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Chair

Mrs. Joy Smith

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● (1140)

[*English*]

The Chair (Mrs. Joy Smith (Kildonan—St. Paul, CPC)): Good morning, ladies and gentlemen. We have a very busy committee morning.

We have some wonderful guests with us this morning. I would ask that we have all the committee members' attention right now because there's something unusual that we have to do this morning.

From the Ontario Telemedicine Network, we have Dr. Ed Brown. Dr. Brown will be coming to us by video conference.

We also have Dr. Kendall Ho.

Can you hear me, doctors? Is the sound okay?

Dr. Ed Brown (Chief Executive Officer, Ontario Telemedicine Network): Yes, we can, thank you.

Dr. Kendall Ho (Director and Professor, eHealth Strategy Office, Faculty of Medicine, University of British Columbia): Yes, thank you.

The Chair: Dr. Brown, I understand that Dr. Rossos will also be coming to us by video conference, and that Dr. Rossos is going to have a PowerPoint presentation.

I can see you in the background, Dr. Rossos. In just a moment we will start with your presentation.

We'll start with the video presentations first. Committee, we have three video presentations. Dr. Rossos, who is not only on video, is going to go high tech and do a PowerPoint presentation during his video.

Members, are you all awake to keep track of this? Wonderful. There are copies of the PowerPoint presentation in front of you.

I'll introduce our two witnesses: Dr. Glen Geiger, from the Ottawa Hospital, welcome; and from Canada Health Infoway, Mr. Richard Alvarez. Is it Dr. Richard Alvarez or Mr. Richard Alvarez? You've been promoted this morning.

Mr. Richard Alvarez (President and Chief Executive Officer, Canada Health Infoway): Or demoted, depending on which way you look at it.

The Chair: I thank all the witnesses for coming.

Dr. Fry.

Hon. Hedy Fry (Vancouver Centre, Lib.): Thank you very much, Madam Chair.

I know we are late because we had a vote and I apologize to the witnesses, but I just wanted to put forward the motion that I have on the table today. We can discuss it later on in committee, but I want to put forward the motion right now, please. The motion is:

> That, the committee undertake a study on the subject matter of Part 4 Division 13 of Bill C-45, A second Act to implement certain provisions of the budget tabled in Parliament on March 29, 2012—

Mr. Ben Lobb (Huron—Bruce, CPC): A point of order.

The Chair: Excuse me, Dr. Fry, there's a point of order.

Hon. Hedy Fry: —and other measures, and report its findings to the House of Commons no later than Monday, November 5th, 2012.

The Chair: Mr. Lobb.

Mr. Ben Lobb: Madam Chair, I know you recognized Ms. Fry. I think she realizes that we have witnesses here today. In addition, she has all the power in the world to read her motion during the time that she's allocated to ask questions. Therefore, I would encourage her, if that's what she chooses to do with the time that's she been allocated, five minutes or whatever it is, to do it when it's her turn to speak, if that's her priority today.

The Chair: Dr. Fry, we do have committee business for 15 minutes at the end. Would you be so kind as to allow us to hear the witnesses who have come in?

Hon. Hedy Fry: Absolutely, Madam Chair. I just wanted my motion to be put before the committee during the public session, because there is a tendency to go into private session and no one knows what goes on.

The Chair: Can we get on with the witnesses?

Hon. Hedy Fry: I have done it, Madam Chair. I have already read my motion.

The Chair: Can we get on with the witnesses?

Hon. Hedy Fry: Yes. We can look after the motion later on.

The Chair: Great.

We're going to start with the video witnesses. We will begin with Dr. Peter Rossos.

You're going to make your PowerPoint presentation. You have 10 minutes, Dr. Rossos.

Dr. Peter Rossos (Chief Medical Information Officer, University Health Network): Good morning, Madam Chair and colleagues. I'm honoured to be here to contribute this morning.

I'll summarize the present state of e-health and telehealth in Canada, and then provide you with an example of telehealth within an organization, the University Health Network. Then I'll suggest a few recommendations for e-health and telehealth.

Given the number of clinicians in the room today, I thought it would be appropriate to start with a case presentation. We have a large country with a small population distributed thinly along the Canada-U.S. border. One of the key variables is that we're all getting somewhat older.

As a result of these and other factors, we see there has been an exponential rise in total health expenditures, and this is challenging the sustainability of our system. In comparison with other OECD nations per capita, we spend toward the top of the cohort.

In looking at the adoption of electronic medical records, I draw your attention to the HIMSS Analytics maturity model for the adoption of electronic medical records within hospitals. It's divided into seven stages. Within the United States, presently over 21% of hospitals are in stages five through seven. In contrast, and this is data from the Ontario Hospital Association, most Canadian hospitals are within the lower half of the scale.

If we look at electronic medical records and hospital information systems across Canada, there are some general trends. Community-based electronic medical records tend to be local, smaller vendor solutions. They have been incented through provincial and national programs, and they tend to focus on primary rather than specialty or interdisciplinary care.

On the hospital side, most of us have foreign vendor solutions, many of them on legacy platforms. To bring this information together, we have existing or emerging regional electronic health records. Many of those involve consortia between large Canadian companies, Telecom Canada, for example, and foreign commercial off-the-shelf solutions.

It's important to remember that part of our battle, at least on the health care organizational side, is that most of these legacy systems were not initially designed for credible care. This has created challenges in workflow, database structure, and interoperability.

On the health care side, there are challenges having to do with standards, interoperability, customization, fragmentation of the marketplace, regulation, and user adoption. Standing back, we have to think what we can do that's affordable, achievable, effective, scalable, and supportive of the spirit, structure, and values of the Canada Health Act.

Over the past 10 years, Canada Health Infoway has taken us a significant way on this journey. Here I present our pan-Canadian electronic health record service blueprint. Certainly, Mr. Alvarez will comment further.

At this point, I'd like to highlight within a single health care organization how we've applied some of these information and communication technologies by featuring the telehealth program at the University Health Network here in Toronto.

We use information and communication technology to deliver health service, expertise, and information over a distance. This can be either real time or store-and-forward telepathology or teleradiology. We use telehealth to advance our patient-centred care initiatives to reduce travel, costs, time, discomfort, and, for many patients, the significant risk of travelling to receive specialized care that's not available closer to home. We've also calculated environmental benefits. That appears in an appendix to the slide deck. In the end we're all committed to this as the right thing for our patients.

● (1145)

At UHN, most of our telehealth occurs through two-way video conferencing over secure networks, very much as we're interacting today. We try to replicate the same workflow as face-to-face visits through our Ontario telemedicine partner, which you'll hear a little more about from Dr. Ed Brown. We also provide interprovincial care, despite significant regulatory barriers.

In this particular graphic, you can see that at most tertiary and quaternary hospitals, the focus of our care is around advanced medical and surgical care, cancer care, and transplantation medicine. The next geographic slide illustrates that our volumes have been increasing exponentially over the past 10 years, despite relatively fixed program costs and a very small team. Geographically, most of our care is provided within Ontario; however, we have a number of programs that have spread nationally.

I'd like to offer a few respectful suggestions for next steps.

First of all, I think it's important that we address issues around designing our health care IT systems and our strategies for telehealth. We must address chronic disease to better deal with morbidity and costs to bend the curve that we demonstrated earlier in the presentation. We must better connect patients and providers from the perspective of efficiency and quality, empower patients to better manage their disease and self-efficacy, and connect providers to reduce medical error.

Second, on the technology side, there is much we can do. To better leverage economies of scale, we can consolidate, upgrade, and replace systems, and we can improve connectivity and interoperability between existing systems. Then to fill the significant gaps we can support and fund innovation in an entrepreneurial fashion by supporting technology research and development and commercialization initiatives, and by creating and reinforcing clinical communities that will advance best practices, standards of care, reporting, and adoption. We can leverage best practices within IT itself, through lower cost agile development, the use of web technologies, better application of analytics, and moving toward more personalized medicine and care.

Certainly, as a third paradigm, none of this can occur without appropriate governance and accountability. That's where leaders like you, obviously, have to help us with alignment of our efforts around patient-centred care and chronic disease management, and with international comparisons and benchmarking to ensure we're meeting targets around health outcomes, access, quality, and safety, and ensuring that investments within our health system are aimed at the performance and adoption targets that we set forth.

As part of the Canada Health Act, we need both patients and providers who have appropriate mobility, and we support universality and accessibility through telehealth and the reinforcement of care communities.

As an individual clinician who has been involved in this process now for almost 15 years, I remain extremely optimistic and passionate. I think we can all work together as patients and providers, payers and managers, industry and innovators to achieve these goals. I think the work you're doing is a very positive step. Once again, I thank you for allowing me to contribute today.

● (1150)

The Chair: Thank you so much. I appreciate your PowerPoint presentation.

We're going to go on to our next witness, and then we'll go into a question and answer time after that.

I would ask the committee to be mindful of our very important guests as well, over the video conference. I'm so glad they've taken the time to do this.

We will now go to the Ontario Telemedicine Network. Dr. Ed Brown is the chief executive officer.

Dr. Brown, you have 10 minutes.

Dr. Ed Brown: Thank you very much, Madam Chair and members of the committee. It is a great pleasure and honour to come before you today to tell you the story of the Ontario Telemedicine Network.

We're an independent, not-for-profit corporation. We provide telemedicine services for the Province of Ontario. We are funded primarily by the Government of Ontario through a transfer payment agreement. We have several key delivery partners we work with—Canada Health Infoway, Keewaytinook Okimakanak Telemedicine, and eHealth Ontario.

We're one of the largest and most active telemedicine networks in the world. As Canadians, we tend to be a modest bunch, but probably we can acknowledge that OTN and Canada are actually world leaders in the field of telemedicine.

I also know you're all quite aware that Ontario is a very large place. It's more than one million square kilometres and has a population of about 13 million. Many of us live in rural areas and about one million people are scattered across the vast northern part of the province.

Telemedicine began here in the late 1990s to address the challenge of delivering health care to this very widely distributed population. We use two-way video conferencing, electronic medical devices, such as digital stethoscopes, hand-held patient exam cameras, ear, nose and throat scopes, and other devices. By these means, physicians and other health providers can examine a patient over a distance just as if they were in the same office.

Back in the early 1990s, we started with four or five hospitals working together to deliver a few services, such as orthopedics and cardiology, to a handful of patients who lived far away from their specialists. In our last fiscal year, 2011-12, more than 200,000 patients received care that way across Ontario. It was delivered by nearly 1,700 consultants in almost every specialty, including mental health, internal medicine, oncology, surgery, and rehab. You just heard from one of our very special partners, Dr. Peter Rossos of the University Health Network.

We currently support more than 1,500 sites across the province. There are more than 3,000 video-conferencing platforms in action. There's participation from every hospital, more than 125 family health teams, 72 community health centres, 350 mental health agencies, 94 long-term care facilities, 65 community care access centres,10 aboriginal health care access centres, and even 13 prisons, including 8 federal prisons located in Ontario. All six medical schools use the network. One of our most important partnerships is with Keewaytinook Okimakanak Telemedicine. By integrating with them we're able to reach 30 remote communities in the far north of Ontario.

When patients use telemedicine from one of these sites, they avoid having to travel to receive care. If you total up the avoided travel, patients who use telemedicine last year avoided about 207 million kilometres of travel. That's about 275 trips to the moon and back, or about 5,200 circuits around the equator, just to give you an idea of the volume of travel avoided.

In addition, people in northern Ontario receive a travel subsidy from our government when they do have to travel, and because we avoided about 108 million kilometres of travel last year, that's about $45 million saved in avoided travel grant subsidies last year. Since OTN's base funding is only $22.5 million, about half of that, we feel that we're probably a rather good investment for our government on that one point alone.

The other exciting part is that using this level of travel enabled us to avoid burning 22 million litres of gas last year, which in turn avoided 57 million kilograms of pollutant being dumped into the atmosphere. It's kind of accidental because we set out to improve patient care, but it turns out that telemedicine is also very green and eco-friendly.

● (1155)

Besides these routine consultations that I've been describing, OTN also supports a number of emergency services. We have a province-wide telestroke initiative, teleburn, sign language, a mental health crisis service, critical care services, and a trauma pilot.

We also use the same technology to deliver a very active education program. That supported about 14,000 educational events last year, plus about 16,000 meetings, just like the meeting we're having here today. That translates into an average of about 18 education events, every single hour of every single business day, all year long.

In recent years, we've also been introducing some very exciting new technology services into the health care system. We have a tele-homecare service that supports remote monitoring and nurse coaching for people living with serious chronic disease. Our pilot program in that area, which we completed several years ago, included 800 patients, who experienced a two-thirds reduction in their hospitalization rates. It's very exciting.

We've also introduced an e-consult service, where primary care physicians can send data and a picture to a specialist for an opinion. For example, if somebody here had a mole or a rash, a primary care physician could take a picture of it, bundle that up with a bunch of other electronic data and send that to a dermatologist. The dermatologist would look at it that day or that week, and send back a diagnosis. Specialists are way more efficient this way, and the patients get care much faster. In our focus groups, for example, whereas it can be a six-month wait or longer for a dermatology appointment if you go in person, patients using this service were getting their consultation back in five or ten days at the most. That's a very, very significant improvement in access.

We're very busy scaling up these programs. We recently introduced lower cost PC-based video conferencing and mobile video conferencing, with the intent of enabling video conferencing to happen everywhere. We're aggressively growing our tele-homecare and e-consult programs to more people and to more specialties. We're doing this because we think these services are absolutely critical, absolutely central, to improving access to care, and in fact to creating a health care system that's sustainable. If we want a sustainable health care system, we need to leverage the innovation. We need to leverage the improvement in process that this technology can provide to the health care system. We're working double-time to make this happen in Ontario. The reality is that even though we have some fancy numbers, we're still scratching the surface. There is a lot of work left to do to make telemedicine a part of mainstream health care in this country.

Before I close, I want to thank all of you, specifically because you may not be aware of the enormous contribution the federal government has made to telemedicine in Ontario over the past number of years.

The federal government, through the Canadian health infostructure partnerships program, CHIPP, funded three start-up telemedicine networks in the province. In fact, there probably would not be telemedicine at the scale it's at today without that initial CHIP investment. Then later on in 2006, Canada Health Infoway partnered with the Ontario Ministry of Health to fund the integration of those three start-up networks to create what is now the Ontario Telemedicine Network.

Since then, Canada Health Infoway has funded a major expansion of OTN, called STEP, the scalable telemedicine expansion project, and has partnered with the Ontario Ministry of Health here to fund that tele-homecare pilot program, and now our tele-homecare expansion program. Our work with the federal government, particularly with Infoway, has been wonderful. It's been an enlightened partnership. I just want to make sure that you get the credit for all the support you've provided in helping us to start out and now to grow and succeed.

Thanks again for inviting me.

● (1200)

The Chair: Thank you very much, Dr. Brown. It's really nice that you acknowledged the good work that's happening through the government. The committee appreciates your kind remarks.

We'll go to Dr. Kendall Ho, director and professor, at the eHealth Strategy Office, Faculty of Medicine, University of British Columbia.

Welcome, Dr. Ho. Thank you for being here. You have 10 minutes to give your presentation.

Dr. Kendall Ho: Thank you, Madam Chair.

Honourable members of the Standing Committee on Health, it's my privilege and honour to participate in and contribute to this session on e-health and telemedicine.

According to a 2012 report, more people globally today have better access to mobile phones than to electricity and safe water. Modern information and communication technologies such as smart phones, portable computing devices, and computers to access the Internet, social media and apps surround Canadians and are used by them every day for banking, travel, checking on investments, and accessing government services. Not surprisingly, Canadians turn to these technologies also for information to address their health needs and to live healthier lives. In 2010 Statistics Canada found that 8 out of 10 Canadians age 16 and older use the Internet for personal use. Out of them, 64 out of 100, almost two-thirds of them, search for medical and health information online.

E-health, the use of computers, smart phones, and other computing devices technologies to provide health services, is not only a theoretical possibility but it has clearly been demonstrated to improve health. Some examples of this have already been cited. For example, people in rural and remote parts of our country see doctors and nurses in medical centres for health services and consultations that they cannot physically access in their own communities. Citizens use text messages to help them quit smoking or as reminders to take medications so that they can reap the full benefits of medication provided to them. People use smart phones to monitor their own heart rates, to monitor how far they have walked or how long they have exercised, or to automatically send out an email for help when they fall at home. Governments monitor the health status of citizens through electronic health records to more smartly invest health care dollars to address the population's unique needs.

The evidence that e-health can improve our Canadian health care system is irrefutable. The opportunity and the challenge that lie ahead of us are not whether e-health can help, but how to integrate e-health throughout our health system in Canada.

For example, six years ago my son, who was 12 years old at the time, asked me why we couldn't make an appointment with our doctor online. I submit to you that this is still a relevant question today for the majority of our citizens across Canada.

What about accessing our own health information, laboratory results, X-ray results, biopsy results online, and then have our own doctor or a nurse help us understand their relevance?

Things are improving. Thanks to the leadership, such as from Canada Health Infoway and Health Canada, we're seeing positive changes. The question is how to accelerate this change so Canadians can benefit from e-health faster, better, and safer.

Based on experience here at the University of British Columbia, Faculty of Medicine, eHealth Strategy Office, I'd like to submit a few suggestions for the Standing Committee on Health to consider.

First, how do we involve our health professionals to use e-health in partnership with our patients and the general public? It has been shown that patients whose health care providers use technologies are much more likely to turn to e-health themselves. While many health professionals are actively using e-health, many more are currently not, because this is not their current practice pattern, or there's a lack of familiarity or understanding of the range of e-health that is there or the benefits for their patients.

We need to encourage practising health professionals through continuing education. We need to embed e-health training into medical schools, nursing schools, pharmacies, and other health professional training programs to increase the uptake of e-health. We need to encourage health professionals to work with and work in partnership with the general public to explore how technology can improve communication and to support patients to optimize their health in truly living out the concepts and practice of patient-centred care.

● (1205)

At UBC, our medical school is integrating e-health training into our medical student training. We are planning conferences and continuing education to help health professionals in British Columbia—doctors, nurses, pharmacists—to immediately integrate e-health in the province into their practices. We are working in partnership with the B.C. Ministry of Health's patients as partners program to involve our public as partners in e-health.

These are some examples of how we might engage the public and health professionals in working together on e-health.

Second, we need to explore gaps in our current health system and identify ways e-health can fill these gaps—mind the gap, as subway systems would remind us. Let's not introduce the latest technology, the leading edge, into our health system, just because we can. How do we find innovative and cost-effective ways existing technology can help address the challenges we have in our health system?

How can technology help citizens at home who have trouble leaving their homes to access needed health services? How can we leverage technology to help patients being discharged from emergency departments or from hospital—I'm an emergency physician myself—who need a little bit of extra help and monitoring at home before full recovery? What about rural citizens not needing to travel long distances to urban centres, spending hours and sometimes a full day on the road, just to have a 15-minute appointment with a specialist for a routine follow-up after surgery, perhaps, or a few weeks before. Think about the inconvenience, discomfort, and challenge of that travel.

These situations and many more do not require cutting-edge technologies to improve wellness and quality of care. What we need to do is find ways to integrate the technologies we have today to help them.

Third, we need to innovate on health policies that guide the progressive introduction of e-health into our health system. This policy hopefully would be informed by evidence as to what types of e-health can best improve access, quality, productivity, and cost-effectiveness. Health policy-makers, working hand in hand with e-health researchers, clinicians, patients, and industry partners, can most effectively design sound policies. Our partners can help monitor the successes and help improve and refine these policies based on progressively improving outcomes.

The UBC Faculty of Medicine has been very fortunate to contribute to some of these evidence-based policy efforts. For example, we carried out a literature review on telemental health for the Ministry of Health. We have undertaken a national benefits evaluation of e-health in first nations aboriginal communities, working hand in hand with the Health Canada first nations and Inuit health branch. We contributed to the World Health Organization Global Observatory for eHealth 2011 report on telemedicine for underserved communities.

The International Telecommunication Union in Geneva declared in November 2011 that broadband communications are a basic universal human right, on par with the right to food, health, and housing. In Canada, we're blessed with excellent broadband infrastructure, a great health system with dedicated health policy-makers and professionals who want to improve it, and citizens keenly interested in accessing digital technology for health and wellness. We can and must use e-health effectively, cost-effectively, and responsibly to improve our health system and the health and wellness of our citizens.

Academic institutions like the UBC Faculty of Medicine would love to support, contribute to, and work, with you, to advance this cause. The evidence is there. We simply need to work together to bring the evidence into routine practice in our Canadian health care system to achieve our desired goal. Citizens will be able to find and trust health services online to help them live well and thrive.

● (1210)

The Chair: Dr. Ho, your time is running out.

Dr. Kendall Ho: Thank you very much.

The Chair: Thank you very much.

Now we'll go to Dr. Glen Geiger, chief medical officer for the Ottawa Hospital.

Dr. Glen Geiger (Chief Medical Information Officer, Ottawa Hospital): Thank you, Madam Chair, and my thanks to the members of the committee. I appreciate being invited here today.

You've already introduced me. I'm a practising internal medicine specialist at the Ottawa Hospital. I work there as the chief medical information officer. I've been in professional practice for 25 years and most of that time I've spent working on clinical information systems, in addition to taking care of patients.

I truly enjoy taking care of patients. I've worked at some outstanding institutions with truly wonderful people.

For the past quarter century, every single day of my professional life it's been obvious to me that health care is not terribly well structured. The way in which we deliver care is not quite what it should be. It's been obvious from the beginning. As time has passed, other industries have adopted strategies, technologies, and processes that have allowed them to prosper in ways that the health care system has not been able to do. Therefore, the gap, if anything, has grown wider over time.

I recognized this issue when I first started and the disparity continues to grow between what information technology can do for other enterprises and other types of industry, and what health care is less able to do.

I'd like to confine my remarks thematically. Everywhere you look in health care, you're confronted with what I call the fundamental paradox of health care. How is it possible that a system that is staffed by compassionate, intelligent, well-meaning individuals could not be meeting the expectations of the citizenry? If you read the papers, you're confronted by the fact that people feel the system is not doing what they want it to do, yet when I look at the people I work with, they're all extremely passionate about patient care. They truly and fundamentally wish to do their absolute best for patients. I have seldom met a nurse, physician, physiotherapist, or pharmacist who wasn't fully dedicated to doing the absolute best. So how is it that we are unable to create and implement a system that actually makes the citizenry satisfied and confident about the care they're supposed to receive?

People write to newspapers, and there are editorials and comments by pundits, but nobody seems to focus on this fundamental question that we should be asking ourselves. I'm prepared to offer my answer, for what it's worth.

My argument is that these people are so well-intentioned that we have to conclude that they cannot do any better than they are doing now. They are working as hard and as smart as they see themselves able to do. In most areas of health care, most people optimize the practice in their particular area. If you're a CCU nurse or an emergency nurse, you make sure that the workflow in your environment is successful for you and the patients you see, without necessarily understanding its implication downstream for other parties—other nurses, other physicians, or the patients themselves—as they transition from one area or cross gaps from one care area to another. These people are dedicated in what they're trying to do in a specific place, but they are unable to systematize care across a broader range of care avenues and create circumstances where the patients themselves feel they're being cared for along a continuum. Exhortations to these people to work harder, to work smarter, to follow guidelines, or polish more policies will not likely be effective, in my opinion. They are not able to change in that way.

My argument has been, for my professional career, that information technology can allow them to adopt new processes that will optimize care delivery along the continuum for the patient, not just locally for the individual practitioner in that specific encounter with that patient.

Some of the telehealth opportunities you've been hearing about already, as well as some of the other initiatives that are going on in hospitals and advanced institutions across the country, are trying to deliver these kinds of solutions, but they are very hard to do. Technology is not a solution in and of itself. I do not believe in buying technology just because it's technology. It has to be adopted to achieve specific purposes and accomplish specific processes for the patients.

● (1215)

In the work I'm doing at the hospital as well as work I've done elsewhere and talked about, we're trying to change the fundamental processes by which health care is delivered. Initiatives we have going on at the Ottawa Hospital include electronic ordering, which we don't see as a physician step. We see it as a process change inside the hospital. Our electronic ordering for diagnostic imaging at the Ottawa Hospital is paperless from end to end, from the creation of the order to receipt of the order inside the radiology department, to the execution of the order, to the speech recognition of the report, to the return of the report to our information technology here on my iPad.

This is how what we're talking about is a process change inside the system. Our lab electronic ordering process is the same. We go from electronic ordering of a lab test to labelling of the blood sample at the bedside by positive identification of the patient, to transporting that sample to the lab, to processing it through the analyzer using the bar-coded information on the sample, to the return of the results to the physician the same way. This is about changes in health care delivery processes.

We're doing electronic medication reconciliation, which is another project to alter the way in which the health care system documents patient medications and follows the patient's medication longitudinally from outside the hospital to inside the hospital to their return to the community. We use speech recognition technology to enhance the timeliness and accuracy of physician documentation and the documentation of our other health providers.

Once again, these are all examples of how technology is not an answer in itself but is an answer insofar as it helps us alter the way we deliver care and provides new tools for these well-meaning people to achieve better patient outcomes and better results for the system and more efficient care delivery. That's the way we see it.

The Ottawa Hospital has been blessed by having received support from government organizations such as eHealth Ontario and Canada Health Infoway for a number of the projects we're doing to enhance care delivery. We've been able to integrate the infrastructure we used at the Ottawa Hospital with the Hawkesbury district hospital. We've been able to connect the two so we support the information technology used inside Hawkesbury. We are rolling out access to electronic medical records to the primary care physicians here in the Champlain LHIN to allow them to see the records of their patients while they're inside the hospital.

These are small steps to begin with, but they're very important ones. I suggest to you that as a government committee you would want to focus on making sure that initiatives you support are focused not just on technology but on making sure that the people who are delivering these systems are going to achieve the process change we're looking for with deliverable outcomes for the patients. That's been the engagement we've had with government agencies to date and we truly appreciate the support we've received.

I thank the committee for the time to speak to you and advocate for continuing your efforts.

● (1220)

The Chair: Thank you very much for your insightful comments, Dr. Geiger.

We'll now go to Mr. Richard Alvarez.

Mr. Richard Alvarez: Bonjour, Madam Chair and members of the standing committee.

Thank you for this opportunity to appear in front of you. With me is Mike Sheridan, our chief operating officer.

It's a real privilege to be on with some of the best clinical innovators that Canada has. I'm very grateful to all of these gentlemen for what they've done.

Canada Health Infoway was created with the unanimous agreement of first ministers to invest in digital health and telehealth systems to improve the quality, access, and productivity of our health care systems. Infoway receives its funding from grants from the federal government, which we then leverage with additional financing from provincial and territorial governments and health agencies.

In the few minutes I have for opening comments, I want to share with you three examples from independent evaluations of how these innovative investments have enabled the expansion and delivery of tools to provide better care for Canadians.

You've heard a great deal from Dr. Brown. I think he's somewhat modest, because the telehealth system he runs is, in fact, one of the finest telehealth systems in the world. It is a way of providing services when patients and clinicians aren't in the same place. We've seen that it's reduced wait times and increased access to care, particularly in the north.

A recent study found that Canada has the world's largest video conferencing network, with more than 5,700 telehealth sites in 1,200 communities, including 423 sites in northern, remote, first nations, and Inuit communities. The result is that a quarter of a million sessions were delivered last year, keeping patients in their communities and close to their social support networks and saving them both time and money by eliminating the need to travel millions and millions of kilometres.

The use of telehealth tools has led to innovative applications in the treatment of mental health and drug addictions, the monitoring of chronic disease patients so that they can remain in their homes, remote wound care assessments for diabetics, and telephathology applications that let pathologists and surgeons communicate and exchange information in real time operating room settings.

The second area is the reducing of wait times and improving access with the use of digital diagnostic imaging, which collects, stores, manages, and shares patient X-rays, CTs, MRIs, and other images and reports. As a result of our investments, over 90% of the most common radiology exams in Canada's hospitals are now digital, up from 38% just six years ago. Research shows that radiologist and technician productivity has increased by 25%, enabling as many as 11 million more exams annually. When fully implemented, we expect annual benefits valued at about $1 billion.

However, the true innovation is when a young child in a remote community has fallen off a bicycle and can have a head injury diagnosed and assessed by a specialist in a major urban centre without having to travel, thus saving much needed time and further injury.

The third example is drug information systems which allow authorized clinicians to access, manage, and share patient medication histories, thus avoiding harmful drug interactions. They are used by one in three community pharmacists and half of the hospital emergency rooms. They help avoid harmful drug interactions and manage medications.

Research results show benefits valued at $436 million per year. Pharmacists surveyed as part of the study rated improved access to patient information, increased patient safety, reduction in fraudulent medication, and a reported 9% productivity gain as the top four benefits.

Last year, much in keeping with what this committee is doing in its investigation, we initiated and funded projects intended to stimulate and spread clinical innovation. We began by launching a website inviting Canadians to share their best ideas to improve health and health care using information technology. In a period of 13 weeks, more than 1,000 Canadians participated in the challenge.

We also launched an awards-based outcome challenge to clinical teams who demonstrate the use and growth of innovation solutions for electronic scheduling, for medication reconciliation, for patient access to their own health information, and for clinical synoptic reporting—much of what Dr. Kendall spoke about earlier.

We now have 31 teams with 300,000 users participating in the outcomes challenge. Their innovative clinical solutions have been used well over a million times.

● (1225)

Generally speaking, as you look across Canada, a lot of the digital infrastructure is now in place, or is in the works of coming into place over the next 18 months. It's time now to further capitalize on our collective investments and to drive out new innovation applications for consumers and clinicians.

That view was confirmed when Infoway conducted a pan-Canadian consultation with over 500 stakeholders comprising consumers, governments, administrators, clinicians, physicians, thought leaders, and researchers. The aggregated result of these consultations and opportunities pointed to five clear innovative and transformative directions for building and expanding on the successes of Infoway and the jurisdiction investments to date.

The clear message was that focus now needs to turn to the consumer by bringing care closer to home, by providing tools for making access easier, by supporting new and better patient-centric models of care, and by using technology to improve patient safety, and at the same time harvesting the electronic health information data for analysis and research to enable a high performing health care system.

Responding to the stakeholders' priorities and shifting the focus to consumers is a big cultural and management change in health care. Quite frankly, we don't get there in one step. Getting there and further harvesting the benefits from doing that will require ongoing commitments to practise improvements from thousands of dedicated clinicians across the country, continued renewal of investment, and strong alignment of legislation, regulation, and policy. We need to keep our eyes focused on the future and recognize how much more innovative digital solutions can be for Canadian health care consumers and providers.

I want to end, Madam Chair, by thanking the federal government for creating a creature such as Infoway, which is really a mechanism for you to help with the modernization of the Canadian health care system.

That concludes my remarks. Thank you.

The Chair: Thank you very much.

Today we had bells. My apologies. We were late starting committee due to the votes in the House of Commons, but we've moved along very nicely. We have some absolutely dynamic witnesses with us today.

We are going to have to shorten the Qs and As to five minutes, and it will be one representative per party.

We'll start with Dr. Morin.

[*Translation*]

Mr. Dany Morin (Chicoutimi—Le Fjord, NDP): I would like to thank the witnesses for joining us.

My first questions are for the representatives from Canada Health Infoway.

I am not sure if you remember the 2005 report that you had commissioned through Booz Allen Hamilton, a consulting firm. This report tried to anticipate the costs that Canada Health Infoway would incur, as well as the benefits that the organization could have on our various health care systems in Canada. The net savings were estimated at $39.8 billion over 20 years.

Do you remember that report? If so, could you tell us about those estimates? Have the numbers changed seven years later? I know there have been additional costs for implementing Canada Health Infoway. Could you tell me more about the study on investments and benefits?

Mr. Richard Alvarez: Thank you for your question.

[*English*]

I will begin and then maybe turn it over to Mike.

Yes, we've actually had two reports done in terms of the cost and the benefits. One was by McKinsey and the other was by Booz Allen. I can't remember in 2005 which one it was. I think it was the Booz Allen one. At that time, when it was all said and done, the costs were in the range of $10 billion to $12 billion, and the benefits would range anywhere from $6 billion to $7 billion on an annual basis.

One of the things we've done, which is quite unusual to Canada in this particular field, is very early on we brought in some of our top researchers in Canada and international researchers and we set up a benefits evaluation framework. For everything we invest in, we do the evaluations. I gave you examples in telehealth, in drugs, and in diagnostic imaging. We can show the benefits occurring from each of them.

Right now we are doing investigations in the expenditures for EMR records in doctors' offices and in laboratory results as well. I must say the benefits that are starting to occur are absolutely tracking in the same way as were the forecasts from both Booz and McKinsey.

There are some swings. At times you'd think you're going to get possibly a reduction in duplicate testing. That doesn't always materialize because clinicians want to reorder a test. There are other areas, in aspects of drug abuse, for example, where we've underestimated what the benefits should be.

Absolutely, we are tracking in those directions. We believe that in the last five years the cumulative benefits from just three programs is over $6 billion.

● (1230)

[*Translation*]

Mr. Dany Morin: Thank you. In that case, I will stick to more recent figures.

On February 9, 2011, you yourself announced an investment of $380 million to set up electronic health records. Also, your objective was to encourage 8,000 to 9,000 additional doctors and nurse practitioners to sign up by March 2011 for the electronic health records program for the doctors' offices in their province or territory.

The deadline has passed. At the end of the day, have you managed, with the $380 million investment, to convince those 8,000 or 9,000 additional doctors and nurses to register for the program?

Mr. Mike Sheridan (Chief Operating Officer, Canada Health Infoway): The answer is yes, absolutely. We had set targets during the planning process of the program. We set the target at 9,000 clinicians. According to the current data, at the end of this fiscal year ending March 31, we will have 12,000 clinicians registered for our electronic health records program.

Mr. Dany Morin: Thank you very much for the information.

In the short time that I have left, I am going to ask you one last question.

The federal government has invested a total of $2.1 billion in the Infoway. According to the Auditor General of Canada, experts have estimated the total costs of implementation at $10 billion.

So who is right? Will the cost be $10 billion, as the Auditor General of Canada suggests, or $2.1 billion, as the Government of Canada estimates?

[*English*]

Mr. Richard Alvarez: First, I should say those are estimates. Clearly the system only has an appetite to digest so much money at any point in time. The issue here, on many occasions, is the take-up rate. The way Canada Health Infoway funds is very simple. From an accountability perspective, if we don't get deliverables, we don't pay out any money. We hold back money until we get deliverables.

If you take the $2.1 billion, as I said earlier in my remarks, those dollars are basically matched in terms of provincial and territorial dollars.

The Chair: Thank you so much, Mr. Alvarez.

Mr. Richard Alvarez: There's a large spend in there.

The Chair: I'm keeping the time tight so everyone can get in.

Thank you so much, and thank you for your questions, Dr. Morin.

Dr. Carrie.

Mr. Colin Carrie (Oshawa, CPC): Thank you very much, Madam Chair.

Again, we have excellent witnesses. I wish we had little more time to ask questions.

I did want to ask Health Infoway to clarify something. I think in our last meeting one witness said that these electronic health records and digitization are great, but he saw that there could be problems with integration and interoperability. On your website you refer to the concept of connection as the final component.

I was wondering if you could go over how things are set up. My understanding is that from one province to another, there is going to be that ability to have that interoperability, the integration.

Could you comment on that?

Mr. Richard Alvarez: Thank you, Dr. Carrie.

You saw from the first presentation from Dr. Rossos that one of the first things Canada Health Infoway created was its architecture and blueprint. Quite frankly, if you don't follow that architecture and blueprint, we don't fund you. You have to follow the standards.

The issue when we got into this business is not to create health records that are specific to just a hospital or just a doctor's office or just a lab; it is about the patients. How do you bring all that information around the patient and have interoperability in those various systems?

Certainly if you follow the architecture and you follow standards, that will start to happen. I must say it's not an easy situation because a lot of the products out there are closed products. We have to incent the venders, and certainly the folks who are bringing on the venders, to make sure they open up the systems, that they can pull data in from the various systems and bring them together.

If you want a living laboratory, go to Alberta. No matter where you are in that province, they can pull up all your medication history, your lab results, your immunization, etc. That is a living example of integration and interoperability working.

● (1235)

Mr. Colin Carrie: Excellent, thank you very much.

We heard from my colleague. I thought he asked some really good questions about how this technology is saving the country hundreds of millions of dollars. Do you have any idea what we can expect to save this year, if you had to give it a number?

Mr. Richard Alvarez: As I say, in each of the investments that we are doing, we look at the annual gains that we're making.

We have been looking at them on a year-to-year basis, and I know the number that is in my head over the last five years, the accumulated, has been over $6 billion. We have, as the good member said, now started investing in the EMRs and the lab systems, so those numbers will absolutely grow.

Mr. Colin Carrie: Excellent.

Also, I've read that you've created thousands of sustainable, knowledge-based jobs. I was wondering if you could give some examples.

Mr. Mike Sheridan: Part of the notion of innovation and using technology is the spinoffs that benefit not just the patient but the whole economy. We did some work with the Conference Board of Canada based on the last grant we received from the federal government, which was $500 million. When you invest in innovation you can also leverage those investments. We leveraged this half a billion dollar grant by another almost quarter billion dollars from jurisdictional partners. Looking at the investments, we should over four years create about 10,700 full-time person-years of employment.

As to types of jobs, we're looking at systems integration, hardware producers, software producers, change management, a whole gamut across the board. The media, I think sometimes pejoratively, has labelled some jobs in the service area as “McJobs”. It's a characterization of lower wage service jobs. The jobs coming out of the investments in the technology we're looking at are high-tech and professionally driven jobs, with a high probability of remaining, if you look at the analysis from the Conference Board of Canada.

The Chair: Thank you so very much.

We'll now go to Dr. Fry.

Hon. Hedy Fry: Thank you very much, Madam Chair.

I want to thank everyone for the excellent presentations. Many of the witnesses whom we heard via video conference today, and Dr. Geiger from Ottawa, have continued to confirm that e-medicine, telehealth, etc., are excellent ways to provide care, to improve patient outcomes, and to save costs to the system.

I have heard lots of questions about costs to the system. Have you done any evaluation on how this improves patient outcomes?

We heard from other witnesses at the last meeting about the challenges they face. One of them is that not every part of Canada is connected. What do you intend to do about that? How do patients get connected? What about infrastructure for the patient and the community of nurses, nutritionists, and home care to help the patient and bring down hospital admissions?

Finally, there is the issue of privacy. Patients are worried that everybody is going to hack into the system and get all their information. Privacy is a big issue.

● (1240)

The Chair: Good question, Dr. Fry.

Mr. Richard Alvarez: There are a lot of questions, Dr. Fry. I will attempt my best.

First, in terms of outcomes, wherever possible, obviously, when we do our evaluations, we measure outcomes. Certainly, in the drug studies, what we found in those measurements is it absolutely reduces drug-to-drug adverse reactions. Here's an example. We just ran a study with three doctors' offices that are still on paper and three that are now computerized. We asked them to find the patients who had a heart attack a month ago, find the patients who are undergoing cancer therapies. We named two drugs and asked if they were recalled, could they find the patients who were on them. After 40 hours the practices that used paper gave up. Within just one hour, those that were automated were able, with great confidence, to pull up the names of the patients. That is a heck of an example of outcomes.

In terms of the rest of Canada, it's our two largest provinces, where there are a lot more points of care and it's a lot more complex, that are taking a while to come on board. Atlantic Canada is moving very well. Certainly, the west has moved very well. Manitoba got in pretty late, but they've played catch-up. I would say that over the next 18 months, fingers crossed, Ontario and Quebec will make progress, though. As we've said, in telehealth, and in EMRs and doctors' offices, Ontario is doing extraordinarily well.

In terms of aspects of new models of care, one of our new strategic directions, and Dr. Kendall Ho talked about it, is that there's absolutely no reason we shouldn't be moving to e-consultations. Again, the Conference Board just came out with another study that showed there were 50 million unnecessary in-person visits to doctors' offices, which amounted to over 70 million lost hours, unproductive hours by Canadians who were spending three hours, on average, taking off work or school for a 10-minute to 15-minute appointment.

Some of those things could be done through e-consultation.

The Chair: I think Dr. Brown would like to comment as well.

Hon. Hedy Fry: Yes, sorry. The privacy one was huge.

The Chair: We will get to that.

Yes. Dr. Brown.

Dr. Ed Brown: Your question about outcomes and patients is very good. I just wanted to make you aware of tele-homecare, which to me is a very exciting area. What is happening in that field is we're looking for patients who are quite ill, with congestive heart failure, chronic pulmonary disease, and putting remote monitoring technology into their home and matching them up with a nurse, who's their coach. What that nurse is doing is empowering that patient to look after himself or herself. Usually, the patient goes to see the doctor. The doctor tells the patient to lose some weight, stop smoking, do whatever. The patient leaves really not knowing what to do.

These patients have serious problems. When they have a coach, they set targets together. A target might be that they want to play with their grandchildren more but they don't have the energy. The nurse will set a target with the patient to make that happen. The outcome is dramatic. These patients are energized. They've avoided two-thirds of their hospitalizations, which is enormous in our pilot program, and 70% of their emergency visits.

The Chair: Thank you, Dr. Brown.

I know we're out of time, but very quickly, Dr. Fry had one more question about privacy.

Could you please speak to that, Mr. Alvarez?

Mr. Richard Alvarez: Absolutely. Privacy is a two-edged sword. On the one hand, it's extraordinarily important. Again, in the projects we fund we insist that it is built up. We have privacy by design right at the front. We insist on a privacy audit for any of the projects we fund. That must be done to make sure that it's there.

That said, when we survey Canadians, Canadians basically want their information shared by those who need to get access to it. If it's unauthorized access, they want to be notified. We want to make sure there are privacy audits that are built into the system for unauthorized access.

The last point I'll make, the other side of the coin is that privacy should not be a smokescreen for not sharing data. This, Madam Fry, takes us to your point about the different clinicians who now need to work with a patient. They need to have access to that data, so it shouldn't be held back because of aspects of privacy concerns as a smokescreen.

● (1245)

The Chair: Thank you very much.

I want to thank the committee for all your extraordinarily good questions. We had a lot of witnesses today and they were very concise and really gave us a lot of very good information.

We are going to go into a business meeting which will be in camera. I'll ask everybody to vacate the room. Thanks for your attendance at our committee meeting. I'll suspend for two minutes.

[*Proceedings continue in camera*]

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