

**Improving access to world-class health care  
by accelerating health information technology  
investments**

*-a strategic pillar of support for Advantage Canada*

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**The Canadian Medical Association's 2009 pre-budget  
consultation brief to the Standing Committee on Finance**

August 15, 2008

Brian Day, MD  
President



A healthy population...a vibrant medical profession  
Une population en santé...une profession médicale dynamique

“The first wealth is health.”

—Emerson

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The Canadian Medical Association (CMA) is the national voice of Canadian physicians. Founded in 1867, CMA’s mission is to serve and unite the physicians of Canada and be the national advocate, in partnership with the people of Canada, for the highest standards of health and health care.

On behalf of its more than 67,000 members and the Canadian public, CMA performs a wide variety of functions. Key functions include advocating for health promotion and disease/injury prevention policies and strategies, advocating for access to quality health care, facilitating change within the medical profession, and providing leadership and guidance to physicians to help them influence, manage and adapt to changes in health care delivery.

The CMA is a voluntary professional organization representing the majority of Canada’s physicians and comprising 12 provincial and territorial divisions and 45 national medical organizations.

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## Executive Summary—improving access through health information technology

By many measures Canada's health care system is underperforming. One symptom of this weak performance are exceedingly long wait times that have an impact on care and cost patients, the system and governments money<sup>1</sup>. There are a number of responses to this poor performance including increasing the supply of health human resources<sup>2</sup>. Another response is to maximize the resources we have on the front lines and work smarter through information technology. This productivity approach is aligned with the assumptions set out in the federal government's Advantage Canada strategy. This strategy involves principally a 'knowledge advantage' and an 'infrastructure advantage'. Consequently, the Canadian Medical Association (CMA) is recommending that the federal government make a strategic "strings attached" **\$570-million investment to create an interconnected health information technology network**<sup>3</sup> through a Health Information System Transition Fund and time-limited accelerated IT tax incentives.

"Electronic information in health care is an essential transformative tool. Information technology – systems such as telehealth, electronic health records, electronic prescribing, and wait-list management systems – offers tremendous opportunity to advance the quality of care in many ways."

Health Council of Canada –June 2008

This investment aims to integrate all Canadian patient health care records, an effort that will take time. However, there are foundations upon which to build thanks to federal government investments — most recently in providing \$400 million for wait-time related health information systems. But for these investments to bear fruit further connectivity and integration is vital. In other words, our current system is like having an ATM card that only works at the bank's head office. We believe that additional investments must concentrate on connecting patient records in physician offices with hospitals and medical laboratories. Physicians also believe in accountability, and suggest investments should not be made unless the clinical community confirms a high level of system integration.

### **The CMA recommends that the federal government should invest \$570 million over five years in an interconnected pan-Canadian health information system that includes:**

- ⇒ A \$225 million, 5-year Health Information System Transition Fund aimed at change management training and support to convert 26-million patient records in 36,000 physician offices and community care facilities into interoperable electronic records across Canada.
- ⇒ \$305 million for a 3-year time-limited and accelerated Capital Cost Allowance for software and hardware costs related to health information technologies that connect patient records from physician offices to laboratories and hospitals.
- ⇒ \$10 million to sponsor a cross-country education campaign to inform Canadians of the health and system benefits of e-health connectivity<sup>1</sup>.
- ⇒ \$2 million annually for Canada Research Chairs to promote and demonstrate the value of interconnectivity in health information between the faculties of Medicine, Management and Engineering.

The federal government must also encourage provinces to increase their support of these initiatives and work to reduce the barriers to health information system interfacing, by ensuring patient record systems use similar codes in labs, hospitals and physician offices. Federal government guidance, encouragement and cooperation with the provinces is integral to making these connectivity investments a success. It is time that the federal government helped finish the job of health information system connectivity. A health information network will improve patient outcomes, system efficiency, increase accountability and save billions of dollars.

<sup>1</sup>The cumulative economic cost of waiting for treatment across just 4 priority areas in 2007 was an estimated \$14.8 billion. This reduction in economic activity lowered federal and provincial government revenues in 2007 by a combined \$4.4 billion.

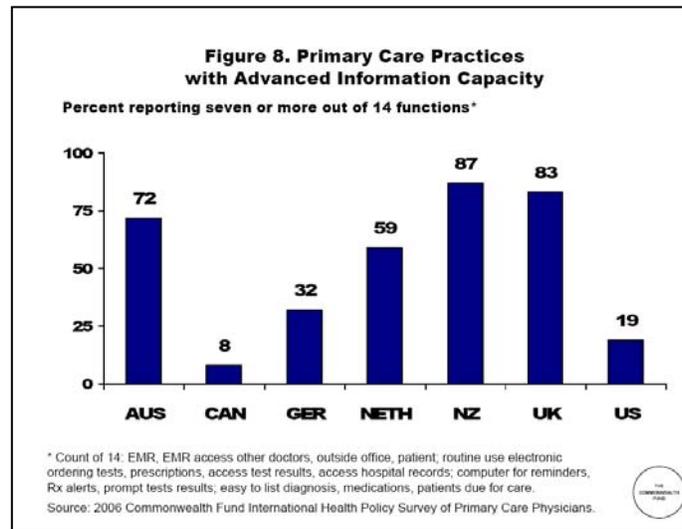
See: [www.cma.ca/multimedia/CMA/Content/Images/Inside\\_cma/Media\\_Release/pdf/2008/EconomicReport.pdf](http://www.cma.ca/multimedia/CMA/Content/Images/Inside_cma/Media_Release/pdf/2008/EconomicReport.pdf)

<sup>2</sup>Almost 5-million Canadians do not have a family physician. Canada would need 26,000 more doctors to meet the OECD average of physicians per population. Physicians spend more time on paperwork and less with patients than they did 20 years ago. See: "More Doctors. More Care.": [www.moredoctors.ca/take\\_action/](http://www.moredoctors.ca/take_action/)

<sup>3</sup>Please see Table 1 in Appendix 1 for full investment horizon details.

## 1. Why advance e-health interoperability now? Our health system e-performance is poor

Both national and international studies confirm that Canada lags behind nearly every major industrial country when it comes to health information technology (Figure 8). The impact of this underinvestment is longer wait times, poorer quality, and a severe lack of financial accountability especially of federal dollars. Investments in connectivity are needed now because Canada's health care system compares poorly in both value and efficiency compared to other countries. The Conference Board of Canada<sup>ii</sup>, the OECD<sup>iii</sup>, the World Health Organization<sup>iv</sup>, the Commonwealth Fund<sup>v</sup>, and the Frontier Centre for Public Policy all rate Canada's health care system poorly in terms of "value for money" as well as efficiency.



### Benchmarking health information connectivity—where we stand, where we must go

According to the 2007 National Physician Survey, just 30% of physicians have an electronic interface with a medical laboratory or diagnostic imaging facility, while fewer than 5% have such an interface with a pharmacy/pharmacist<sup>vi</sup>. Imagine if just 30% of Canadian banks had ATMs throughout the country? This is a difference of not only convenience, but quality and cost savings. In comparison, Denmark and New Zealand have near 100% use of electronic medical records (EMRs) in ambulatory care. According to Dr. Allan Brookstone<sup>vii</sup> an EMR expert, "If most physicians in a health region or geographic area implemented an EMR system, the incentive for a local hospital or region to connect to those physicians would be significantly enhanced". In an emergency situation right now in Canada it is easier to access critical financial information than critical health information. This reality is not a matter of technology but the lack of will to put it in place.

## 2. Why the federal government should be interested in e-health interoperability. —Health information technology connectivity yields returns on investment: 8:1

International strategy and technology consulting firm Booz Allen Hamilton found that<sup>viii</sup> the benefits of an interconnected Electronic Health Record (EHR) in Canada could provide annual system-wide savings of \$6.1 billion. These savings would come from reduced duplicate testing, transcription savings, fewer chart pulls and filing time, reductions in office supplies and reduced expenditures due to fewer adverse drug reactions. The study went on to state that the benefits to health care outcomes would equal or surpass these annual savings, thus providing a possible combined annual savings of \$12.2 billion. In addition, a comprehensive literature review<sup>ix</sup> comparing health IT productivity gains to similar industries in the U.S. concludes that effective EMR implementation and networking could eventually save more than \$81 billion annually by improving health care efficiency and safety. Similarly, health information technology-enabled prevention and management of chronic disease could eventually double those savings while increasing health and other social benefits. Assuming that the Canadian health system is one-tenth the size of US system, savings would range from \$8 to \$16 billion annually.

## Connected health information technology – increasing performance and accountability

A fundamental question the Standing Committee on Finance may ask is where \$22 billion (growing at 6 % annually) in federal health care transfers to the provinces is going and what are the results of this support? Right now, we do not know exactly. Health care in Canada represents 10% of our economy (\$160 billion annually and growing at 6% per year) and is larger than the total agricultural sector.

A great deal of reporting on the state of health care in Canada has been produced by all levels of government... Yet these efforts have not led to the “enhanced accountability” and improved performance reporting that the accord promised.”

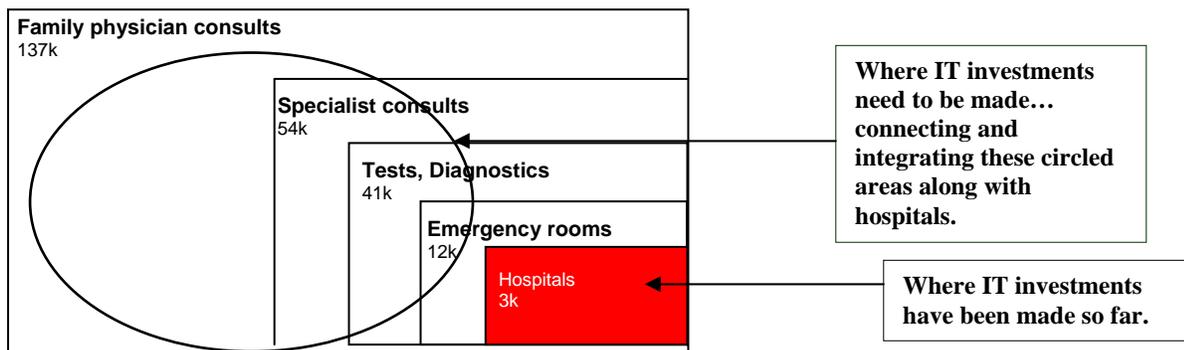
— The Auditor General of Canada.

The question Canadians are asking is not whether tax dollars should be spent on health care, but whether the money being spent is worth the services received<sup>x</sup>. Moreover, in health care, there are legitimate questions as to whether improvements to date have justified the associated costs. The public institutions and organizations that deliver health care in Canada could deliver more value than they do at present. With a national health information (management) system in place they could work to reduce variations in the quality of service and in the way services are used across the system. However at a national level, we do not have an accounting system<sup>xi</sup> in place to uniformly measure quality across the country.

### 3. Who: Canadians – our patients – want and need e-health interconnectivity. Health information technology is critical to managing wait times

Quality of care is an important concern for Canadians, but first they must be able to get the care they need. But *waiting* for health care is the principal concern for Canadians<sup>xii</sup>. Excessive wait times result in mental anguish for patients and their families and also cost the Canadian economy billions of dollars each year. In 2007 a study commissioned by the CMA<sup>xiii</sup> conservatively calculated that excessive wait times in just four procedures (joint replacements, cataract surgery, coronary artery bypass grafts and MRIs) cost the economy over \$14 billion in lost output and government revenues. It is important to note that beyond these hospital procedures there is potential to reduce wait times and cost in physician offices through information technology. This is why we have suggested accelerating the capital cost allowance tax for EMR related software and hardware purchases and that they go to community care and physician offices where most patient visits occur every day. Figure 1 below shows that in Ontario for example, just 3,000 out of an average of 247,000 patient visits per day or 1.2% of the total are made in hospitals. That is why this submission is aimed at (the circle area in the chart) increasing connectivity and tying investments to the 99% of the places where patients visit most.

Figure 1 Patient visits per day in Ontario, Source: Canada Health Infoway



Most of the emphasis on connectivity in Canadian health care to date has not focused on the point of care — even though the number of patient interactions with hospitals is greatly exceeded by the number of visits to physicians' offices<sup>xiv</sup>. Thus patient-physician office interactions outnumber patient-hospital interactions by a ratio of 18 to 1. It is also important that patients understand the value of electronic health records, which is why we are recommending a \$10 million cross-country educational campaign to impact the demand side of this critical health and industrial equation.

#### 4. Why physicians are involved in e-health interconnectivity

The physician community can play a pivotal role in helping the federal governments make a connected health care system a realizable goal in the years to come. Through a multi-stakeholder process encompassing the entire health care team, the CMA will work toward achieving cooperation and buy-in. This will require a true partnership between provincial medical associations, provincial and territorial governments and Canada Health Infoway (CHI).

#### Accelerating Advantage Canada through health information technologies

The CMA's pre-budget submission, related to health system connectivity, incorporates the five tenets of Advantage Canada<sup>xv</sup>. This submission principally addresses the infrastructure and knowledge advantages that are involved in investing in an interconnected network that is useless unless the 'knowledge' advantage to provide stewardship of the Electronic Health Record through our physicians' is in place. That is why we recommend that the federal government help support research, development and knowledge transfer at our major universities in health information technology by supporting 10 Canada Research Chairs in the faculties of Medicine, Management and Engineering. In addition, a pan-Canadian health information technology network will provide the kind of infrastructure that supports labour mobility where for example a migrant worker from Atlantic Canada can access his health records in Fort McMurray Alberta.

#### 5. How to speed-up health information technology connectivity –a green tax incentive approach

Thus far the strategy applied to health information connectivity in Canada has been focused on a top-down approach that has produced limited success. That is why the CMA is suggesting that the federal government accelerate the Capital Cost Allowance (CCA) on EMR-related software and hardware equipment over the next three years – an early-bird special or incentive. The CMA does not pretend to be tax policy experts however

we do appreciate the federal governments' recent increase in the CCA rates for software and hardware. Our recommendation would mean changing the current software CCA (Class 12<sup>xvi</sup>) from 100% over two years to 100% in the first year specifically for EMR related investments. And for EMR hardware (Class 50<sup>xvii</sup>) accelerate the CCA to 100% in the first year from the current 55% rate for a limited time only of three years. These accelerated CCA rate proposals are also consistent with the governments' environmentally friendly CCA initiative as EMRs would save tonnes of paper for years.

**Change is underway, but too slowly.** We are still a long way from the promised goal of a national system of electronic health records. Clearly, Canada is not moving aggressively enough to realize the potential of information technology. These are big investments but the payoff is big too.

Health Council of Canada –June 2008

#### Mixed results for Canada Health Infoway => Health Information System Transition Fund

The CMA lauds the federal government's 2008 Budget for making a \$400-million investment in Canada Health Infoway (CHI) to support early movement toward patient wait time guarantees through the development of health information systems and electronic health records. At the same time the physician community believes that CHI has had mixed results, especially when it comes to digitizing and integrating patient records at the places where most patients contact the health care system: physician offices, laboratories and emergency rooms. However, we believe with targeted, conditional policies CHI can be an effective vehicle to accelerate the transition of current health centre paper practices into electronic operations through a time limited five-years Health Information Transition Fund. We also believe that federal transition funds should be matched at a fifty-fifty rate by the provinces. Although this may not be easy, there are other non-monetary policy levers (e.g. regulatory) that the federal government could and should use to persuade the provinces of the value of investing in electronic health record system integration. This is particularly true since the provinces will yield most of the return on the investment. It is imperative that the current health information technology gap be closed and be set at levels for similar service-intensive industries (see Figure 2 in the Appendix 1). That is why; beyond the figures outlined in this submission, the CMA recommends continued federal health information technology support for the next 10 years.

## Conclusion – Big investments. but big payoffs too

As the Health Council of Canada stated in their 2008 annual report<sup>xviii</sup>, “Change is underway, but too slowly”. The OECD, WHO, The Commonwealth Fund and the Conference Board of Canada’s research all strongly suggest that Canada lags behind the rest of the industrialized world in terms of health information technology investments and system integration. The investments made so far may seem large but they will be wasted if a second effort in connecting the entire system is not made now. It is time that the federal government finishes the job of health information system connectivity at the point of care.

A Pan-Canadian network of health information will improve patient outcomes, health system efficiency and dramatically increase system accountability. The Health Council of Canada also said that, “These [health information technology] are big investments but the payoff is big too”. Accordingly we suggest that over the next five years the following investments will improve the running of Medicare as well as the Canadian economy.

**The conditions of this health information investment should include:**

1. That there is FPT **fifty-fifty cost sharing**.
2. That the **clinical community is involved** in the input and oversight of the program and
3. That **interconnectivity is a mission critical** concern for project approvals.

**The CMA recommends that the federal government should invest \$570 million over five years in an interconnected pan-Canadian health information system that includes:**

- ⇒ A \$225 million, 5-year Health Information System Transition Fund aimed at change management training and support involved in converting 26 million patient records in 36,000 physician offices and community care facilities into interoperable electronic records across Canada.
- ⇒ \$305 million for a 3-year time limited accelerated Capital Cost Allowance for EMR software and hardware costs related to health information technologies that connect patient records from physician offices to laboratories and hospitals.
- ⇒ \$10 million to sponsor a cross-country education campaign to inform Canadians of the health and system benefits of e-health connectivity<sup>xix</sup>.
- ⇒ \$2 million annually for Canada Research Chairs promoting the value of interconnectivity in health information between the faculties of Medicine, Management and Engineering.

## References

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<sup>i</sup> Patient perspective on electronic medical record.

Meldgaard M; International Society of Technology Assessment in Health Care. Meeting (19th : 2003 : Canmore, Alta.). Annu Meet Int Soc Technol Assess Health Care Int Soc Technol Assess Health Care Meet. 2003; 19: abstract no. 148. CONCLUSIONS: Patient confidence and perceived quality of care is influenced by a well informed forward-looking staff as can be obtained in settings where EPR is successfully implemented. Patient satisfaction and the functional level of EPR implementation are interdependent.

<sup>ii</sup> A Report Card on Canada see: <http://sso.conferenceboard.ca/HCP/overview/health-overview.aspx>

<sup>iii</sup> Organization for Economic Co-operation and Development [OECD] (2007). OECD Health Data 2007. Version 07/18/2007. CD-ROM. Paris: OECD.

<sup>iv</sup> World Health Organization [WHO] (2007). World Health Statistics 2007. see: <http://www.who>.

<sup>v</sup> Mirror, Mirror on the Wall: An International Update on the Comparative Performance of American Health Care May 15, 2007 (updated May 16, 2007) | Volume 59

Authors: Karen Davis, Ph.D., Cathy Schoen, M.S., Stephen C. Schoenbaum, M.D., M.P.H., Michelle M. Doty, Ph.D., M.P.H., Alyssa L. Holmgren, M.P.A., Jennifer L. Kriss, and Katherine K. Shea

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<sup>vi</sup> See Tables Q39 and Q40a in the 2007 National Physician Survey at:[www.nationalphysiciansurvey.ca/nps/](http://www.nationalphysiciansurvey.ca/nps/)

<sup>vii</sup> Dr. Alan Brookstone is a family physician in Richmond, BC and the founder of CanadianEMR. The quote was taken from: Online resource enables MDs to rate EMRs. See:

[www.cma.ca/multimedia/CMA/Content/Images/Inside\\_cma/Future\\_Practice/English/2007/November/Online-e.pdf](http://www.cma.ca/multimedia/CMA/Content/Images/Inside_cma/Future_Practice/English/2007/November/Online-e.pdf)  
The CanadianEMR Physician Resource Directory provides access to a province specific searchable list of vendors of products and services to support the EMR-based practice. <http://www.canadianemr.ca/>

<sup>viii</sup> Booz, Allan, Hamilton Study, Pan-Canadian Electronic Health Record, Canada's Health Infoway's 10-Year Investment Strategy, March 2005-09-06.

<sup>ix</sup> Can Electronic Medical Record Systems Transform Health Care? Potential Health Benefits, Savings, And Costs Richard Hillestad, James Bigelow, Anthony Bower, Federico Girosi, Robin Meili, Richard Scoville and Roger Taylor, Health Affairs, 24, no. 5 (2005): 1103-1117.

<sup>x</sup> In November 2008 the Auditor General of Canada will present it's performance audit on, "Reporting on Health Indicators—Health Canada" to Parliament. See: [www.oag-bvg.gc.ca/internet/English/oag-bvg\\_e\\_29401.html](http://www.oag-bvg.gc.ca/internet/English/oag-bvg_e_29401.html)

<sup>xi</sup> There has been heavy emphasis is being placed on "accountability" and "performance measurement," endorsed by the Romanow Commission (Commission on the Future of Healthcare in Canada 2002), the Kirby Committee (Standing Senate Committee on Social Affairs, Science and Technology 2002), and the First Ministers' accord (First Ministers 2004). See Raisa Deber Why Did the World Health Organization Rate Canada's Health System as 30th? Some Thoughts on League Tables. Some Thoughts on League Tables

<sup>xii</sup> The results of an Ipsos Reid poll (January 2008) finds that eight in ten (78%) Canadians believe that hospital and other health care wait times cost Canada money because people who are waiting for treatment are less productive and miss work. This is compared to just two in ten (19%) who think that wait times save Canada money because governments don't have to put as many resources into healthcare.

<sup>xiii</sup> The economic cost of wait times in Canada, January 2008. This study was commissioned by the Canadian Medical Association (CMA) to analyze the economic costs of wait times in Canada's medical system. The CMA's membership includes more than 67,000 physicians, medical residents and medical students. It plays a key role by representing the interests of these members and their patients on the national stage. Located in Ottawa, the CMA has roots across the country through its close ties to its 12 provincial and territorial divisions.

See: [www.cma.ca/multimedia/CMA/Content/Images/Inside\\_cma/Media\\_Release/pdf/2008/EconomicReport.pdf](http://www.cma.ca/multimedia/CMA/Content/Images/Inside_cma/Media_Release/pdf/2008/EconomicReport.pdf)

<sup>xiv</sup> Sources: Physician visits - CIHI - Physicians in Canada: Fee-for-Service Utilization 2005-2006. Table 1-21. Hospital contacts - CIHI - Trends in Acute Inpatient Hospitalizations and Day surgery Visits in Canada 1995-1996 to 2005-2006 and CIHI -National Ambulatory Care Reporting System - Visit Disposition by Triage Level for All Emergency Visits - 2005-2006.

<sup>xv</sup> **Advantage Canada** builds on Canada's strengths and seeks to gain a global competitive advantage in five areas:

1. Tax Advantage—Reducing taxes for all Canadians and establishing the lowest tax rate on new business investment in the G7.
2. Fiscal Advantage—Eliminating Canada's total government net debt in less than a generation.
3. Entrepreneurial Advantage—Reducing unnecessary regulation and red tape and increasing competition in the Canadian marketplace.
4. **Knowledge Advantage**—Creating the best-educated, most-skilled and most flexible workforce in the world.
5. **Infrastructure Advantage**—Building the modern infrastructure we need.

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<sup>xvi</sup> **Software:**

**CLASS 12 , (100 per cent)**

Property not included in any other class that is...

(o) computer software acquired after May 25, 1976, but not including systems software or property acquired after August 8, 1989 and before 1993 that is described in paragraph (s).

<sup>xvii</sup> **Hardware:**

**CLASS 45 , (45 per cent)**

Property acquired after March 22, 2004 (other than property acquired before 2005 in respect of which an election is made under subsection 1101(5q)) that is general-purpose electronic data processing equipment and systems software for that equipment, including ancillary data processing equipment.

Draft Regulation

(a) electronic process control or monitor equipment;

(b) electronic communications control equipment;

(c) systems software for equipment referred to in paragraph (a) or (b); or

(d) data handling equipment (other than data handling equipment that is ancillary to general-purpose electronic data processing equipment).

**Class 50 (55 per cent)**

Property acquired after March 18, 2007 that is general-purpose electronic data processing equipment and systems software for that equipment, including ancillary data processing equipment, but not including property that is principally or is used principally as

(a) electronic process control or monitor equipment;

(b) electronic communications control equipment;

(c) systems software for equipment referred to in paragraph (a) or (b); or

(d) data handling equipment (other than data handling equipment that is ancillary to general-purpose electronic data processing equipment).

<sup>xviii</sup> Health Council of Canada, Rekindling Reform: Health Care Renewal in Canada, 2003 – 2008, June 2008 (page 23).

See: [www.healthcouncilcanada.ca/docs/rpts/2008/HCC%205YRPLAN%20\(WEB\)\\_FA.pdf](http://www.healthcouncilcanada.ca/docs/rpts/2008/HCC%205YRPLAN%20(WEB)_FA.pdf)

# Appendix 1

## Table 1 –Health Interconnectivity investments over five years.

Program (\$'s millions)	Health Interconnectivity Investments					2009-2014
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	
<b>Community Office Electronic Medical Record Transition Fund*</b>						
EMR connectivity transition implementation training	\$ 90	\$ 120	\$ 80	\$ 10	\$ 10	
EMR paper to electronic record conversion service investments	\$ 40	\$ 50	\$ 30	\$ 10	\$ 10	
<b>Subtotal of F/P/T monies</b>	<b>\$ 130</b>	<b>\$ 170</b>	<b>\$ 110</b>	<b>\$ 20</b>	<b>\$ 20</b>	<b>\$ 450</b>
<b>Federal share based on 50/50 F/P/T cost sharing</b>	<b>\$ 65</b>	<b>\$ 85</b>	<b>\$ 55</b>	<b>\$ 10</b>	<b>\$ 10</b>	<b>\$ 225</b>
<b>Tax measures in support of patient electronic health records**</b>						
Accelerated Capital Cost Allowance for EMR related software	\$ 65	\$ 80	\$ 40			
Accelerated Capital Cost Allowance for EMR related hardware	\$ 40	\$ 60	\$ 20			
<b>Subtotal</b>	<b>\$ 105</b>	<b>\$ 140</b>	<b>\$ 60</b>			<b>\$ 305</b>
<b>Educational support for accelerating health information technology</b>						
Canada Research Chairs in Health Information Technology***	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	
Cross-country educational campaign promoting e-health connectivity	\$ 10	\$ 10	\$ 10			
<b>Subtotal</b>	<b>\$ 12</b>	<b>\$ 12</b>	<b>\$ 12</b>	<b>\$ 2</b>	<b>\$ 2</b>	<b>\$ 40</b>
<b>Total connectivity spending</b>	<b>\$ 222</b>	<b>\$ 292</b>	<b>\$ 132</b>	<b>\$ 12</b>	<b>\$ 12</b>	<b>\$ 570</b>

\*Using Canada Health Infoway as a conduit of this connectivity "strings attached" cash.

Assuming 36,000 offices to integrate into the system at \$12.5k per office that is \$450 million.

\*\*The accelerated CCA assumes that the government has accounted for 50% of these credits may already be taken up under current CRA law.

\*\*\* Assuming 10 Chairs at \$200,000 per Chair per year.

## Figure 2 -Major Canadian health centers are well below industry IT investment standard

