to operate until early 2012. The BC Government has committed more than \$107 million to physician IT support over that period, through PITO.

### *Provincial Lab Coordinating Office (PLCO)*

The PLCO is charged with developing a patient-centred medical lab service system for British Columbians that can provide high quality, affordable, and accessible service. The PLCO is part of a comprehensive initiative to renew lab service delivery in the Province, and ensure better coordination of lab test results for patients.

The Ministry works with the PLCO to develop a provincial lab information system that will be more efficient (in its use of people, processes, and technology), prevent the needless duplication of testing, and provide for better patient care.

### *Provincial Lab Information Solution Executive Steering Committee*

Reporting to the eHealth Deployment Task Group, the Provincial Lab Information Solution (PLIS) Executive Steering Committee is charged with guiding and directing the development of a patient-centred lab service information system for British Columbians. PLIS is a comprehensive initiative to renew and streamline medical lab service delivery in the Province, integrate lab information with BC's electronic health systems, and ensure better coordination of lab test results for patients.

### *Telehealth Steering Committee*

Reporting to the eHealth Deployment Task Group, the Telehealth Steering Committee has representation from the six Health Authorities, the Health CIO Council, medical schools, the Ministry, and the Premier's Technology Council.

The committee identifies and defines provincial priorities for Telehealth that respect Health Authority and provincially identified health care needs, and endeavours to align them with strategies identified by Infoway for potential funding.

## **Universities**

The Ministry works with a number of colleges and universities on a variety of health information issues. They include: the BC Academic Health Council to explore collaboration opportunities between health and education sectors; the School of Health Information Science at the University of Victoria to develop curriculum on health information management and physician education; the BC Institute of Technology to examine health care technology issues; and Simon Fraser University to establish a partnership whereby the VSA will share its existing warehouse technology with the University, and in turn, the University will assist with ongoing development and will be the clearinghouse for academic users requesting access to the warehouse for research or teaching purposes.

## **Workplace Technology Services (WTS)**

Services provided by WTS include integrated, common IT services, finance and administration services, payroll services, as well as procurement and supply services.

The Ministry works with WTS to clarify its outsourcing strategy and information technology decision-making process, service levels, costing models, the government migration strategy for mainframe/legacy systems, and the cost implications for remaining legacy users.

## **Other Stakeholders and Partners**

In addition to the groups listed above, there are numerous other provincial stakeholders, including:

- BC Civil Liberties Association
- BC Coalition of People with Disabilities
- BC Dental Association
- BC Freedom of Information and Privacy Association
- BC Patient Safety Task Force
- BC Persons With AIDS Society
- BC Pharmacy Association
- BC Schizophrenia Society
- Canadian Mental Health Association, BC Division
- College of Registered Nurses of BC
- College of Dental Surgeons of BC
- Michael Smith Foundation for Health Research
- Seniors Network BC

## Appendix 3: eHealth Projects

The Ministry's information resource management activities involve a broad range of projects and initiatives, with the greatest present effort focused on eHealth. The eHealth clinical and foundational projects that are targeted for implementation within the next one to two years include:

### *Aggregated Health Information Project (AHIP)*

AHIP is intended to create an integrated, provincial health information management infrastructure, capable of quickly supporting new types of analyses, as the need arises. Through a staged and iterative process, AHIP will provide a strategic information management framework for the Ministry of Health Services and the Health Authorities. AHIP will integrate currently separated health data sources and systems into a more accessible, knowledge-based, corporate decision support framework. The AHIP products and services are based on best practises in information management and are designed to meet the legislated security and protection of privacy requirements. In addition to housing the currently available health administrative data, the integrated data warehouse developed by this project will serve as the environment for eHealth data for secondary use as they become available. Once in production, this development project will transition to a Ministry of Health Services information delivery program.

### *BC Public Health Information Project (PHIP)*

In 2005, the British Columbia Ministry of Health Services initiated a project to review and improve public health information management and public health surveillance technology in BC. BC is leading the Pan-Canadian Public Health Communicable Disease Surveillance and Management Project that will deliver the Pan-Canadian Public Health Surveillance System (Panorama), providing high quality, timely health surveillance data at the regional, provincial/territorial and Pan-Canadian levels.

In 2006, an agreement was reached between British Columbia and the Yukon Territory to partner on this initiative. This BC/Yukon PHIP has three major components:

1. Communicable disease component – determines how to best implement the system in BC to support communicable disease surveillance and control, based on the system that is being developed and provided to all Canadian jurisdictions by the Pan-Canadian Communicable Disease Surveillance and Management Project.
2. Environmental health/health protection component – supports public health field operations by developing requirements and assessing tools for managing environmental health and health protection information, and supporting the research and surveillance requirements of environmental health/health protection stakeholders.
3. Family health component – supports public health providers in their provision of maternal/child services.

Additionally, the project will develop a strategy to ensure the PHIP solution fits within the context of British Columbia's EHR initiatives.

### *Connecting Diagnostic Imaging (CDI)*

Diagnostic imaging (DI) serves a critical role in the delivery of high quality health care in British Columbia. Diagnostic images and their interpretation are of significant clinical value, but their supply is constrained by the high capital and operational cost of the imaging modalities and by the limited availability of the skilled health professionals that support imaging services. In response, BC has developed a provincial DI Electronic Health Record strategy to use information and communications technology to increase the value of imaging services for health care delivery.

CDI will develop a solution to deliver DI results to end users via the iEHR and EMR systems, and thus the design and operation of the Provincial Diagnostic Image repository (PDI-r) will be implemented in the broader context of the Electronic Health Record. The PDI-r will use the EHR architecture and controls, but be designed and implemented at a higher level and with a broader scope. Features that deliver services such as privacy and security will, therefore, be addressed in a consistent and comprehensive fashion across the whole provincial eHealth initiative, and each of the domain projects such as CDI will avoid creating its own approach.

The PDI-r will integrate with other key clinical and patient data systems within British Columbia's iEHR program to provide a longitudinal view of electronic DI records across the Province. Users of the PDI-r will be able to use the iEHR as a route to access provincially held DI results that are necessary for the care of the patients, but are not accessible through a local PACS system.

### *eHealth Network Gateway*

This gateway will allow health care communications and data to travel securely between health care facilities in the Province. Services using the gateway include email, dictations, diagnostic reports, diagnostic images and Telehealth.

### *Electronic Medical Record (EMR)*

On May 5, 2006, the BCMA and the Provincial Government completed negotiations on a new agreement covering physicians in British Columbia. As part of this negotiation, the parties agreed to work collaboratively to coordinate, facilitate and support information technology planning and implementation for physicians within the eHealth strategic framework.

Appendix C of the agreement describes the strategy to implement an EMR system and the supporting infrastructure in the offices of BC physicians. This has resulted in the launch of three separate but related projects:

1. Definition, procurement, packaging and implementation of the infrastructure necessary to run the EMR applications in physician offices (e.g. secure network, email);
2. Definition, procurement and bundling of qualified EMR products and services (including required computer hardware and helpdesk services); and
3. The setup of PITO, including the framework, policies and procedures related to supporting physicians in their EMR implementation, and provision of the associated funding and services.

The EMR project includes the above features as well as chronic disease management functionality.

### *interoperable Electronic Health Record (iEHR)*

From a clinical and business perspective, the iEHR project solution will deliver a private and secure EHR service for BC and will enable sharing of Electronic Health Record data across the continuum of care for the appropriate caregivers. It is established from the needs and requirements of service providers and patients to have sharable clinical information available using an EHR infostructure. Physicians will view information on a real-time transactional basis through a provincial viewer. Expected benefits include improved patient safety and quality of care, as well as cost and process efficiencies.

From a technical perspective, the solution will acquire or reuse, integrate and deploy the core components of an EHR infostructure, including the Health Information Access Layer (HIAL), the Longitudinal Record Services (LRS), the Shared Care Record and the provincial viewer. The solution will also integrate a number of provincial and Health Authority level systems in order to establish the complete set of services required to create a working EHR infostructure, including registries and specific domains such as drug, laboratory and diagnostic imaging. The solution will be standards-based, with a firm commitment to the standards set by the Pan-Canadian EHR standards collaboration process.

### *InterRAI Implementation - Residential Care*

Implement interRAI (Residential Assessment Instruments) to help guide consistent community-based service delivery. The interRAI data will be used to facilitate evidence-based clinical practice and policy decisions.

### *Private Physician Network*

This initiative will enhance the transfer of information from one physician to another using a private and secure network.

### *Provincial eDrug Project*

The eDrug project will build on the existing PharmaNet systems and focus on three areas:

1. Increasing authorized access to medication profiles for physicians, other clinicians and patients;
2. Expanding medication profiles stored in PharmaNet (e.g. to include physician office medications, and drugs dispensed in acute care settings); and
3. Deploying ePrescribing capability across the province, including:
  - a) Clinical reference and financial reference support tools -
    - dosage calculations and best practice guidelines
    - formulary checking and special authority management
  - b) Electronic prescription functionality and associated methodology.

### *Provincial Laboratory Information Solution*

This project will support care providers with a standardized view of and timely access to laboratory information at the point-of-care anywhere in the province. It will provide physicians and other health care providers with more complete, timely and relevant information to support clinical decision making. The project will be phased, with the end-state solution delivering web-enabled laboratory test order entry and results reporting capability across BC.

### *Registries Readiness*

This project will ready the Provider and Client Registries for the various eHealth domain (lab tests, drugs, diagnostic images) solution implementations. Through it, the provincial registry hardware and software will be enhanced to support the greater demands and volumes associated with the EHR and the overall eHealth system. The Enterprise Master Person Index (Client Registry) will help enable EHR capability by providing the means to identify the health records (lab results, medication histories, diagnostic reports, discharge summaries) that all belong to the same patient. The Provider Registry will help enable EHR capability by providing demographic, licensing, credential and practice restriction information for such service providers as physicians, nurses and pharmacists.

### *Telehealth*

Planning for the implementation of a portfolio of Telehealth initiatives throughout the Province is scheduled for completion at the start of fiscal year 2008/09. Agreements with Canada Health Infoway are expected to be established early in the fiscal year to secure investment in a number of these initiatives, which are expected to include: TeleOncology, TeleThoracic, TeleHomecare, TeleOphthalmology, TeleWoundcare, and First Nation Telehealth Infrastructure.

### *The eHealth Gantt Chart*

In 2005/06, the Ministry released British Columbia's eHealth Strategic Framework, which outlined how the eHealth vision and initiatives would improve overall patient care; help health professionals deliver better, faster and safer services; and improve the underlying efficiency of the health system. That document also contained a Gantt chart showing the overall eHealth 10-year Implementation Plan. The eHealth Strategic Framework can be found at [www.health.gov.bc.ca/library/publications](http://www.health.gov.bc.ca/library/publications).

Figure 9 shows a revised version of the original eHealth 10-year Implementation Plan Gantt Chart. This chart is similar to the original one found in the Strategic Framework. It essentially presents the same type of information, but reflects current eHealth projects and timeframes for the next three fiscal years.

The Ministry is entering the fourth year of the province-wide eHealth initiative. All of the listed active eHealth projects have completed the planning and initiation phase, and are now either in the build, prototype and test, or the implementation and evaluation phase; phase two and three projects are anticipated eHealth projects with the timeframe of expected start date.

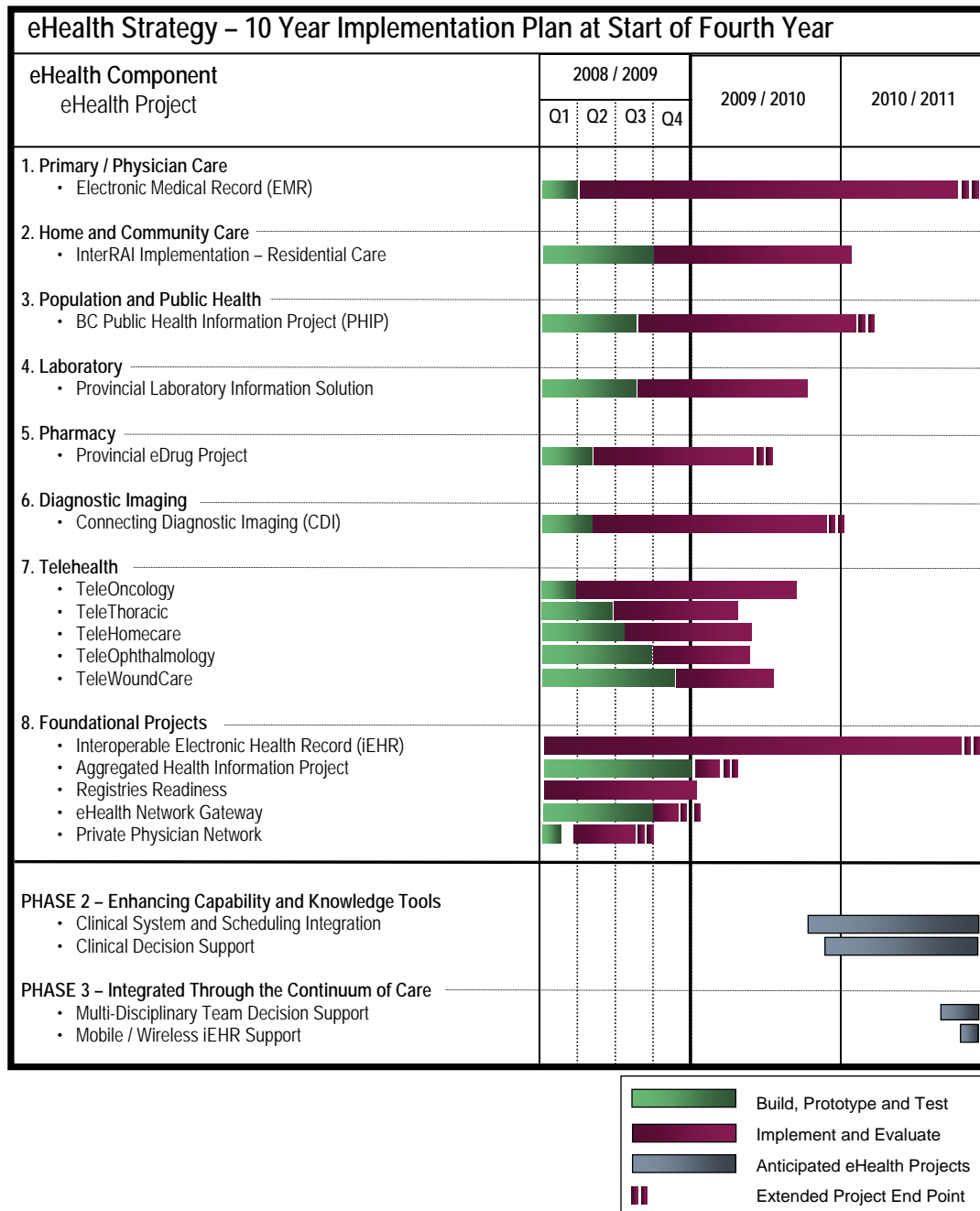


Figure 9 – eHealth Gantt Chart

## Appendix 4: Other Business Requirements and Initiatives

The following is an alphabetical listing that briefly highlights the business requirements, projects and initiatives not specifically targeted at eHealth. They were identified through an extensive consultation and planning process with the Health Authority and ministry program areas.

Since information resource planning is an ongoing process, additional business requirements and initiatives may be identified throughout the year and be added to this list. The IRMP is published annually.

### *Acute Care GLE/PA/SP Monitoring*

This project is intended to build a SharePoint site with the capability of capturing performance monitoring data from Health Authorities, presenting the data as a performance dashboard and in reports, providing for automatic distribution/notification of reports, and appropriate security. It will ensure that performance levels are meeting expectations, providing a better quality of service and an improved utilization of resources.

### *Addictions Information Management System (AIMS) Database Assessment*

The AIMS database is nearing capacity and will need attention to ensure functionality remains available until all the regional Health Authorities are reporting through the Mental Health and Addictions Minimum Reporting Requirements system.

### *AIMS - Feasibility Study*

Investigates whether or not the AIMS data can be used to populate the new Addictions Minimum Reporting Requirements system; and if so, the intent is to proceed with the associated work.

### *AHIP Source System Evaluation for Health Authority Reimbursement - Phase 0: Business Requirements*

This project will deliver business requirements and data definition documentation related to the feeding of Health Authority Physician Reimbursement (HAPR) provider payment details into the Ministry of Health Services data warehouse. Development of an integrated view from available sources was one of the basic requirements in support of the HAPR.

### ***Alternative Payment Program Contract Management System (APPCMS) Replacement - Phase 2: Implementation***

This new system will replace the current APPCMS mainframe system so as to comply with specific ministry standards, follow recommendations from the Auditor General's Report on expenditure monitoring, and adopt identified business application requirements. This Phase will focus on implementing custom services that include feeder interface designs, data export warehousing, and contract-claims matching.

### ***Alternative Payment Program (APP) Web - Phase 3***

This project will add features to the already existing Alternate Payments Program application for the Contract Management System (CMS). These improvements will support business requirements and address concerns expressed in the 2003 Auditor General's report, such as contract management, verification of physicians, collection and auditing of detailed transaction records, reduction in duplicate entry and improved flexibility.

### ***Alternative Service Delivery (ASD) Governance Support and Interfaces***

The government selected Maximus BC to work with the Province on developing an ASD model for the MSP and PharmaCare. This initiative has carefully defined the complex business processes required to facilitate change management and knowledge transfer in support of the related agreement.

### ***Ambulance Billing Other Transactions (ABOT) System Rewrite***

ABOT is used to enter transactions – payments, changes/corrections to Ambulance Crew Reports, bill stubs, adjustments and transfers. It is expected that the current application will have to be rewritten in order to run in a Windows Vista environment.

### ***BC Hearing Aid Dealers and Consultants Information Database***

This project will enable the Board of Hearing Aid Dealers and Consultants to provide accurate and timely reports to the public, and a single point of entry for registry information and tracking complaints.

### ***Birth Registration***

This project will significantly reduce the number of days between the date of birth and the Ministry's receipt of the required Registration of Live Birth form.

### ***British Columbia Ambulance Services Patient Care Information System Project***

This project will enhance the quality, timeliness and completeness of the patient care information available to the BC Ambulance Service for operational, business intelligence and medical research purposes.

### ***Business Process Design for Nurse Practitioner Reporting of Encounter Records***

This project is intended to design or modify the business process and application to capture and report on Nurse Practitioner (NP) encounter codes and records in a timely, consistent and accurate manner. Complete and accurate administrative data on the services provided by NPs will provide a high level of confidence in making decisions about their role and impact in the health care system.

### ***Cardiac Arrest and Major Trauma Initiative***

This project will provide the British Columbia Ambulance Service with the ability to manage cardiac arrest and major trauma data for the purposes of quality improvement and medical research.

### ***Core Image Migration***

This project will ensure all ministry line-of-business applications are compatible with the planned standard operating system for government workstations (MS Vista).

### ***Corporate Initiatives Tracking***

The project is aimed at building a system to track progress on strategic initiatives for the Ministry; it will be able to track initiatives of numerous types, and link related initiatives.

### ***Crew Report Data Entry System (PC/DES) and Ambulance Billing Information System (ABIS) Revisions for Patient Care Information System (PCIS) Rollout***

These projects are process initiatives designed to improve the PC/DES and ABIS. The upgrade will enhance the validation process for both systems by addressing technical and business requirements arising from the PCIS.

### ***Data Sharing Agreements Inventory and Repository***

There is a requirement that the ministry Data Steward to be able to provide details of who has access to any data under ministry stewardship. This project will develop an inventory and provide an electronic repository for all Data Sharing Agreements with people and agencies outside the Ministry. This application will improve turnaround on data access requests, improve accuracy of records and improve access by the public.

### ***Data Stewardship and Access Management (DSAM) - Phase 3***

This project is intended to provide data access support tools to senior information resource managers. By effectively storing, updating and retrieving all information requests for access to personal data, the related reporting requirements and business processes can be streamlined and stewardship workloads will be systematically alleviated.

### *DSAM - Phase 4*

This project is intended to further enhance the DSAM application so that it can track “who has access to what” – i.e. to add existing agreements from any source, and to add the remaining Connections Access Application workflows to the system. The first release of DSAM went live in May 2008 with the MSP Direct access workflow. The application is to be a repository for all Data Access Agreements.

### *Data Warehouse for InterRAI*

This project is intended to build a data warehouse to receive, store and allow analyses on the interRAI data (Home Care and Residential Care) sent from Home Community Care Reporting Project to the Canadian Institute for Health Information (CIHI) and to the Ministry of Health Services. InterRAI is a collaborative network of researchers in over 20 countries committed to improving health care for persons who are elderly, frail, or disabled. Their goal is to promote evidence-based clinical practice and policy decisions through the collection and interpretation of high quality data about the characteristics and outcomes of persons served across a variety of health and social services settings. The data warehouse will enable better decisions by comparing BC admissions and Home Care/Residential Care support to that for 20 other countries.

### *Decision Support System (DSS) - MO Server Segregation*

A project designed to move DSS application databases, and their linkages, from currently shared servers, to a separate, securely managed environment. This will ensure segregation of applications security and operations between the Ministry DSS team and the Managed Operations contract with CGI.

### *E-Team Implementation - Phase 3: Obtain Alternate Service*

This project will replace TELUS subscription services by upgrading ministry owned E-Team licenses to Enterprise Licenses and using IT services provided by WTS and the CGI group. The outcome will be a standardized model for a province-wide health sector web-based emergency information management tool. The Ministry will continue to share knowledge gained throughout the implementation phase and with the provincial EMIS team.

### *Emergency Management Geo-spatial Information*

This project will develop a comprehensive strategy to implement an integrated Geographic Information System (GIS) service for health sector emergency management in British Columbia. Its three objectives are (1) to define the GIS requirements that will support health emergency managers in preparedness planning and operational response, (2) to develop a GIS application as a Health Emergency Management (HEM) tool, and (3) to determine the best strategy to deliver the HEM GIS service. This project will improve the decision-making process, improve consistency of information that can be shared by government agencies, and provide a standardized and cost-effective model for a province-wide health sector emergency information management tool that can be accessed and used by both public and private sector partners to support public health emergency management.

### ***Emergency Medical Assistant (EMA) Licensing Registry and Identification (ID) Cards***

The EMA License Registry with ID Cards is an initiative to replace and enhance the current system with the following features: photo ID software for multi-user network installations, high grade PVC license ID card printing, and robust data management reporting capabilities. With the EMA Regulation introduced January 1, 2005, only one license can be held by an individual, yet two registries for first responders and paramedics are currently being used. Consolidating registries into a single entity will help accommodate the regulatory change and will promote consistent application by producing photo license cards for first responders.

### ***Emergency Medical Assistants Registry System (EMARS) 7 - License Registry and Patient Complaints Monitoring and Reporting***

This project will develop a tracking and reporting process for Patient Complaints in support of the Emergency Medical Assistant Licensing Board (EMALB) function of adjudicating complaints and implementing decisions. The project will utilize the database from the EMA Licensing Registry and ID Cards project. Each patient care complaint needs to be linked to the appropriate licensee registry record – this project will enhance the ability to monitor licensee status, to process and to implement the EMALB's patient complaint investigations and determinations, and provide for multi-tiered reporting capabilities to meet client requests and regulatory reporting requirements.

### ***Financial Management Reporting Redevelopment***

The project is intended to redevelop the Financial Management Reporting (FMR) application into a stable, secure and automated application, combined with the Chartweb application.

### ***Formulary Management Drug Submission Review Database and Web Page***

The Formulary Management and Drug Submission Review Database is an upgraded storage system designed to enhance the capturing of drug review data for its eventual posting to a revised website. By converting a series of legacy spreadsheets into an advanced database, many information-based benefits are realized. User entry is simplified, data quality is improved, and drug review progress results with a range of timely information extracts are readily available to both the public and various stakeholder groups via the web.

### ***Full or Partial Rewrite the Hospital Out of Province (HOOPC) Application***

This project involves re-writing all or parts of the HOOPC application. HOOPC includes the Staging Area, the batch and web interface, as well as the electronic interface for both inbound and outbound files to Alberta for reciprocal billings. It will ensure that HOOPC complies with the Inter-Provincial technical specifications for electronic interfaces for the exchange of hospital reciprocal claims, redesign the HOOPC rules engine to make it more efficient and easier to update, address outstanding changes to HOOPC that were carried forward from the original implementation project, and other priority enhancement requests as identified by the business area. It will also ensure all technical documents are current and complete.

### ***Full Time Equivalent (FTE) Reporting Redevelopment***

This project will redevelop the FTE Reporting functionality in a stable and secure environment, as a part of a combined Chartweb/Financial Management Reporting (FMR)/FTE application.

### ***Guaranteed Income Supplement (GIS) Look-up Alternative***

The project is a new ministry managed secure website that provides those Health Authorities no longer using Continuing Care Information Management System (CCIMS) with an alternate access to GIS data from the federal government.

### ***Health Authority Encounter Reporting (HAER) - Phase 0: Business Requirements***

The Health Authority Encounter Reporting project is a new business process which is required for the collection of clinical services encounter records from the Health Authorities. This data is a mandatory compliance requirement for payment under clinical services contracts. The physician/patient event data provides critical diagnosis and intervention outcomes for the management and review of alternative funding program expenditures.

### ***Health Authority Encounter Reporting***

This project delivers a new application to provide a repository for Paediatrics Encounter Reporting by developing a process for importing the data and a method of producing both canned (developed within the application) and ad-hoc (query) reports. As established in their contracts with the Ministry, the Health Authorities are required to send encounter data to the Ministry, and this project addresses that obligation.

### ***Health Authority Health Human Resource Planning (HHRP) Report Requirements***

Conduct an assessment of what Health Authorities are tracking within their physician reimbursement systems, and their process for reporting to the Ministry. Deliverables will include a strategy for Health Authority HHRP reporting, a business systems options document, and a solution proposal.

### ***Health Authority Physician Reimbursement (HAPR) Enhancements***

This project will add features to the HAPR application to support requests from Health Authorities and the program area. This will give the Health Authorities the ability to review their own information online and to develop canned (developed within the application), parameter driven reports.

### ***Health Authority Physician Reimbursement (HAPR) Query Tool Enhancements***

This project is designed to prepare requirements documentation for the delivery of more complex queries and reports used in the reporting and analysis of Physician Payments. Having access to HAPR data helps the Physician Human Resources Management branch and the Ministry to properly review and analyze total physician reimbursements.

### ***Health Emergency Management Information System (EMIS) Operational Readiness***

This project will support the acquisition of the necessary equipment and build an application capable of creating archives of the data stored in E-Team, and to design an executive report system utilizing that data.

### ***Health Lines Services BC (HLSBC) Websites Review and Transition Planning***

The HLSBC Websites Review and Transition Planning project will follow through on a transition model for the existing BC NurseLine, Dial-A-Dietician, BCBedline, BC HealthGuide (BCHG) & TCM websites migrating them into a standardized HLSBC website. The Planning context will include investigation of alignment with existing websites used in the EHCS.

### ***Health Status Registry Rejuvenation***

Increase the number of reporting sources, quality of the data, and accessibility to the Health Status Registry.

### ***Home and Community Care - InterRAI data from Canadian Institute for Health Information (CIHI)***

This project defines, designs and builds a repository for the InterRAI data for Home Care to be received by the Ministry from CIHI. InterRAI data is sent to CIHI by the regional Health Authorities.

### ***Healthnet BC Interface (HNI) Upgrade***

This project will modernize the existing HNSecure (software and infrastructure communications technology), HNI Message Broker and Access Control List (ACL) functions.

### ***Improved Financial Tracking and Reporting Systems and Business Processes***

This project is intended to define, design, build and implement replacements for the current MS Access and MS Excel-based ministry financial management tracking and reporting systems. Replacement systems will involve modern database and web architecture.

### ***Insync Upgrade to 1.97***

Insync is a customizable-off-the-shelf payroll system which is being used by the BC Ambulance Payroll Services. The current 1.94 version is not compatible with Window Vista. The upgrade is required before the Windows Vista rollout. This activity requires comprehensive testing of all custom reports and customized data entry screens, including year-end processes.

### ***Interactive Website for Emergency Medical Assistant Licensing***

The Interactive Website is a data exchange site designed to manage paramedic profiles and their minimum required activities for maintaining membership. Users can submit and retrieve information regarding their level of patient contact and status on course standings.

### ***Interactive Website for Emergency Medical Assistants Licensing - Reporting and Analysis***

This project will enhance and improve the reporting and analysis capability for use of the Interactive Website for Emergency Medical Assistants Licensing in order to monitor, report on and identify licensees for examination due to the licensee's failure to meet continuing personal and professional development requirements as defined in BC Regulations. This will enable the associated branch to provide accurate and timely reports on licensure status in response to client requests.

### ***Major Trauma Interim Solution***

This project will provide intervening solutions for the reporting of major trauma cases encountered annually by paramedics, through the development of a data capture tool contained on the new Cardiac Arrest and Major Trauma form. Basic reporting and export functions will be included to facilitate analysis and research.

### ***Medical Services Plan (MSP) Public Website Redesign***

This project will update the structure, content and navigation of the MSP public website, improving user access to information and ensuring information is current and relevant for its intended audience. Redesigning the structure and updating the content of the MSP website will improve the user experience and increase the website's effectiveness by enabling members of the public to find pertinent information in a self-service environment.

### ***Mental Health and Addictions Minimum Reporting Requirements (MRR) 10 Year Plan***

This project will integrate the functionality of three applications, allowing for the first time an integration of mental health and addiction services data collection and reporting. The enhancements will allow tracking of capacity and utilization of resources within the health system. This project supports the “Mental Health and Addictions 10 Year Plan” and will set a baseline for the plan in order to run comparisons and allow the branch to properly report to the Premier’s Task Force on Homelessness, Mental Illness and Addictions.

### ***Mental Health and Addictions Minimum Reporting Requirements (MH&A-MRR)***

This project will develop processes to accept the revised Minimum Reporting Requirements dataset for Mental Health and Addictions, provide error reporting back to the Health Authorities, and develop a database to store the validated data.

### ***Modifications to the Health Sector Compensation Information System (HSCIS)***

This project is designed to enhance the HSCIS system in order to improve compliance, data quality, and ease of reporting. It will include collection of purchased services information requested by the Health Authorities and Health Employers Association of BC (HEABC), resulting in improved data for establishing health sector funding and for collective bargaining.

### ***MSP Influenza Early Warning***

This project is intended to establish and evaluate a prototype for ongoing monitoring of influenza like illness (ILI) activity by extracting and summarizing daily MSP data, using a software approach to automation in order to provide early warning of increased influenza activity beyond historical norms for BC and its regions.

### ***National Ambulatory Care Reporting System (NACRS)***

This project, initiated by the Ministry, will implement NACRS in three new British Columbia sites (currently not using NACRS). It is intended to carefully measure the costs, and build an understanding of the issues and impacts associated with system implementation and ongoing data submission to the Canadian Institute for Health Information.

### ***National Routing Pilot***

This project will demonstrate the feasibility of setting-up a federal/provincial/territorial network that will allow vital event data to be delivered from producing organizations (e.g. the BC VSA) to authorized subscribing organizations (federal government departments and the vital statistics organizations of other provinces and territories). This will include verification by federal government departments (e.g. the Passport Office) of vital event information from vital event certificates issued by provincial and territorial vital statistics organizations.

## *NETCAD*

In support of the British Columbia Ambulance Service (BCAS) Strategic Direction for Computer Aided Dispatch, the intent of this project is to acquire and implement a single Computer Aided Dispatch (CAD) system to be used by all of the functional dispatch areas within the BCAS.

## *Nursing Professional Development Database*

This project will develop a database and reporting function designed to integrate data on Nursing Directorate funded professional nurse development programs from across the Province, integrating the funding data in order to improve underlying access, allow timelier reporting, and reduce the associated analytical effort.

## *Patient Care Information System (PCIS)*

The PCIS is intended to provide the BCAS with the capacity to access both an individual BCAS electronic Patient Record (ePR) data, and high quality business intelligence data related to patient care. The benefits to be realized from this project include improved clinical documentation and quality of service, increased efficiency and cash flow, and improved confidentiality for patient records.

## *Patient Safety Project*

This project will conduct a business solution options review that will lay out the current situation, the alternatives to consider, and recommend a solution to improve patient safety.

## *PharmaCare Public Website Redesign*

Many of the access features, content descriptions and navigational designs of the current PharmaCare public website are constrained, inconsistent and generally outdated. A website overhaul which integrates the Health Insurance BC site will follow ministry approved templates, provide access improvements and contain user-suitable related information.

## *Plan G Alternative Access*

Health authorities are currently using the legacy mainframe Client Patient Information Management System (CPIM) to register clients for PharmaCare Plan G. With the implementation of Health Authority patient information systems, a different method of access to PharmaNet is required. HSIMT and PharmaCare will work together with Maximus BC to develop a method of direct connection for Health Authorities to PharmaNet.

### ***Population Health Data Repository and Reporting***

An Oracle database will be used to define and implement a Population Health and Wellness (PHW) data strategy for supporting ActNow BC, that will accommodate core functions information, Health Authority performance indicators, and PHO annual report requirements.

### ***Provider Registry for Home & Community Care and Mental Health & Addictions***

This project is intended to build a single unified system to track and assign provider IDs for Home and Community Care and Mental Health and Addictions. This would replace the functionality in Continuing Care Information Management System (CC-IMS), Client Patient Information Management System (CPIM) and the Addictions Information Management System (AIMS). These systems are scheduled for reengineering or retirement by 2010.

### ***Rehosting of Medical Services Plan Decision Support Systems (DSS) Online Information System***

DSS will replace the existing application with a web-based application that allows users to efficiently retrieve practitioner and services information to answer frequently asked questions from the MSP claims data.

### ***Replacement of HAMIS Platform***

The existing Health Authority Management Information System (HAMIS) will be decommissioned and the Operational and Administrative Support Information System (OASIS) will be expanded to take on Health Authority data feeds directly. OASIS will provide a flexible reporting environment for Management Information System data to provide stock management reports and ad-hoc reports.

### ***Rural Health Travel Program - Reporting System***

This project will provide a reporting system for the Rural Health Travel Program, which provides rural residents of BC access to non-emergency services that are not available in their own community.

### ***Rural Payments System***

This project is intended to cover the research, design and build for a system that will calculate and pay Rural Payments to Physicians. This will fulfill the Rural Review requirement to collect standardized data for Rural Programs and to automate payment calculations for these programs while improving the accuracy, completeness, clarity and timeliness of the payments.

### *Surgery Wait Times Website*

The initiative will redevelop the Surgery Wait Times Website in order to improve public reporting of surgery wait times, to automate data collection, analysis and presentation, and to provide an ad-hoc reporting environment for the Ministry. This project supports the BC government commitments on First Minister's Meeting (FMM) targets, throne speech commitment in 2007, and a Ministerial Directive that Health Authorities complete a surgical patient registry, which provides data for this website.

### *Third Party Liability Redevelopment*

Redeveloping the Third Party Liability software application in a standard corporate environment will expand and automate data input. New legislation passed in 2008 will permit the Ministry to recover from third party insurers a broader range of health care costs paid by the government. This new software application will draw data from more sources and will do it automatically, allowing staff to process more claims.

### *VISTA Enhancement*

This project is intended to enhance the utility of the BC Vital Statistics Agency VISTA warehouse by increasing its functionality and the information provided to users of vital event information.

### *WIMS - BCAS Staff Scheduling*

This BC Ambulance Service project has two main objectives:

1. Define and implement an integrated set of processes and employ a central computer system that will facilitate the management of employee scheduling and seniority, qualifications, leave, and on-call tracking.
2. Implement an electronic link to the payroll system to streamline the process of determining, distributing and auditing payroll.





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