

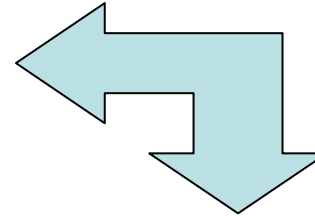


Annual Review Breakfast with the Chiefs Vancouver, B.C.

April 20, 2006
Richard Alvarez, President and CEO

Last Year, In Canada

- **35 million Diagnostic Images**
- **440 million Laboratory Tests**
- **2.8 million Inpatient hospitalizations**
- **382 million Prescriptions filled**
- **3.4 million Vioxx Prescriptions in 2003 for patients that had to be contacted in 2004**
- **322 million office-based physicians visits - 94% resulting in handwritten paper records**
- **60,000 physicians faced 1.8 million new medical papers in 20,000 journals and 300,000 clinical trials**



About 2,000 health care transactions per minute, many quite complex, and all requiring documentation and information flow

**Information is the Lifeblood of our
Healthcare System!**

In spite of spectacular advances in medicine, the foundation of healthcare delivery is still primarily paper-based



“The most remarkable feature about twenty-first century medicine is that we hold it together with nineteenth century paperwork.”

US Secretary Tommy G. Thompson, Washington, D.C., May 6, 2004.

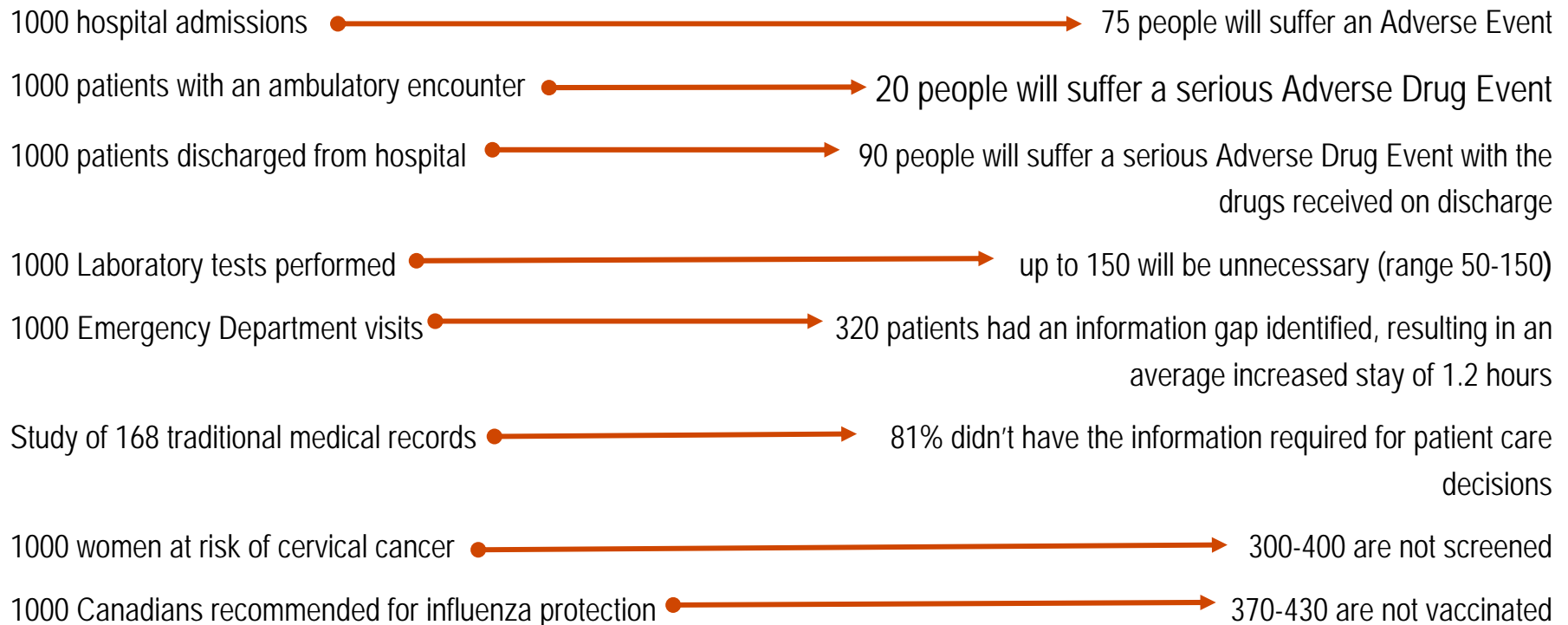
How has our dependence on 19th century paper records impacted our ability to meet the challenges of 21st century health care?

Electronic Health Records

Healthcare In Canada – The Challenges

For Every

.... in Canada



Electronic Health Records

The International Scene

- Most industrialized countries have recognized the need to implement electronic health record solutions quickly to improve the quality and safety of patient care and system efficiency.
- United States
- United Kingdom
- New Zealand
- Netherlands
- Scandinavian

... and Canada



Electronic Health Records

Healthcare in Canada – the Priorities

- Improving access
- Wait time reduction
- Health human resources
- Home care
- Primary care reform
- National pharmaceuticals strategy
- Public health
- Health innovation
- Aboriginal health
- Accountability

Ten Year Plan to Strengthen Health Care (2004)

“..... First Ministers agree to accelerate the development and implementation of the electronic health record, including e-prescribing. To this end, First Ministers commit to work with Canada Health Infoway to realize the vision of the electronic health record through an ambitious plan and associated investment.....”

This is the complex and rapidly changing environment into which *Infoway* has been challenged to introduce the electronic health record

Electronic Health Records

Electronic Health Records in Canada

- Electronic health records give authorized providers rapid access to their patients' complete, up-to-date health information

An Electronic Health Record (EHR) is a secure and private lifetime record of an individual's key health history and care. It creates significant value, providing a longitudinal view of clinical information. The record is available electronically to authorized health care providers and the individual anywhere and anytime in the support of care

- A network of interoperable electronic health record solutions is being implemented in Canada – one that links clinics, hospitals, pharmacies and other points of care
- Will help improve Canadians' access to health services, enhance the quality of care and patient safety, and assist the healthcare system to become more efficient and effective.

GME0000 Smith, Ethan (M/5 years) 25 Provincial Rd., Edmonton, AB T6M 4T4

EHR

Help

Logout

Patient Record

Summary

Lab Results

Diagnostic Images

Details

Notes/Comments

Patient Details



GME0000 Smith, Ethan

Sex: Male
DOB: 01/01/2000
Next of Kin: John Smith

Phone: 365 565 6969
Address: 25 Provincial Rd. Edmonton, AB T6M 4T4

Alerts

- Allergies - Peanuts
- Allergies - Strawberries

GP Details

Name: Jones, Evan
Phone: 333 445 5555

Address: 112 Tomkotal Ave. Edmonton, AB T6N 5R3

Medications

Date	Medication	Description
02/03	Hydrocortisone Cream 1%	Discontinued
04/03	Protopic Cream .03%	Apply to Affected Areas
03/03	Amoxicillin 250 mg	Discontinued
03/04	Amoxicillin 250 mg	Discontinued
04/04	Coclor 375 mg	Discontinued
10/04	Flovent 50 mcg	Two puffs twice/day
12/04	Sarvent 50 mcg	One puff twice/day

Medical History

Category Service Author

Advanced

Diagnosis	Date	Status
Croup	11/01	Resolved
Eczema	02/03	Ongoing
Otitis Media	04/03	Resolved
Otitis Media	03/04	Resolved
Asthma	10/04	Ongoing
Chest X-rays	11/01	
CBC	03/03	

Encounter History

Date	Facility	Specialty	Clinician	Reason	Type
02/03	Children's Hosp.	Infectious Diseases	Brown	Croup	Inpatient x 2 days
04/03	Children's Hosp.	Dermatology	Matthews	Eczema	Outpatient
04/03	Children's Hosp.	ENT	Smith	Otitis Media	Outpatient
03/04	Children's Hosp.	Emergency	Reynolds	Asthma	Emergency
04/04	Children's Hosp.	Respirology	Litman	Asthma	Outpatient
10/04	Children's Hosp.	Respirology	Litman	Asthma	Outpatient
12/04	Children's Hosp.	Respirology	Litman	Asthma	Inpatient x 2 days

Immunizations

Type	Date	Date	Date	Date	Status
Hep B	01/00				Complete
DTPPHib	03/00	05/00	07/00	07/01	Complete
DTPP					
MMR	01/01				
Varicella	01/01				
Pneumococcal	03/00	05/00	07/00	01/01	

Identifying information for patient and GP

Patient's allergies to food and medications

Patient's medication history, including appropriate dosage recommendations

Patient's lab results and diagnostic images

Patient's medical history/ problem list

Patient's immunization history and reminders for scheduled vaccinations

Patient's interactions with the health care system

Recognizing the Need for Electronic Health Records



QUALITY



ACCESS



PRODUCTIVITY



Electronic Health Records

Benefits of Electronic Health Records

Infoway Electronic Health Record

Demographics
Diagnostic Images
Laboratory Results
Drug Profile
Clinical Reports
Immunizations
Infectious Diseases
Telehealth



Benefits = \$30 million per year¹

- Medical Transportation Savings = \$30 m/yr

Access

- Availability of Services
- Ability to Access Services
- Consumer Participation

Benefits = \$3.4 billion per year²

- Inpatient ADE = \$1.6 b/yr
- Ambulatory ADE = \$1.4 b/yr
- Post Discharge ADE = \$0.4 b/yr

Quality

- Safety
- Effectiveness
- Appropriateness

Benefits = \$1.6 billion per year^{2,3}

- Diagnostic Imaging Efficiencies = \$1.1 b/yr
- Laboratory Test Efficiencies = \$0.5 b/yr

Productivity

- Efficiency
- Care Coordination

Sources

1. Health Canada – Telehealth Evaluation
2. Booz Allen Hamilton – EHR ROI Model
3. Courtyard Group – DI ROI Model



Canada Health Infoway

- **Mission**

- To foster and accelerate the development and adoption of electronic health information systems with compatible standards and communications technologies on a pan-Canadian basis, with tangible benefits to Canadians. To build on existing initiatives and pursue collaborative relationships in pursuit of its mission.

- **Goal**

- *Infoway's* plan is to have an interoperable electronic health record in place across 50 per cent of Canada (by population) by the end of 2009.

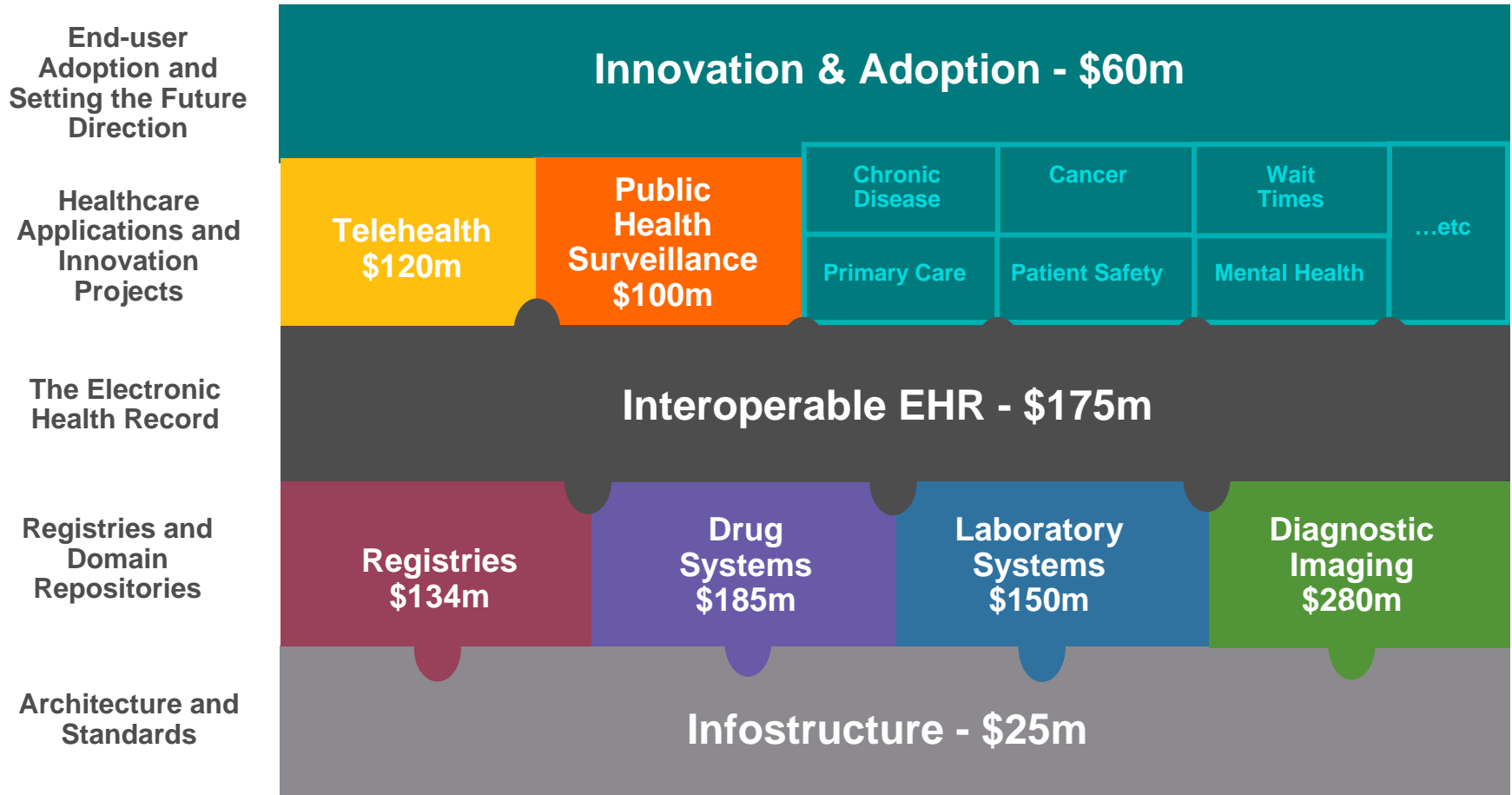


Infoway's Business Strategies

- **Targeted Programs**
 - Tight focus on nine Investment Programs
- **Collaboration with the Public Sector**
 - Joint short and long-term planning with health ministries and other partners
- **Joint Investments**
 - Share and leverage the investment in projects with our public sector partners
- **Leveraged Investment**
 - Invest in solutions that can be replicated in jurisdictions across the country
- **Focus on End-Users**
 - Early and ongoing focus on end-users to gain acceptance and adoptions
- **Alliances with Private Sector**
 - Form strategic alliances with private sector to implement standards-based, commercial solutions that reduce cost and risk
- **Measure Benefits and Adjust**
 - Continually measure benefits achieved vs. those planned and make the necessary adjustments

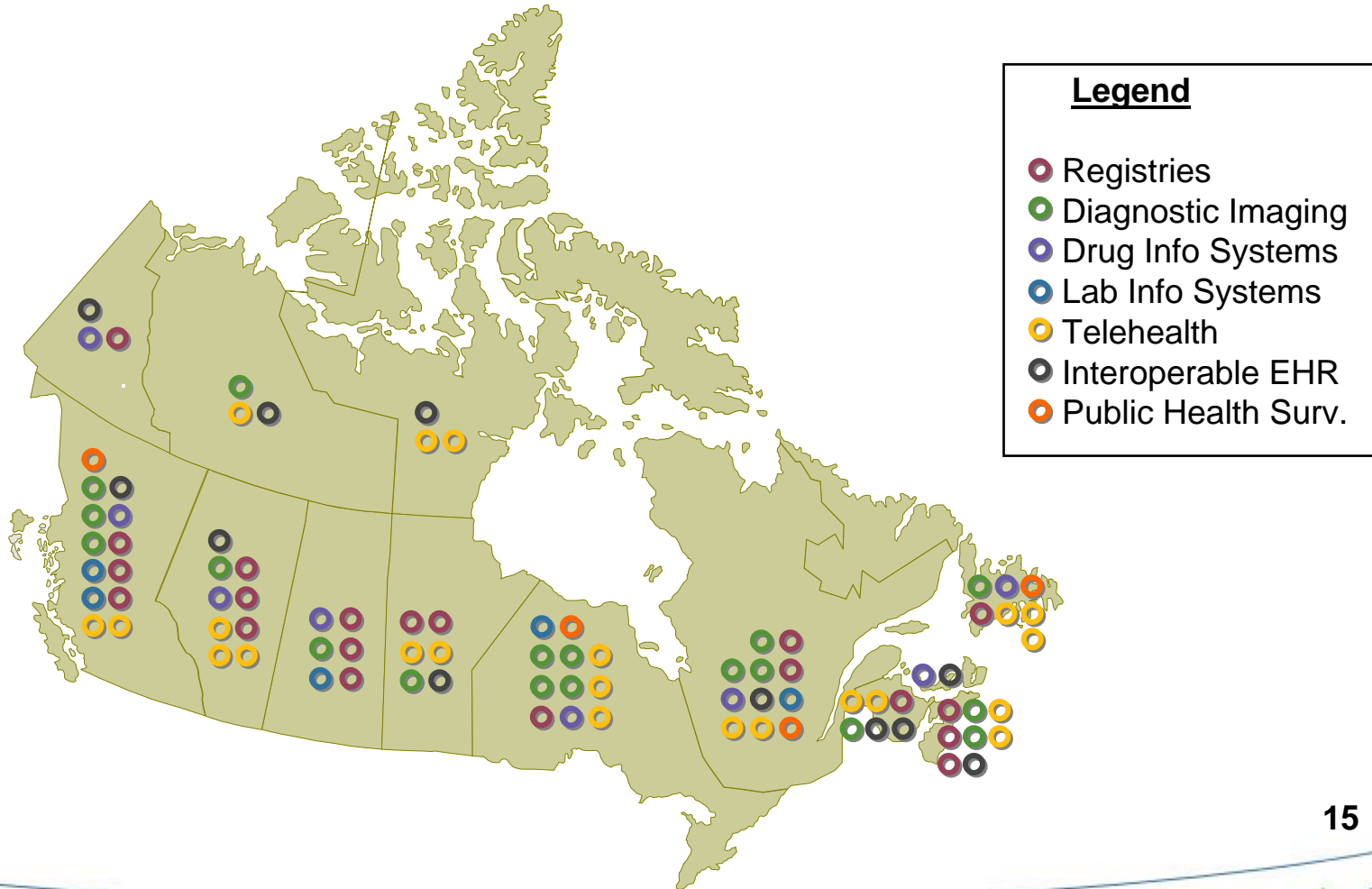


Strategic Investment Programs



Infoway Projects Coast to Coast

150 active & completed projects valued at **\$700 million** in all 9 investment programs.



Significant Progress in the Past 2 Years

March 2004 = \$125 M

		WEST				ON	QC	EAST				TERRITORIES		
		BC	AB	SK	MB			NB	NS	PE	NL	YK	NT	NU
INVESTMENT PROGRAMS	Telehealth													
	iEHR													
	Laboratory													
	Drug		●	▲		▲								
	DI	●				●								
	Provider Reg.	●	●	●	●									
	Client Reg.		●							■	●			

March 2006 = \$704 M

		WEST				ON	QC	EAST				TERRITORIES		
		BC	AB	SK	MB			NB	NS	PE	NL	YK	NT	NU
INVESTMENT PROGRAMS	Public Health	▲				▲	▲	▲	▲	▲	▲			
	Telehealth	▲	●	●	●	▲	●	●	●	▲	▲			▲
	iEHR	▲	●	▲	▲	▲	▲●	▲	▲	●	▲	▲	▲	▲
	Laboratory	●	●	▲	▲	●	▲	▲	▲	●	▲	▲	▲	▲
	Drug	▲	●	●	▲	●	▲		▲	●	●	▲	▲	▲
	DI	■●	●	▲	●	▲●■	●	●	●	■	●	▲	▲	▲
	Provider Reg.	■	■	■	■		▲	▲	▲	▲	▲	▲	▲	▲
	Client Reg.	●	■●	●	●	●	●	▲	▲	■	■	▲	▲	▲

▲ Phase 0/1 Projects ● Phase 2 Projects ■ Completed



All at Different Stages of Progression

Canada-wide Public Health Surveillance

All 14 provincial, territorial and federal governments agreed to adopt a single Public Health Surveillance solution to ensure efficient inter-working among their systems. A vendor has been selected and development is on track in 2006/7. B.C. is managing procurement of the components required for rollout across the country,

British Columbia: Leveraging Past Investments for an EHR

BC is extremely well positioned to implement With significant past investments DI, lab, drug, and hospital information systems BC will quickly implementing an electronic health record across the province.

Alberta: netCare Alberta-bound

Alberta is leveraging Capital Health's netCare viewer for province-wide use in iEHR and Lab information systems.

Saskatchewan: Checks Med Safety

Drug prescribing has become safer, with one of the first provincial systems covering "all drugs, all people."

Quebec: Networking 62 Hospitals

The McGill - Montreal RUIS repositories for diagnostic imaging system will be the largest in Canada. They will benefit almost two-thirds of Quebecers by networking 62 institutions and the major private clinics, performing a total of 6.1 million imaging exams a year .

Manitoba: Telehealth Calling

Manitoba has doubled its network from 26 to 43 sites, providing access to health care services to 10 northern First Nations and 7 Franco-Manitoban communities throughout the province

Ontario: Keeping Tabs on Labs

The first of nearly 200 hospitals and community labs are going "live" in 2006, providing on-line viewing of Lab results through links with hospitals and 10,000 doctors' offices.

Newfoundland & Labrador: Province-wide eProgress

The province-wide Drug Information System underway supports e-prescribing, providing better access for physicians and pharmacists to residents' complete medical information.

Nova Scotia: Farewell to Film

Almost 100% filmless - medical professionals in Nova Scotia's hospitals will be able to access patients' complete lab results, images and patient history from anywhere in the province by 2006/7.

PEI: Island-Wide iEHR

By the end of 2007, PEI's clinicians will be able to see a patient's lab results, medication and diagnostic images on on-screen, from anywhere on the island.



Leveraging the EHR for Innovative Health Care

Quebec MSSS

Infoway's investment in electronic patient evaluation and service planning solutions will optimize quality and continuity of care for vulnerable populations

British Columbia Ministry of Health

Infoway's investment in a pilot for province-wide adverse events reporting, analysis and management will support improved quality of care and patient safety

Sault Ste Marie

Infoway's planned investment in linking primary care providers and pharmacists will improve the quality of care.

British Columbia Interior Health Authority

Infoway's planned investment in a patient portal providing secure access to laboratory test results to improve self-management of chronic disease.

Vancouver Island Health Authority

Infoway's planned investment in EHR-based clinical decision support tools to optimize care within the network of Mental Health & Addictions Services (MHAS).

Alberta Capital/Calgary Health Regions

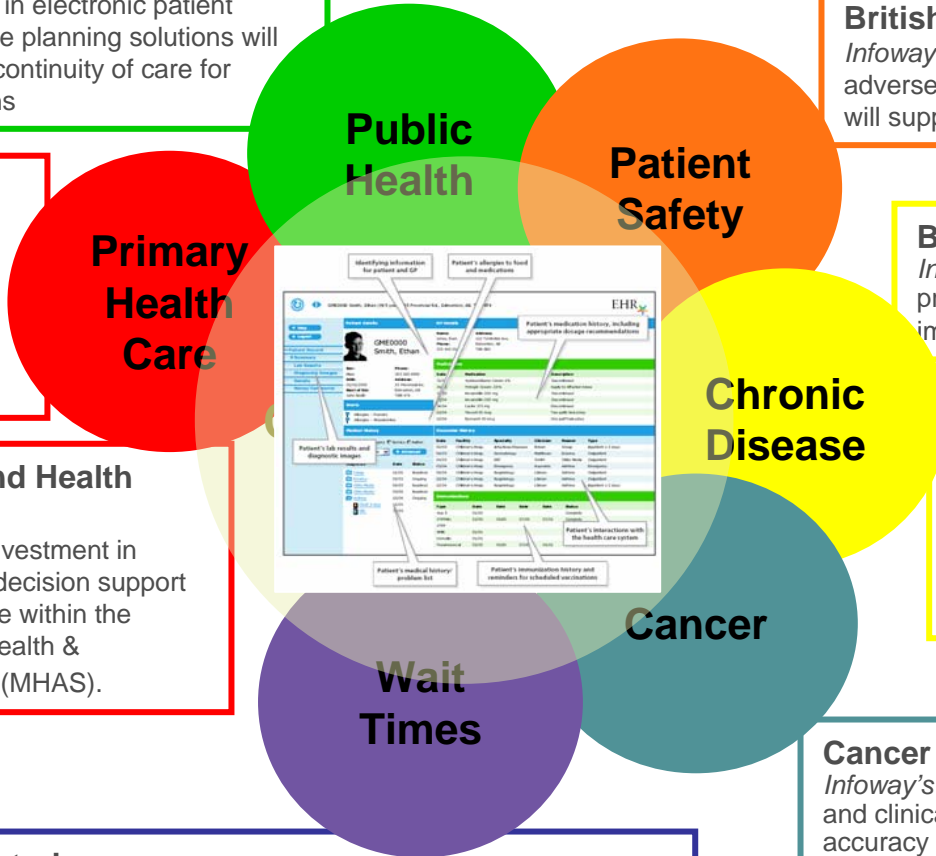
Infoway's investment to extend Alberta's iEHR and chronic disease management solutions to primary care teams will support more coordinated management of diabetes, hypertension and other related conditions

Ontario

Infoway's investment in client registries will be a foundational element of Ontario's Wait Time Information System which will provide the information needed to effectively manage wait lists and improve access to care

Cancer Care Ontario

Infoway's investment in computerized order entry and clinical decision support will improve accuracy and appropriateness of systemic therapy for cancer patients



EHR – a Priority for BC

From the 2005 Premier's Technology Council report:

“The PTC recommends that the provincial government:

- **Give the highest priority to establishing architecture for the Electronic Health Record...**
- **Ensure that the EHR strategy incorporates features to empower patients to better manage their own health and to interact with the health care system electronically.”**



eHealth Strategic Framework

November 2005

Important step in the governance structure for EHR initiatives in BC – signed off by all members of the BC Health Leadership Council

- **Strategic Vision for eHealth**
- **outlines deliverables and benefits for next three years**



BC Infoway Investments

- Client Registry – nearing completion
- Provider Registry – nearing completion
- Diagnostic Imaging
 - Successful projects in IHA and FHA
 - Provincial interoperability in planning
- Drug – Pharmanet enhancement/eprescribing in planning
- Lab – Solution procurement underway
- Public Health Surveillance
 - BC leading Pan-Canadian solution development
 - Implementation planning for BC/Yukon under way
- iEHR – Solution procurement underway
- Telehealth – Strategy under development
- Innovation and Adoption – Implementation of Incident Reporting Information System (IRIS) soon to begin



BC is poised to be a Leader in Canada

BC is a key component in Infoway's target EHR completion by 2009

- Implementation decisions made here will affect strategy in other jurisdictions that follow
- Broad based collaboration among health care leaders in BC is crucial to success



Lessons Learned – Issues and Resolutions

- **Slow to get started – National Organizations**
- **Slow to flow investments**
 - Increased pace and volume of new project approvals over last 12 – 18 months
 - Matching, 50% investment from jurisdictions were an issue
- **Align *Infoway* and Jurisdictional Priorities**
 - Initiated three-year P/T investment plans based on their IT strategy and priorities
 - Collaboratively developed shared road map for technical and business architecture
 - New environment of openness and shared goals that reflect F/P/T priorities
- ***Infoway's* initial processes and models rigid, cumbersome and didn't recognize unique landscape of each province and territory**
 - Streamlined planning and engagement processes
 - Established realistic funding gates
- **Engage clinicians** – end user strategy, clinician panel, roundtable of physician leaders
- **Mid-Term Independent Review just completed**
 - Speaks to change and progress



Adding Value at Every Step

- Joint Governance
- Joint Planning (Rolling 3 years)
- Predictable Funding
- Common Solutions Architecture
- Common ICT Standards
- Common Procurement
- Common Solutions
- National Pricing
- Shared Services
- Knowledge Sharing
- Global leaders – exporting expertise



Challenges

- Physician automation
- Adoption and acceptance by healthcare professionals
- Ability of some jurisdictions to support several programs as priorities
- Privacy
- Human Resources; capacity and capability
- Interoperability
- Vendors
- Capitalization



The Opportunities

Better Prescribing Practices

Reduced Wait Times



Improved access to care in rural and remote communities



Complete and accurate clinical information to diagnose and treat

***Less administrative burden,
More time for patients***



The Opportunities

Less adverse drug events



Better therapeutic outcomes



Healthier lifestyles

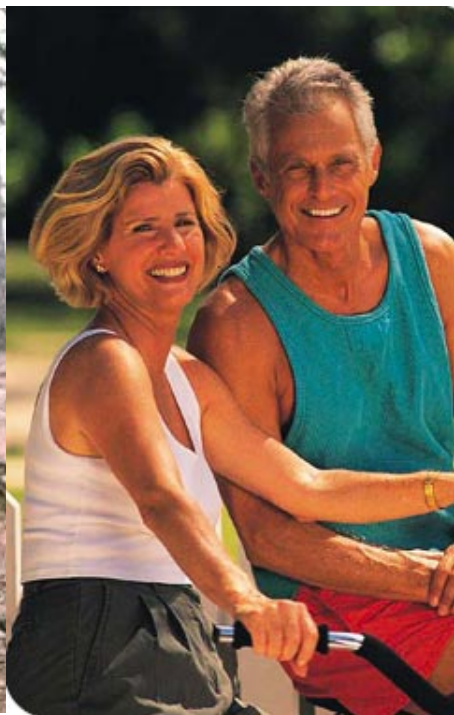


Well managed chronic illness



Increased patient participation in care





Thank you

