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Chair

Mrs. Joy Smith

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● (1530)

[*English*]

The Chair (Mrs. Joy Smith (Kildonan—St. Paul, CPC)): Good afternoon, ladies and gentlemen.

Welcome to the committee. We are so pleased to have our witnesses here today.

Dr. Lear, we are so happy to have you here. It's my understanding that you're on vacation right now. You drove an hour from your vacation spot in California to come and testify. I'm impressed and so is the committee.

Dr. Scott Lear (Professor, As an Individual): It's a pleasure for me to be here. I'm excited about the proceedings in the next couple of hours.

The Chair: How's the weather down in California?

Dr. Scott Lear: It's a bit warmer than what you have there in Ottawa.

The Chair: Exactly.

We admire your dedication. I wanted to give you some special time because anybody who cares so much to come as a witness to our very important committee.... As you know, we're studying technological innovation and witnesses like you are very important to us. For you to be on vacation and take time away from your family to drive and get to a place where you can actually speak to us via video conference, we're very honoured to have you here, and I thank you very much for that.

We have Dr. Lear, ladies and gentlemen. You have the video conference from California in the background and what he has done to be here at committee today.

We have as an individual, Dr. David Price, chair of the department of family medicine at McMaster University. We're very pleased to have you here as well, Doctor.

We have a guest arriving, Paul Lepage, president of health and payment solutions at TELUS. He'll arrive at 4 o'clock.

We'll begin with you, Dr. Lear. You have 10 minutes.

Watch me a little because I'll gesture when you're just about a minute out. Thank you, sir.

Go ahead, Dr. Lear.

Dr. Scott Lear: Thank you again for the invitation to speak at this committee. I'm quite excited about this topic.

As we all know, the use of e-health and telehealth has been met with substantial enthusiasm as a way to bridge gaps in health care and geographical inequities of care. This has been recognized by decision-makers throughout the country. It is reflected also by the proliferation of e-health provincial offices, and many health regions also have telehealth managers, as well as the creation of Infoway.

However, despite the enthusiasm for e-health and telehealth implementation, I would say the uptake has been quite modest. This is in part due to limited evidence to inform decision and policy-makers as to what programs may be beneficial and what ones aren't. In addition, most of the initiatives to date have been directed to supporting administrative duties such as electronic health records, and the storage and forwarding of medical images, and while these things are important, there has been relatively less attention given to improving direct patient care.

In British Columbia I lead a network of health researchers and health authority decision-makers called the BCATPR, the British Columbia Alliance on Telehealth Policy and Research. Our goal is to develop and evaluate patient-focused solutions for the delivery of health care services to patients with chronic diseases.

Our initial work has been directed toward bridging this geographical gap in health services. As we know, while most of our health care resources are centred around large urban centres, chronic diseases and other conditions are ubiquitous throughout Canada. Indeed, in rural areas, we actually find the prevalence of chronic diseases is increased due to higher rates of smoking and higher rates of obesity.

Conversely, access to health care services in these areas is commonly limited to the primary care physician and the local community hospital. They have little or no access to specialty care or specialty clinics, such as diabetes teaching centres, cardiac rehabilitation programs, and others that have proven effective for the prevention and management of chronic diseases.

What we find is that the per capita hospitalization for chronic diseases in rural areas is actually quite a bit higher than in urban areas, and it may be due to this missing gap in specialty care. So basically, if care for a patient gets too complex for the family physician, their next level of attention is to refer them to the local hospital, being unable to refer them to a specialist or specialty clinic.

Now our projects to date have made use of the Internet to bridge these gaps in care, as the Internet has the advantages of using existing infrastructure such as home computers, it's widespread, and it is growing in use, and models of care can be readily scalable through the Internet.

As an example of the utility of the Internet for health care delivery, in 2006 our team conducted a survey of nearly 300 hospitalized heart patients between St. Paul's Hospital in Vancouver and what was then called Prince George Regional Hospital in Prince George. Two-thirds of these patients had home Internet access and about 80% of those had a high-speed connection. When we asked them about home Internet use, 70% actually said they used the Internet to access health information. This was third only behind general browsing and using the Internet for e-mail. What we do know is that as we move away from urban centres, Internet access diminishes. In our rural patients, we found about 50% had home Internet access, compared to over 70% in the urban centres.

At around the same time, we conducted a number of interviews with decision-makers, health professionals, physicians, and patients, and all indicated that using the Internet had great potential to coordinate care and also to communicate care and health information across the key players, including the patient.

We have subsequently developed and tested what we call a virtual cardiac rehabilitation program. Cardiac rehab programs are proven effective for preventing subsequent events for patients with heart disease, but only about 15% to 25% of eligible patients actually attend these programs with the greatest barrier being transportation and geographical access. Our virtual program consists of a website that mimics the hospital-based standard cardiac rehab program and allows patients to connect with the cardiac rehab staff we have in Vancouver.

● (1535)

One of the innovations is that patients are given a recordable heart rate monitor that they can wear while they exercise to record their heart rate. When they get home they can upload it to the web server so that the health staff in Vancouver can actually check on their exercise heart rate and provide any feedback as needed.

After 12 weeks the patients increased their physical activity and fitness levels and reduced their cholesterol levels comparable to what we see in the standard hospital-based programs. One of the participants was quoted as saying at our interviews:

> I can't say enough about how helpful it was in changing some of my habits. The alternative would have been to go into Vancouver regularly, or to bring home a sheet of exercises and instructions...which I've done before and quickly given up on.

This patient lived about a two-hour drive from Vancouver.

We've since advanced to models that can be readily translated to a number of chronic diseases beyond heart disease, including diabetes, renal disease, and lung disease. In this program, patients log onto our website, which we call MyHealthConnect, and answer questions about their symptoms and how they feel. An alert may be generated if their answers indicate a worsening of symptoms.

The alert sends an e-mail to the nurse who will then phone the patient. Most commonly we find the nurses counselling a patient on supporting their self-management and behaviours. As well, the nurse, if it seemed fitting, would refer the patient to their family physician for additional medical management. Also there is the opportunity for the patient to converse with a dietician or an exercise professional.

The value of this model is that it acts as a type of early-warning system to direct patients in appropriate care and prevent downstream hospitalizations and complications. In addition, patients benefit from the nurse counselling, and as they do, the number of alerts they generate should decrease. Those patients who are stable actually don't generate alerts at all and spare the nurse's time.

This program also includes a patient action plan that is coordinated among the patient, the program nurse, and their family physician. We are currently studying this program throughout B.C. in smaller urban and rural areas, and we have right now over 70 family physicians and some of their patients participating in it.

One of the key aspects I want to stress about our work and research development regarding the downstream implementation is the inclusion of stakeholders or end-users in our design. Our team is constantly working with decision-makers, policy-makers, health care professionals, and patients to help guide our programs. For example, when designing the MyHealthConnect program, we had an advisory committee that consisted of specialist and family physicians, health care professionals, nurses, psychologists, and patients. This was extremely beneficial in ensuring that our program fit into and aligned with current primary care practices, in addition to addressing the needs of the patients.

The next step is working towards implementation. We already have one group in Whitehorse that is interested in looking at our virtual cardiac rehabilitation program in order to prevent having to send patients down to Vancouver for subsequent care or having specialists come from Vancouver to care for patients there.

Some of our future projects will look at translating these programs beyond the Internet to regular telephones and cellphones in order to increase access and use, as well as developing other solutions for patients and providers, such as an online specialist referral portal and programs to support the transition of patient care.

Just before I close, I would like to take the opportunity to suggest some recommendations as to how we might move forward in certain areas.

Number one, Infoway, which has provided extremely valuable support in electronic health records, should consider expanding its mandate to include support for models that incorporate direct patient care and also to go beyond funding health regions as innovation can come from other areas besides the health authorities.

Number two, a way should be found to promote interprovincial collaboration on telehealth strategies. We find that one of the virtues of telehealth is that it can cross jurisdictional boundaries, but sometimes these can become barriers to implementing and facilitating excellent programs.

● (1540)

Number three, the development and research of e-health and telehealth through the CIHR should be encouraged so that decision-makers have the evidence they need to make informed decisions for health care delivery. This can be done through the CIHR by taking a leadership role and conducting specific grant funding calls for research in technology-supported models of patient care. This may include examples of supporting patient care in the home, delivery of care at a distance, and mobile applications, as some ideas. This would also help put the data that's needed into the hands of decision-makers.

I'd like to close there. Thank you for your time and your attention.

The Chair: Thank you very much, Dr. Lear. That was a very interesting presentation on cardiac care from a distance. It sounds very interesting.

I want to welcome Paul Lepage, president, health and payment solutions, from TELUS.

You have a guest with you as well, Mr. Lepage, who we don't have on the roster.

Mr. Paul Lepage (President, Health and Payment Solutions, TELUS): Yes, I do.

● (1545)

The Chair: Who is that?

Mr. Paul Lepage: I have with me Michael Guerriere, who is our chief—

The Chair: Michael Guerriere, welcome. We are so glad you could join us as well.

We've just heard from Dr. Lear and now we're going to our second witness, Dr. Price, from the department of family medicine, McMaster University.

Could you begin, Dr. Price.

Dr. David Price (Chair, Department of Family Medicine, McMaster University, As an Individual): Thank you very much for this opportunity.

As the father of three teenage girls, it's going to be an experience to have people listen politely and not interrupt for 10 minutes. I'm going to enjoy this.

My grandfather was born in Montreal and lived in a small town just outside Montreal called Chambly. One of his early chores was to harness the horses and hitch them to the wagon to take his father to the train station. He disliked horses very much so when the car came out he was one of the early adopters. Early adopters transformed the way transportation happened. We're at the same stage now in our development of electronic health records and e-technologies.

If you go to the States the CDC, the Centers for Disease Control and Prevention, this last year said that about 50% to 55% of physicians are now using electronic health records in the United States. In Canada the Canadian Medical Association estimated that somewhere around 39% of our physicians are using electronic health records.

It's clear to me that with graduating 2,000 physicians per year we've passed the tipping point. Those graduating physicians are not going to start using paper charts and move backwards. They are moving forward quickly. I think we will see a massive shift to electronic health technologies in this country over the next three to five years. That's one of the key messages here; it's happening and we're there in terms of adoption.

One of the keys is that we haven't got toward meaningful use. What I mean by meaningful use is value added. If my grandfather only used his car to take his father to the train station and back, we wouldn't really have seen any development. If we're simply using our electronic health records to replace the paper chart, we're not getting anywhere. We're maybe slightly improving our efficiency but we're really not taking full advantage. That is really where we are now, that is, to drive the meaningful use. That's what I'd like to talk about a little: what we're trying to accomplish.

McMaster University is probably well known as being one of the innovators. We developed an electronic health record called OSCAR about 12 years ago. OSCAR is now one of the leading EMRs in the country. Approximately 2,000 family physicians are using it across the country with about three million Canadian citizens being registered with OSCAR and being supported on that. However, it's an electronic health record and that doesn't meet all the needs of our Canadian public. What we really need to see is the development of tools within the electronic health record that facilitate and promote care. We've been working with our colleagues and OSCAR has been developed across the country. It's now at McGill in the department of family medicine. It's at Queen's University, McMaster, and also at UBC.

This product is now starting to mature to the point where we're starting to see more and more, I will call them apps or add-ons to this product. For example, we are seeing an increasing number of patients with chronic kidney disease in this country who require renal dialysis. Renal dialysis, hemodialysis, and peritoneal dialysis are considered an onslaught and are extremely expensive. We know we can prevent large numbers of patients from moving down the slope to needing dialysis. Part of the challenge is identifying those patients early.

One of the things we've done is we've partnered with the Kidney Foundation of Canada and the Ontario Renal Network to start to develop what we would call an app that goes on to the electronic health record and identifies those patients early. As we start to see if they have an increase in blood pressure, if they have certain ethnic backgrounds, if they're aboriginal or South Asian, or if their glomerular filtration rate or their kidney function starts to deteriorate, it sends a signal to the clinician that says this is a patient whom you might need to pay more attention to.

● (1550)

As a result of that, we can now start to see changes in how we manage. One of the challenges with a paper record, frankly, is if it's sitting in the back of the paper record, nobody is triggering to the clinician that you need to pay more attention to that patient and perhaps intervene early to stop the progression.

This product is being trialled. It's now ready to go. I think one of the important aspects of one of the messages I'd like to give is that this is an open-source solution. Although it's been developed on our electronic health record, it will be made and is going to be made available to any electronic health record in the country. It would be something that would be an add-on, and we give it away. It's not a matter that there's a cost for it.

Another example is our BORN initiative, the Better Outcomes Registry and Network for perinatal and pregnant women. One of the keys here is that when you're a patient and you're receiving prenatal care from your obstetrician, your family doctor, or your midwife, that data resides on the clinician's chart. It doesn't necessarily get shared. In partnership with Ontario, as well as what was formerly called the B.C. reproductive care program—it has a new term, I'm sorry; it's in my speaking notes—the idea is to identify women and get their information onto a registry such that no matter what hospital they show up at, no matter which specialist takes care of them, their information is immediately accessible to the clinicians. That's going to lead to improved care, and less duplication of investigations.

We've also partnered with the Better Outcomes Registry to start doing prompts, again for the clinicians. When I was seeing patients this past Monday, up came a prompt that said to me the patient is 34 weeks pregnant, she has not received a certain investigation, she is already at risk because of her maternal age, because of her maternal weight, and it suggested that perhaps I should have done or should be doing a particular glucose screening. That fundamentally right there starts to change the whole dynamics of patient care because we're triggering early the information for how we're going to care for those patients.

We've also developed a program called MyDrugRef, which in a nutshell is a social networking site to try to improve how we provide care to our patients to stop the drug-to-drug interactions and to start to incorporate best practices. As a family doctor working in isolation in my office, I don't necessarily have access to a number of specialists and a number of other individuals. This is a way of having instant access to a whole variety of information. We think that's going to change how we practise over the next few years.

We've also been involved with the development of a personal health record. We've called it MyOSCAR for now, but really this is a personal health record that should be broadly available. I want to differentiate between a portal and a personal health record. A portal is a window into the physician's electronic health record. Our vision is that we develop a personal health record that you, the patient, own. It has a number of features.

Initially, we have online booking for the patient. I booked my plane ticket to come here online. Why can't I book my doctor's appointment online? Why do I have to wait? We have now instituted that and it's up and running so that patients can actually book online easily.

There's secure messaging between the clinician and the patient. My patients can send me a message over the Internet, not e-mail but secure messaging, so that I can interact with them. That could be my nurse, or one of the nurses in the unit, a dietician, a social worker, whoever is the most appropriate person.

The other thing is document transfer. When I looked online today at my patient profiles, I received the cholesterol, the laboratory results, the sugar test, etc. I acknowledged that electronically. It gets filed into my electronic medical record, but it also was sent to my patient today so that they saw it online, in their own personal health record, along with a comment from me, “Great work. Keep it up, Joe. You'd better come in and see me. We need to talk about your exercise”, or whatever it is.

● (1555)

It's that starting to put the care of our patients in the patient's hands, which is where it probably belongs in the first place. Through Health Canada or the Federal Economic Development Agency for Southern Ontario, we've been part of a partnership with York University and NexJ and are starting to develop a series of apps so that patients can take care of their own health themselves. It generates that sort of care for themselves.

My next point is that telemedicine—

The Chair: You're almost out of time, so please wrap it up, because we have Qs and As as well.

Dr. David Price: Sure.

Telemedicine is certainly something that we need to be thinking about. As patients have more access to their personal health records, this is going to allow for communication back and forth.

That, fundamentally, is my presentation. Thank you very much.

The Chair: Thank you very much. It was very insightful and we very much appreciate what you have come to tell us today.

Now we will go to Paul Lepage, president of health and payment solutions.

Do you have a presentation?

Mr. Paul Lepage: Yes.

The Chair: Okay, go ahead please.

Mr. Paul Lepage: Thank you for this opportunity.

From TELUS's perspective, technology is going to be key to the transformation of health outcomes. We believe that to be successful we have to involve all of the players in the system—doctors, health practitioners, and patients.

As a company, we feel we have a corporate responsibility to step up and help health care professionals. A lot of our focus is on the tools and capabilities we can bring to market. We constantly ask ourselves whether to move the focus from illness to wellness.

From a Canadian perspective, health care is a service. It's a service-based industry and should be leveraging technology the same way as other major industries—banking, airlines, insurance—to get the benefits of IT to the patients. We focus on finding solutions that will help organize information, connecting the various health care professionals, moving information securely, and making information more meaningful.

In connecting professionals, one of the challenges we have in health care is that it's a very siloed industry. We need to connect all of the various providers along the continuum of care. As to moving information securely, this is where a large carrier has a role to play, because we move lots of information today over our broadband infrastructures and our wireless networks. Organizing information is also key. Applications have to be set up in such a way that health care providers can easily use the information provided to them. Finally, making information more meaningful has to do with taking the information we have and presenting it back to health care providers or patients so they can take action on it.

We have solutions that address the continuum of care, that go across that continuum. TELUS is active in most of these areas, whether it's providing electronic health records, clinical information systems in hospitals, or electronic medical records. For example, we have about 34,000 clinicians involved in our solutions. In our first line of care, we have about 3,500 physicians using our EMRs.

Then we move towards the other end of the gamut, which is home care and self-care. At the end of the presentation I want to show you a video where you'll see live Canadians actually using some of our solutions. One of the areas of focus is remote patient monitoring. It sits between the first line of care and self-care—

● (1600)

The Chair: Excuse me, Mr. Lepage. I just have to interrupt you for a moment. My apologies, but my understanding is the video cannot be shown because you only have it in English. You don't have it in French.

How does the committee feel about that? With your permission, can we show the English one? The French one is not available. I just found that out. What's your feeling? Is that okay?

Ms. Libby Davies (Vancouver East, NDP): It's in English only?

The Chair: Yes.

Ms. Libby Davies: No, we don't usually do that. It's a pretty strong rule.

The Chair: We have to have consensus of the committee to allow it to happen and we have one member who says this is not generally what we do. So I'm sorry, Mr. Lepage. Continue on.

Mr. Paul Lepage: One of the areas that we have focused a lot on is remote patient monitoring. In the information that we supplied to you is a study that was done by HEC, École des Hautes Études Commerciales, on the benefits of remote patient monitoring and the implementation of e-solutions.

What you would have seen in the video is a patient using a terminal at home. This patient is discharged from the hospital, is assigned a care plan, and is asked to follow this care plan. In this case, we did a study on patients who were suffering from chronic obstructive pulmonary disease. The study from the HEC shows that by providing the terminals and the care plans, we've actually decreased the number of admissions to emergency by 34% and the total cost of hospitalizations by 66%. The study is there. I think the study is available in both official languages. It's a good example of how you can get the patient more involved in his treatment and drive lower costs in the system.

In the video we also have two different patients using a personal health record.

In one case, we are doing a project with the Lawson Health Research Institute relating to mental health. We started with 200 patients who are suffering from a form of mental illness, schizophrenia in most cases, and we supplied them with a personal health record. That personal health record is configured in such a way that the provider as well as the patient, obviously, have access to the record. The patient enters his symptoms during the day and exchanges information with a physician. The outcome has been one where in many cases the testimonies from the doctors have been around the fact that they've moved treatment forward. In some cases, having a patient on the system, after two or three weeks, they've gathered more information on that patient's mood and issues than they have had in six months of treatment. That's another example of how the personal health record comes into play.

The other example that we have on the video is where we've partnered with University Health Network to build an application called “bant”. We've enabled a personal record which sits behind bant. In this case the trial was with young adolescents with type I diabetes. What we've seen is that by supplying them with a personal health record, we've increased the amount of readings these adolescents are taking on a daily basis, how many times they're checking the blood glucose levels, by about 100% and their A1C levels have been reduced over time. That study is also available.

One area that we're extremely focused on going forward is the notion of collaboration. When we look at the health care ecosystem, one of the key elements is how you connect the various players in this health ecosystem so that we're sharing information along the health ecosystem, and how we put in place increased collaboration among the various players along the health ecosystem.

We introduced either personal health records, and in many cases, patient portal solutions, where the patient can go in, for example with various pharmacy chains, and sign up on a portal and get electronic refills of their prescriptions, monitor their medications, and set reminders for taking their medications. These solutions started out with two small regional pharmacy chains in Quebec and we're up to hundreds of thousands of people who have signed up for it. We've performed over 1.3 million electronic refills over those solutions, with only two pharmacy chains.

● (1605)

I guess one of the key messages to the committee is that not only do we have to connect the various players and providers in the health ecosystem, but we also have to enable the patient to play a more active role. Whenever we've provided solutions whereby the patient can play a more active role, patients are willing to embark on doing this because they're doing this in other walks of life.

The Chair: Is that the end of your presentation, Mr. Lepage?

Mr. Paul Lepage: Yes.

The Chair: Thank you very much. That was extremely interesting.

There seems to be a thread in all the participants' presentations today. It's really very interesting.

We will continue our technological innovation study by beginning with Ms. Davies.

You have seven minutes.

Ms. Libby Davies: Thank you very much, Chairperson.

Thank you to the witnesses for being here today, and to Dr. Lear for being here via video conference, far from home.

I must say that we're learning a tremendous amount about the new advances that are being made. I find it fascinating, but I also find that increasingly there's a sense of frustration. The stuff that we hear about is so incredible and, across the country, various projects, initiatives, or innovations are under way. What I'm beginning to wonder more and more is, is there a sense of national purpose about what we're doing? We have the Canada Health Act, which lays out the five principles of medicare, including universality. I hope it will be one element that we bring to this study. How do we take what you are doing, which appears to be working very well on the ground, and scale it up to a national level? I think it's a sort of frustration. It's a challenge.

On a personal note, I had an experience here in Ottawa. It was something very simple. I had to go to the ER, the one on Carling Avenue, and the ER doctor said, “Here's my e-mail. If you've got any questions, e-mail me”. I was just blown away. It was the first time I'd ever had a health care provider say, “Here's my e-mail, and if you have any questions when you go home e-mail me”. And I did. I wrote to the doctor and he replied within 20 minutes, instead of my having to go back. It was so simple. I mean, e-mail; what's e-mail? We all use e-mail, but even within the care system I had never had that happen, and it really blew me away.

In hearing about what's happening in B.C., Dr. Lear, with the B.C. alliance, I guess the question I have for you and I think it's also for Dr. Price, is, how can we respond to this in a more institutional way? How can we take what you are doing, find a way to scale it up, and replicate it? It's not necessarily one-size-fits-all. We want local innovation, as that's where the creativity is. How can we make sure that all of this stuff is accessible across the country?

For example, in B.C., I'm curious to know if you did it through the Ministry of Health, or did you have to go to each health authority and convince them to get on board with this or the various projects you've described? To me, that's where the challenge is. How do we put this into practice in a much bigger way so that we all get the benefits?

I know that's a big question. Whether it's the private sector.... I'm primarily interested in the public sector, but if you would care to answer that, I'd be very interested.

● (1610)

The Chair: Dr. Lear.

Dr. Scott Lear: That's an excellent question. I have personally experienced a number of those challenges that you've raised.

My domain is in research, so most of the projects I'm working on have been funded through CIHR, and some of it through the Michael Smith Foundation, which is the B.C. health research foundation.

There is some encouragement that CIHR has done with the requirement of having decision-makers in place for the application. So we apply as a researcher and we also have to have decision-makers.

My work has kind of percolated up from the ground level upwards. Yes, I have had to do basically a dog-and-pony show to various people in the health authorities. They're the ones who are delivering the health care. A lot of it has been word of mouth and that kind of snowball effect. It may not be the kind of cutting-edge answer that we want to get for something like this, but when we start to have one health authority involved and we have connections in other ones, that's how it's branched outward.

It's the same thing when we're recruiting or engaging family physicians. Once we get a certain mass, then it starts to increase. That's what Dr. Price mentioned about the early adopters, the modest adopters, and so on.

We've spent a lot of grassroots time doing one-on-one talks with individual...[*Technical difficulty—Editor*]...e-mails and that's how it's worked. Then it started to gain some more traction from there.

Ms. Libby Davies: What I find fascinating is that it's almost touch and go as to whom you can talk to. There is no systemic way, and I think that's what we have to get at here. How can we, in a systemic way, help the system to respond? What can we do at a national level?

Maybe, Dr. Price, you'd like to respond to that. In terms of the work you're doing, what could we do, specifically, that would help you bring that to a much bigger community in terms of Canadians and health care?

Dr. David Price: I would agree with you absolutely that it is not a one-size-fits-all. I suspect all of our frustrations are that there perhaps is not the kind of standardization and regulatory requirement for us to speak to one another.

I think one of the huge roles that Canada Health Infoway has, that probably the federal government has at the national level, is to set standards that require interoperability, that require conversations or communication that happens between systems so that as one organization develops a really neat application that enhances care, it is able to speak to other ones. Whether it's proprietary, whether it's institutional, or whether it's organizational doesn't really matter as long as those standards are generalized.

We're terrible at picking winners, either as individuals or as government. It's really hard to say which are the three solutions or the 23 solutions that are going to succeed. What we can do is say that everything has to have certain safety requirements, privacy requirements, data standardization, and also standardization for how we communicate.

The Chair: Thank you so much.

Dr. Carrie.

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

I want to thank the witnesses. I find the sessions we're having here so exciting because, as you were saying, it seems we're right at the precipice of getting all these things implemented.

We've had witnesses in the past, Dr. Price, from Health Infoway. One of the things they did tell us is that they do have standards and they do have requirements for interoperability between the provinces. I think, though, there are a lot of really good products out there, especially what you're talking about with OSCAR and what you're doing on the ground. It makes common sense that we should be doing that across the entire country.

Some of the frustration we have is that I know the federal government invests in a lot of this. I think you've received money from CIHR and Infoway yourselves in the past, haven't you? Here we have people on the ground such as you and the people you work with, and you're doing really good work, but then suddenly there is an obstacle to getting the technology implemented. As I said, we've had witnesses in the past, and it seems that Ontario and Quebec are having a really hard time getting things implemented, whereas I think in P.E.I. and Alberta they do have some electronic health records implemented already province-wide.

What are the obstacles to getting this technology implemented?

Were you in discussions with the provincial governments when you were gearing up with this technology?

● (1615)

Dr. David Price: To answer the latter question, yes, we've been in conversation. I think one of the things that Ontario has started to do well is that they have set up conformist testing, saying all of our electronic health records must have certain things in place and if they are in place, we're certified and we're eligible. That has made, I think, a huge difference.

Canada Health Infoway has moved into ISO certification saying that you must have a quality system from start to finish. Whether it's from the development of the software to the implementation, it has to be in a standardized quality format. I think that sort of initiative really starts to break down the barriers.

Where the barriers are still frustrating is where a province or an organization says they're not going to speak with one particular technology because they want to set up a barrier. That's what has to be broken down so there's a standardization. This means a hospital will speak to one technology and a technology will speak to another one because there's comfort that their standard is there, the data is protected, that there is security, privacy, etc.

The Chair: Doctor, I think Mr. Lepage wanted to make a comment as well.

Mr. Paul Lepage: From my perspective, if we're asking what can be done, I see two areas, and I have some comments on the notion of standards.

From my perspective, we have to continue to focus on primary care reform in Canada. We're at 40% penetration, 39% depending on the numbers, of EMRs within clinicians using EMRs. Many countries are sitting at 90% or a percentage in the high eighties. So we have a huge gap just in terms of moving information into an electronic fashion and then making it accessible.

I think primary care reform.... The focus on putting EMRs with physicians is going to help us drive a lot of the other programs that we're trying to put in place around chronic disease management, medication management, etc.

The second comment I would make is that as Canadians we have spent the better part of 10 years focusing on standards, from 2000 to 2010. From my perspective, what we need to focus on is what we are trying to achieve in terms of health outcomes. Let's not fund on meeting a certain standard; let's fund on getting to certain meaningful uses. So let's fund outcomes. Let the market sort out, frankly, the notion of standards. We've spent so much time, a good part of 10 years, on a blueprint and on standards, and we haven't moved the bar.

One of the things we need to do is.... I would say the latest funding that was done with Infoway was funding that was more around projects and innovation and bringing solutions to market. For example, our Lawson project with the Lawson Health Research Institute was partially funded by Canada Health Infoway, but it was not funded on meeting a certain standard; it was funded on meeting a certain outcome.

From our perspective, we need to shift our funding from standards-based to funding that's outcomes-based. The U.S. is doing a pretty good job on that right now.

● (1620)

Mr. Colin Carrie: Thank you very much for that comment. It makes a lot of sense to me.

I wanted to talk to Dr. Lear as well.

You have probably heard of a doctor down there in California, or you may not have. I think his name is Eric Topol. He's doing a lot of things with cardiac. He's doing a lot with self-care. He's doing a lot with apps and cellphones.

We've had some witnesses here in front of us who are talking about the wonderful things that could be done with these apps, and the work that you're doing for remote communities, things along those lines.

We see these apps that could be used for diabetes, where people will put a sensor on their skin and they can read their blood sugar levels. We see where you can do an EKG that used to be a 12 lead when I was in school, and now it's just two fingers and you've got an EKG. You can do these things cheaply with a $199 app in remote communities, so the technology is there.

I wanted to ask you the same question. I know you've received federal funding, CIHR grants, things like that, but what do you find? Now that you've got the model, are you having trouble with the B.C. government? Are they prepared to start supporting you and financing these in your initiatives?

It seems that as the federal government we can do the role on the research side of things, but to actually get this implemented we have to have the provinces to buy in and it seems that there's a real stopgap there. What do you see being the obstacles?

Dr. Scott Lear: I agree that there is a stopgap and sometimes a disconnect between the federal research funding and then the implementation. At the end of the day, we're all here. All the researchers want to make a difference and want to see their projects actually on the go and working.

I mentioned earlier about some of the ways CIHR has tried to do it by involving the health authority decision-makers on the application. That's taken one step. Still when I approach these people, their first question is as to how much work it is going to take, because the health authority decision-makers already have full-time jobs. When I go up and knock on their door, most of the ones who are participating believe in it and are champions, but it's not necessarily part of the vision of the health authority. It's not part of the vision or the job description of that individual to participate in research. There are some things that could be done there to enhance it or greater incentives for the health authorities to get on board.

The Chair: I'm sorry, Dr. Lear, we're way over time. So I have to go to the next question.

You'll have to watch when I try to give you a signal, and I know it's hard to do via video.

We'll go to the next one.

Mr. MacAulay.

Hon. Lawrence MacAulay (Cardigan, Lib.): Thank you very much. Being new on this committee, it's certainly interesting for me.

Dr. Lear, you were saying that the chronic diseases are much more prevalent in rural areas. Is that because of Internet access? Also, you were telling us that you can take a heart rate, blood sample, and pretty well read the condition of a patient from a rural area. Is that correct?

Dr. Scott Lear: I'll just make a couple of clarifications. With the heart rate, this is a regular off-the-shelf heart rate monitor that people strap on. It can record their heart rate when they exercise. When they come home they can link the monitor to their computer and then it sends the information to our website so that the exercise professional nurse can view the heart rate and look for things. These are things such as whether they are warming up properly, because this can lead to chest pain in these patients, or whether they are within their target heart rate range.

Things like cholesterol measures can actually be done. Those can be done at the local labs in the communities where the people live and then the results can be transferred down onto our website as well.

In terms of the increased risk, the Internet access is low, but what we tend to find is that there's a greater prevalence of smoking in smaller communities and rural areas. There's also a greater prevalence of obesity. These are two big risk factors for chronic diseases: heart disease, diabetes, lung diseases, and cancer.

Hon. Lawrence MacAulay: Dr. Price, I think you wanted to take a little more time on telemedicine, and I'd be interested in hearing that.

Mr. Lepage, on your video, is it possible for us to get that? I would like to see that video. I'll leave you my card. I'd like to see it.

Go ahead.

Dr. David Price: On the telemedicine, Canada is a huge country geographically and when you're working up in a small rural community one of the things that is very frustrating often or very nerve-racking for the family doctor is that you don't have instant access or soon access to a specialist. Telemedicine has huge potential. I think you've seen across the country a large expansion of that in the last few years. As we start to see, though, as the technology improves is that it's just a video link.

One of the frustrations that the specialists seem to have is that they don't have access to all of the patient records. They end up repeating tests or making decisions because they don't have all of the patient records. So whether you use a portal into the electronic health record, whether you use a personal health record, it doesn't matter. The key here is how you have access to the patient data to inform the clinician to make appropriate decisions.

● (1625)

Hon. Lawrence MacAulay: Thank you very much.

The electronic health records and the medical health records, just for the public, what is the security on that and what is the difference between the two?

Dr. David Price: When I was talking about standards, I would agree that it's about outcomes and innovations, but you need to ensure that whatever it's doing, it is secure, it's something that does meet privacy regulations, that the data is organized in a standard way. One of the challenges we have right now is that there is no data that is common. So whether the cholesterol is entered in a certain way, it's very difficult to compare them. That's one of the key things we have to have. That's where I think the federal government can play a huge role in helping us to understand how we enter our data so that it is common and as researchers we can compare data across jurisdictions.

Hon. Lawrence MacAulay: And shared, but confidential, too, on individuals.

Dr. David Price: Absolutely. So you have to ensure that the integrity of the privacy is maintained so that patient privacy is always maintained.

Hon. Lawrence MacAulay: Thank you very much.

The Chair: Thank you, Mr. MacAulay.

We'll now go to Mr. Wilks.

Mr. David Wilks (Kootenay—Columbia, CPC): Thank you very much, gentlemen, for coming today. My questions will be directed to all three of you. Basically, I have one.

Certainly, Dr. Lear, I wanted to extend my understanding. I come from British Columbia in the southeast corner near Cranbrook. We deal with IHA there, the Interior Health Authority, and to me it would appear, and this is just a statement, Chair, that the health authorities are there as a buffer for the province, and it becomes difficult at times to try to administer something as it moves forward. That's just a statement, Chair.

I live in a small community of 3,000 and we work under the primary health care model. Our hospital was closed some years ago and it worked quite well. But part of the problem, and I want to understand what we can do federally, from you three gentlemen, is how do we convince the general public that either e-health or telehealth is something they can believe in?

The other thing is, what I hear from a lot of people is, “Why do I have to be the doctor? You're the doctor, so why am I doing all this stuff for you?” How do we get them to the point where they're confident with the system, that they understand that this is the next generation and that this is where we have to go, especially in smaller, rural communities?

I'll start with you, Dr. Lear.

Dr. Scott Lear: Yes. Thank you, Mr. Wilks.

What we're looking at here is basically trying to change behaviours. What you're asking is no different from how we get people, regardless of where they are, to be physically active. How we do that is to make these solutions the easy solutions, so there's easy access. However that patient is interacting with the system, whether it's through the Internet, telemedicine, through their phone, it's easy. Also, we must build their confidence in it. There are some barriers around health literacy, or e-health literacy, as well, with patients, and comfort levels. Now what we'll see as time goes on is that more and more older people will be using these devices more so, mainly because it's a cohort age thing. As we all age, we'll be still using these systems. So there are these challenges. I don't have, off the top of my head, the single answer that we can do here, but making sure that people have access to that information would be the first thing, and then engaging it and ensuring that the providers....

The other thing that you talked about is whether patients should be their own doctors. We talk a lot about the self-management, proactive patient in primary care. But a lot of patients don't want to be proactive. There are a lot of patients, who you've described, who want to go in and be told what to do and then go and do it.

We have some barriers to deal with there, but I'll stop there to let the other people respond as well.

● (1630)

Mr. David Wilks: Dr. Price.

Dr. David Price: I would absolutely agree with Dr. Lear that around the self-management issue, part of our challenge in training now is training our physicians to understand that the patient is probably going to come in with.... There are two types of patients. They come in with way more information about the specific disease than I have, or they come in saying, “Just tell me what to do, Doc”. The challenge for us as physicians in training our new generation or our next generation of physicians is to help interpret for the patients so that the patient can make the best decision that is relevant to themselves. I think that is part of the comfort, as they get more and more information from the Internet. It's putting it into context for themselves. That's probably key across the board.

The second thing that you asked about was in terms of Internet access and how we make it comfortable for the patients. How do we make it so that the patient wants to do it? One of the things we did at the maternity centre in Hamilton was give all of our pregnant patients access to their own health records and then give them targeted information. So we attached them to websites that we had vetted, we had already cleared. They came from reputable places like Johns Hopkins, Stanford, McMaster, McGill, etc. We told them what was relevant for their particular situation. That was huge. We were able to demonstrate that the amount of time they went to those sites was dramatically different from those patients who had no access to their own records. So that starts to trigger the interest in the patient.

Mr. Paul Lepage: We focus a lot on solutions, on the benefits to the system of using personal health records for remote patient monitoring in terms of reduced readmissions, reduced hospitalizations.

The reality is that every time there is a hospitalization or an emergency visit, there's a Canadian who is wasting time waiting to be treated in a hospital. As consumers, we're aware of this. It's a service, and if you could avoid going to a hospital, I think you would prefer this as a service.

The other thing we found is that as we supply patients with terminals or with iPhones on which there's a specific program, they take comfort in the fact that they have the ability to interact with a clinician and be supported by a care team rather than have to go to the hospital or to a primary care clinic. There's a level of comfort that develops from a patient perspective.

You're not going to be able to put all consumers, all citizens, all patients into one category. But more and more, as consumers, we're taking charge of what we're doing, in any walk of life. There are more and more patients, more and more consumers, who want to take charge of their health in the same way they take charge of other parts of their lives.

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

We're now going into our second round, and it's five minutes. It's two minutes less, so you have to be really sharp in watching your time.

We'll begin with Dr. Sellah.

[*Translation*]

Mrs. Djaouida Sellah (Saint-Bruno—Saint-Hubert, NDP): Thank you, Madam Chair.

My thanks to all the guests who are here today and to Dr. Lear who is with us by videoconference.

As a physician by training, I also believe that all these electronic tools will lighten the heavy burden carried by practitioners. When I was at Laval University, I had to find the charts of elderly patients. Some of them often had three or four charts. I had to go through them in a few minutes and present the case to our manager. It was a challenge for me. So I feel that this will really reduce the workload.

However, I am concerned about the security and protection of personal health information. I just noticed that we have electronic health records and electronic medical records. I assume that the electronic health records do not include the medical history. Correct me if I am wrong, but that is not what I have read. The electronic medical records could be transferred between various general practitioners or specialists in various regions, even across the country. I know from experience that sometimes you need the patient's consent to request the transfer of the record from another doctor. How is the confidentiality of information protected if patients' records are transmitted electronically?

I would also like to ask Dr. Price a question. In your discussions leading to the development of OSCAR, what were the main concerns of health care providers?

● (1635)

[*English*]

The Chair: Thank you, Dr. Sellah.

Who would like to begin to answer Dr. Sellah's questions?

Monsieur Lepage.

[*Translation*]

Mr. Paul Lepage: To begin with, I think it is important to fully understand the three items.

There is the computerized clinical file, which is used in hospitals by doctors who work there. In clinics, they use the EMR or the electronic medical record.

We have talked at length about the patient's personal record and about patients, regular people, keeping their records. Patients then have some control. They can decide who has access to their personal file. The exchange of information often takes place in a service corridor. Some service corridors develop naturally. In the Montreal area, Montreal, Laval and the south shore represent a service corridor. People will go to primary clinics and then to hospitals. In the Quebec City area, the same types of service corridors exist.

In all those cases, the exchange of information takes place with the patient's consent only. If patients do not give their consent to have their information sent electronically, it will not be done. I am in a good position to talk about this.

Furthermore, I think it all depends on how you ask the question. If patients in the emergency room are asked whether they want the doctor to have access to their information, the answer is always positive. In other situations, the answer is likely to be different.

[*English*]

The Chair: Dr. Price, did you want to make a comment on that as well?

Dr. David Price: The way I look at it is that if we refer a patient from one person to another and the patient says, “Yes, I will go to see that specialist”, that is implied consent. For that specialist to do the job properly, they need me to send the information to the patient.

The second thing is that, when the patient wants to share with somebody something in their personal health record, the patient owns their personal health record and gives permission to the clinician to view the record.

Does that answer the question?

The Chair: I think we're just about out of time.

Pardon me?

[*Translation*]

Mrs. Djaouida Sellah: Is my time up?

[*English*]

The Chair: We're right out of time. I'm sorry.

Now we'll go to our next person.

Mr. Brown.

Mr. Patrick Brown (Barrie, CPC): Thank you.

We're looking at technological innovation in health care. One question I have asked of each panel we've had so far, is, how do you feel we are doing compared with other countries? What lessons might you have observed when comparing us with some of our competitors in the delivery of health care? Are there lessons that Canada can learn from other examples that you have seen?

● (1640)

Dr. David Price: Perhaps I'll just reply that the countries in the United Kingdom spring to mind, where they've tried to have a one-size-fits-all approach. It has failed dramatically, and that has been a real challenge. For Australia, it's the same thing. It has essentially allowed the marketplace to deliver the innovations that the consumers want and need.

Set standards for privacy security, but look for outcomes.

The Chair: Dr. Lear, did you want to make a comment?

Dr. Scott Lear: Yes, I have just a brief one.

My focus is on supporting of self-management. There are definitely many different projects going on in the U.S., in Australia, and in the U.K. as well. There's also a lot going on within Canada. Often small clinics will create their own solutions which work very well for them, but we don't hear about these things, because they tend not to pass beyond the walls of that clinic. In different interactions with different health professionals, we start to find these things.

For example, one of the groups I work closely with is in Chilliwack. They all use the OSCAR platform, and some of them have started building on some applications.

I think there's still a lot of good that we can learn within our own country, just trying to look for those diamonds in the rough.

Mr. Patrick Brown: I have another question which I asked a different panel. Because health care is administered by the provinces, there are restrictions on areas in which the federal government can have an influence on health care. But one area we do influence when it comes to innovation in health care is the area of medical devices and the regulation of products and the product approval process. Obviously, that's an important part of the process for health care innovation.

What is your opinion on what the federal government could do to make that process more efficient or effective in supporting innovation?

The Chair: Who would like to speak to that?

Dr. Price.

Dr. David Price: Fundamentally, I would agree that you can't have the wild west in deploying electronic technologies. You have to be comfortable that when my mother's chart is there and a drug is being prescribed, the particular system her doctor is using will recognize drug-to-drug interactions. That is the key aspect. I think it's there that the federal government has a real role to play in ensuring that all systems meet a basic level of security, performance, etc.

Mr. Patrick Brown: Do you have any additional comments, Dr. Lear or Mr. Lepage?

Mr. Paul Lepage: What I would say is that, as you see more and more of these devices, these applications, be it with personal health records or remote patient monitoring, are more and more connected to devices, you're going to be connecting these devices either through a USB port or Bluetooth. The basis here is that whatever device it is would have to follow certain standards, because we're going to be relying more and more, from a medical perspective, on the information coming from those particular devices so that we can diagnose. So more and more information will be coming from devices, fed in either through personal health records or through remote patient monitoring tools, and will be fed back to clinicians.

I would say that from a standards perspective, this is paramount.

Mr. Patrick Brown: Do you have any concerns about research overlap? Is there adequate collaboration on innovation with international institutions? For instance, in treating juvenile diabetes, we're investing in an artificial pancreas, and they have a parallel study in Australia. That's one example. I'm sure there is collaboration, but do you believe that we do enough of it?

Mr. Paul Lepage: I would refer that to Michael, who is our chief medical officer. He's done a lot of research at various universities.

Dr. Michael Guerriere (Chief Medical Officer and Vice President, Health Solutions, TELUS): I think we've done well in our collaboration with various international research entities. You don't want so much collaboration, though, that you end up with group think, because often it's the competition of ideas that leads to innovation and new insight. Just because two countries are doing the same study doesn't mean they're using the same technology or the same approach to try to get at the problem. Sometimes these competitive situations are quite healthy for spurring on innovation.

● (1645)

The Chair: Thank you so much.

Dr. Morin.

[*Translation*]

Mr. Dany Morin (Chicoutimi—Le Fjord, NDP): Thank you very much, Madam Chair.

My first question is for Dr. Price.

My colleague Colin Carrie asked a very good question about the standardization of electronic medical records. At first, your answer was not what I expected, but as you answered more questions, you provided more details. You said that you would like to see the federal government do something about how data is entered into that software.

In terms of applications such as OSCAR and MyHealth, which are developed in Canada, I think it is healthy for the companies to compete in the marketplace. All those applications can export data, but the problem is that they are not compatible with each other.

A number of years ago in my riding, when we started to develop electronic records, I was working in a clinic that wanted to implement a system like that. Since buying a program requires private clinics to make a large financial investment, the clinics want value for their money. They want to be able to read their patients' data and that of patients who were referred to them. The problem is that the data are not compatible, although they can be exported.

You mentioned

[*English*]

that the federal government should look at how we enter our data.

[*Translation*]

Since you know more about electronic records than I do, could you tell me how you think the federal government could contribute to make the data compatible from one software to another?

[*English*]

Dr. David Price: I think if you get too prescriptive it doesn't work.

The concept has to be that my data must speak to your clinic's data, and therefore it's up to the companies, to the innovators, to make sure that innovation happens. When I talk to my technical people, they tell me that it's possible, but because of firewalls and different ways of doing the data, it doesn't work. There are at least a couple of innovations I'm aware of in private companies that are taking multiple sources of data, synthesizing it, and transporting it out. This is possible. They are proprietary companies operating in a marketplace. There are at least two or three companies involved in doing this.

[*Translation*]

Mr. Dany Morin: This is the first time I have heard about a system like that. It is like an RSS feed bringing the data of a number of people together. I think this is something for the committee to think about.

[*English*]

Dr. Lear, you talked at great length about the good work being done through telemedicine to reach as many people as possible, even in remote areas. I come from a rural part of the country, and although the best solution would be to have more doctors to treat more patients, this is not possible to achieve in a short time. I believe that telemedicine can be a way for medical doctors to be more efficient.

Can you tell us more about how medical doctors could be more efficient through the use of telemedicine? Is it by answering e-mails, rather than setting up appointments, as my colleague Libby Davies said, or is it by making video appointments so we save time between appointments? Can you expand on that?

Dr. Scott Lear: Yes, certainly.

One of the things that can help is for patients to have the ability to report their symptoms, patient-reported outcomes, and for that information to be transferred, and maybe in the future to populate that physician's EMR so that right when a patient comes in, they know. They see on their screen why the patient is coming in. That would be one thing.

Another thing is that a lot of time is spent on managing chronic diseases and chronic care. With our system, we have the nurse who actually helps to provide the support for both the primary care physician and the patient around those lifestyle, behaviour, and self-management strategies that physicians would otherwise be expected to do, but may not have the time to talk about, such as how exercising is going to improve your blood sugar. These conversations should happen with a patient, but they don't need to happen by the physician.

● (1650)

The Chair: Thank you so much, Dr. Lear.

We'll now go on to Ms. Block.

Mrs. Kelly Block (Saskatoon—Rosetown—Biggar, CPC): Thank you very much, Madam Chair.

I, too, join my colleagues in welcoming you here and thanking you for being here to share with us your experience and the work you do.

I can't believe it, but it was 15 years ago that I was a member of the board for the Saskatchewan Health Information Network. It seems to me that we were talking about so many of the things that we continue to talk about today. I know at the time we recognized it was going to be a huge financial investment, that even if we had all the money we needed, we were not going to be able to do it quickly. One of the challenges at that time was to create that connectivity, not only within hospitals and within health regions, but within the province. So you had to start by taking very small steps.

Dr. Price, you've mentioned some of the issues, such as no common data, the limited ability to share across jurisdictions, and the need for protecting privacy. Mr. Lepage, you talked about the fact that we spent a decade developing standards. I think we needed to spend time developing standards for the very reasons that Dr. Price has pointed out. But I'm wondering if you could share with us if there are any disciplines within the health sector that are doing it well. I'm thinking, in particular, about pharmacy. There have been some huge gains in pharmacy in this area, and perhaps there are others you could share with us.

Mr. Paul Lepage: I'd start by saying you would not expect today to see a pharmacist who's part of a chain or a banner, or an independent pharmacist, who wouldn't be using a pharmacy management system. It would be impossible to conduct your business without the technology today.

If you look at the penetration of EMR, one of the issues is if the countries that have been successful in the implementation have combined the technology with changes to the compensation, with incentives for physicians to adopt the technology. So we've started, and some provinces are behind others on that. I know Quebec has just launched its program to incent physicians to adopt EMRs, and the EMR penetration is one of the lowest in the country.

I think it's a combination of factors. What are we incenting physicians to do? There's an element there. If we're focusing more on health outcomes and not just on a transaction, and we're looking at how we're going to fund health outcomes over time, then if you're going to track patients.... It's not a question of physicians not wanting to do this. My point is that if they're being compensated to fund and to follow a patient from an outcome perspective, over time they will need tools to track that. I think that will increase the adoption of technology.

If you look at the countries that have been successful, it's been a combination of more than one factor that has driven a higher use of technology.

Dr. David Price: You can look at dentistry, for example. We all receive reminders from our dentists. If we can start to do that electronically, that's going to make a big difference. I'm not of the opinion that we should be incentivizing physicians to do things. It should be a part of their day-to-day world. I'm not sure we need to pay them extra money for it, but it needs to be part of the system. It needs to be enabled so it's not a frustration and a coster, a net cost for them.

● (1655)

Mrs. Kelly Block: Dr. Lear, do you have anything to add?

Dr. Scott Lear: I agree with Dr. Price about having it a part of current processes in schedules for physicians. I don't have anything else to add to that.

The Chair: Thank you very much.

We'll now go to Dr. Sellah.

[*Translation*]

Mrs. Djaouida Sellah: Thank you, Madam Chair.

Let me go back to the question that Dr. Price did not have time to answer. It had to do with the concerns of health care providers in relation to the OSCAR system that you implemented.

As a general practitioner, I have some questions about this whole technology. I am not saying that it is bad, on the contrary. It is very useful. It enables us to save a lot of time and to have access to our patients' records. But I am wondering what place the industry is giving to the doctor-patient relationship.

I am probably old-fashioned, but I see that some patients who go to the doctor's office do not have an organic disease. Instead, they need someone to listen to them. Sometimes, it takes a number of appointments to realize that the patient has a psychological problem rather than an organic one. If doctors relied on what patients say, they would be tempted to order a series of tests.

How can we work with this situation? My colleague Dr. Carrie talked about a physician who was using a BlackBerry to measure patients' heart rates, to monitor their hearts, and so on. In this industry, I still think that the role of physicians, particularly general practitioners, is based on trust and on the relationships they have with their patients.

How do you see this in the future?

Dr. David Price: I completely agree. It really has to do with the doctor-patient relationship.

[*English*]

I'm sorry to move into English.

The important concept has to be that we need to make sure that the doctors are trained to have that relationship. It may be so they get to the point where it's a cardiac problem and Dr. Lear's technology is important, but you have to go through it. It's not just about training our young physicians around technology. It is, to coin Sir William Osler, to put the patient at the centre of the therapeutic discussion. You're absolutely right in that sense.

[*Translation*]

Mrs. Djaouida Sellah: Thank you.

I will share my time with my colleague.

Mr. Dany Morin: Thank you very much.

My question is for Dr. Price.

[*English*]

Earlier I talked about my beef that I have with the data itself.

In your presentation you talked about searchable data which would help with public health, for example. Do you think that the current data being produced by that software is searchable? Otherwise, we're still going to have problems if we don't make sure that the data is searchable in a usable way.

Dr. David Price: In certain instances it is not searchable; in others, it is.

I will speak just to OSCAR, which I know well. In our particular EMR it has already been adopted by at least three or four public health agencies in the cities in Ontario. All of that is very searchable. We can actually amalgamate the information from multiple jurisdictions and run large-scale data. We've just had a paper accepted on influenza surveillance and we're actually able to pull it, not just from one or two practices, but from different cities and compare data.

The Chair: Thank you.

We'll now go to Mr. Lobb.

Mr. Ben Lobb (Huron—Bruce, CPC): Thank you very much, Madam Chair.

Mr. Price, would you consider the industry for electronic medical records fragmented since there's really no one clear leader in the industry, or is there a clear leader in the industry that has 25% or 30% of the market?

● (1700)

Dr. David Price: It's fair to say there are a number of leaders.

I'm going to come back to the car analogy in that it will work out that there are going to be major leaders over the course of time. But there's always going to be the need for boutique solutions. Perhaps the ideal is that the boutique solutions will overlay or sit on top of basic electronic medical records.

Mr. Paul Lepage: I think the industry is like any industry when you start with a certain level of maturity and you're going to see a consolidation of the industry over time.

It's no secret that, from a TELUS Health perspective, we're actively looking at acquisitions in the space. We've already done a first acquisition in B.C., Alberta, and Quebec. The purpose here is to consolidate a very fragmented industry, but also we're focused on players that had solutions that were SAS-based, solutions where you could take all that data and have access to that data so you are looking at data from 2,000 physicians at once and you can denominalize that data and use it. That's what we focus on.

Mr. Ben Lobb: Just so I'm clear, in my understanding of the Infoway contracts—and I'm from Ontario—the basic architecture must be the same regardless of what software company designs it so in the eventuality you're talking about, they will speak to one another. Is that correct or not? I think we had some officials from Ontario tell us this.

Mr. Paul Lepage: From our perspective, our goal is to get to a national platform as we acquire and consolidate various players.

Mr. Ben Lobb: Why would the federal government fund projects that wouldn't consistently have the same basic architecture? I just don't understand why we would do that. Is there any logic behind that?

Mr. Paul Lepage: The reality is you're dealing with 13 different jurisdictions. You're dealing with decisions that are made in each province. You're dealing with the reality that some solutions are SAS-based, so there's central software with a terminal in front of the physician. In other cases they're installed directly in the physician's office, so it's a separate database. That is the reality of the landscape we have today.

There is no—

Mr. Ben Lobb: We're going to spend $10 billion. We've probably already spent half of it. We're going to spend another $5 billion. What is it going to cost us then to get everything put back together so systems will talk to each other from one province to the other, coast to coast? Is it going to cost another $5 billion to get everything fully integrated from coast to coast?

Dr. David Price: My really short answer is when you're funding a solution you require that it does roll up, that it speaks broadly, and that it can export its data. That is the fundamental challenge for everybody, and if we can accomplish that, it makes a huge difference.

Mr. Ben Lobb: Okay. The one thing—

Dr. Michael Guerriere: Can I add another point?

One of the things about this market is that it's quite dynamic. As the standards are increasing the demand on the different vendors, some vendors are having trouble keeping up with those standards because they're small. So what you're seeing is a consolidation in the market over time to probably four or five vendors who will be big players in the market and they will be able to meet the standards for intercommunication.

Mr. Ben Lobb: I know my time is pretty well up, but SAP is a huge player. Oracle is a huge player. I'm sure you guys feel you are a big player in Canada. Why are we even messing with these little guys when we should be dealing with the big ones so it's already there? OSCAR sounds as if it's a fairly big one too in the market. Why aren't we just dealing with these? It seems to me we are almost wasting our money with these little guys. Am I wrong?

● (1705)

Dr. Michael Guerriere: I'd be careful because this is a very innovative market. That kind of approach would have said that some of the new starts...just take other areas of technology—

The Chair: I'm sorry, our time is way over right now, so I'm going to have to cut this off.

We'll go to Mr. Lizon. You can continue if you choose, Mr. Lizon.

Mr. Wladyslaw Lizon (Mississauga East—Cooksville, CPC): Maybe I have different questions.

Thank you, Madam Chair, and thanks to all the witnesses.

I had another question but this is quite interesting. Therefore, maybe you can continue on this topic.

What comes to mind is when they were building the railway system throughout Canada they didn't use different gauges in different provinces. It happened in Europe in different countries and when you came to the border you had to switch the wheels. I think this is what my colleague is talking about. It would make total sense to build a system whose parts talk to each other, despite the fact we have 13 separate systems.

Dr. Michael Guerriere: I think we have the gauge right, but despite the fact that the gauge might be the same, you still have competing companies, different car manufacturers. You still have innovation occurring in the different areas of the market. I think it's important that we get the right balance. We have standards for communication, or as people call it, interoperability. But don't stifle the innovation that's necessary to keep propelling the market forward. I think we're getting the right balance as we put systems into doctors' offices across the country.

Mr. Wladyslaw Lizon: I will ask my original question on the topic that my colleague Mr. Wilks raised about how to convince the general public to be proactive in the use of innovation. I would like you to comment on the opposite side of the problem. Are all the doctors in for all the innovations? I would really like to sit at home instead of going in. I'm not in a rural area; I'm in the GTA, but I don't like driving downtown. Instead of driving in downtown Toronto for an appointment, I would prefer to sit in front of my computer and maybe check something with my telephone, if those applications were available.

How are doctors approaching it? Is there an issue of liability? How does all of this work together?

Dr. David Price: Doctors tend to be conservative. We're generally not early adopters. For instance, it gets us into trouble if we try drugs too early. It has to be tried and true. As we move into the next generation, there is increasing comfort with using advanced technologies.

Dr. Scott Lear: I agree. In our interactions with primary care physicians, with respect to our projects, we're getting 20% to 25% saying yes. These would be the most progressive physicians, the ones with EMRs. Some of them might have nurses in their clinics. We're not getting the engagements of those at the other end of the distribution, the late adopters, or what we call laggards. The other thing is that patients want to receive their care close to home, and they want to have access to health care professionals. There needs to be a balance. A physician who gives her home number to a patient is probably going to be inundated with calls at home. But you have to manage it so patients are satisfied with their access to that physician. If we can improve that balance a bit, I think the patients will start to adopt some of these programs.

Mr. Wladyslaw Lizon: The question was asked about familiarity. Do you have a link for us? I know Mr. MacAulay asked already, but I didn't hear the answer.

● (1710)

Mr. Paul Lepage: Yes, we have it. I have it on my key and I can make it available on the link. Some of the videos are also available on our website.

Mr. Wladyslaw Lizon: Okay.

Mr. Paul Lepage: I think all of us today are doing work in the office, at home, and on the move. As patients, we expect to be able to do the same thing, to be able to meet with a doctor, to get more information at home, to get information or enter it on the move. My sense is that one of the things that—

The Chair: I'm sorry, we're running out of time. We'll have to go on to the next one. Thank you Mr. Lepage.

We'll now go on to Mr. MacAulay.

Hon. Lawrence MacAulay: Thank you very much.

This is getting interesting, to say the least. With innovation and new technology, just where are we in the world, in the whole scope of things? Are we running behind? How are we doing with this new technology? Either you're in the game or you're out of it. Where are we as a country, would you say, Mr. Lepage?

Mr. Paul Lepage: We're very close to being the last country in terms of adoption of technology in health care.

Hon. Lawrence MacAulay: That's not good.

I'd also like you to explain a bit about how smart phones and web applications might help people with mental health problems. There are other diseases or problems that also could use this. I'd like you to explain a bit on that.

Mr. Paul Lepage: I can give you a personal case.

Both of my kids are type 1 diabetics so they are insulin-dependent. They use the bant application, which allows you to take your readings and monitor your readings over time. My kids are a little older now, but when they were adolescents, often they would take their readings and fill out the booklet the night before meeting the doctor; whereas here with this application, you time-stamp it. You know exactly what the reading is, and you have that information. That gives the doctor more information when it comes time to either adjust the insulin doses or make changes to their diet. It allows you to get more information, and it makes it easier for the patient to enter that information at any point during the day.

So it's true for type 1 diabetics, and it's true for mental illness. In this application we're asking the patients at any point in the day to enter how they feel, to enter information, and that information is fed back to the provider. If they are not feeling well, or their mood is poor, it triggers an alert, and that information is sent to the provider, and it triggers a reaction.

So you're creating this ability to support that patient, not quite 24-7, but much more than what my kids would have had seeing their doctor, let's say once a quarter, as diabetics. The use of technology has increased the possibility of that exchange.

Hon. Lawrence MacAulay: Basically what you're telling the committee is that possibly information is better than the miracle of a doctor if having that information works better. I can understand that. They are only human beings too, of course.

Mr. Paul Lepage: I have two brothers who are doctors, and they are very human, trust me. The reality is I think you're providing the physician more information if they have access to that information that's been captured over a longer period of time than they would have by taking one blood test one morning.

Hon. Lawrence MacAulay: Are there enough dollars? Is there enough government investment? You tell us we're basically behind the eight ball in this country. What needs to be done? Should there be more government involvement, more government dollars, more research dollars? Where should it come from?

Mr. Paul Lepage: My sense is—

Hon. Lawrence MacAulay: Or should the companies do it?

Mr. Paul Lepage: The companies are going to do it. The companies are going to continue to invest in health care, because it's a very large market.

● (1715)

Hon. Lawrence MacAulay: But you say we're behind the eight ball. Why?

Mr. Paul Lepage: I think one of the reasons we're behind the eight ball is that we need to focus our dollars in the right place. I think part of the focus has to be not only on outcomes, but—

The Chair: Just be mindful that Dr. Lear does want to answer the question as well, so could we go on to Dr. Lear, because there is only about 30 seconds left.

Mr. Paul Lepage: I would just say the funding has to go towards outcomes.

The Chair: Thank you.

Dr. Lear, go ahead, please.

Dr. Scott Lear: Thank you.

Just briefly, one of the things, going back to what I mentioned in the opening presentation, was about shifting some of the CIHR dollars to more applied research that can look at health services that can look at e-health and technology.

I think we need a mix of both private and public inputs to get this done.

The Chair: Thank you so much.

We're going to go back to the seven-minute roster, because the members opposite would like to have more time to answer. We still have 15 minutes to question.

We'll begin with Dr. Morin, for seven minutes, please.

[*Translation*]

Mr. Dany Morin: Mr. Chair, thank you very much for allowing us to ask the witnesses more questions. We have some excellent witnesses with us today.

A number of committee members who are here today are very concerned about the staggering amounts of money that the federal government has invested in electronic records. I personally believe that they are important, but compared to the money being invested, I don't think we have had an adequate or satisfactory product yet. In his questions, Mr. Lobb also identified this issue as a priority. In addition, I am happy to know that this is also important for a Liberal MP.

Mr. Lepage, please be brief. You said that the funding should be outcome-based. I need to ask you to further explain what you meant by that.

Mr. Paul Lepage: What I was trying to say was that it is important to consider the models that have been recently implemented in the United States. We are looking for some indicators. We are focusing on outcome rather than on dictating how it is obtained. In addition, standards are obviously in place. Dr. Price talked about them. It is important to follow basic standards, but, if we want the system to evolve, we need some innovation. We must let the market find the right solutions to meet standards. The idea is to provide rewards when those standards are met, not to dictate exactly what we want to be done. Instead of dictating what needs to be done on major work sites, it is better to focus on an outcome and let people decide what the best way is to achieve it.

[*English*]

Mr. Dany Morin: I'm going to give more time to Dr. Lear also to explain his point of view. You only had a short answer.

Dr. Scott Lear: Oh, I'm sorry. I didn't have anything to add to that.

Mr. Dany Morin: I'm giving you more time to answer the question you were asked earlier.

Dr. Scott Lear: Oh, sorry.

As I pointed out, the CIHR funds can go through a balance. Right now there are the four health pillars within CIHR: biomedical, population health, behavioural social and clinical health services. I think there could be more shifting of funds to more of these applied sciences where we do see things funded around primary care transformation and a development of health services models, and something that a development of technology can also feed into.

In my experience, that has been quite positive because our platforms have been developed through CIHR money and then when we're interacting with health authorities we don't have to say this is going to cost them *x* amount of dollars because we've already developed them.

Mr. Dany Morin: I have a quick question before I let my colleague, Djaouida Sellah, ask one.

[*Translation*]

Mr. Lepage, earlier you said that we must let companies innovate. I also agree with you, but when I look at...

● (1720)

[*English*]

The Chair: Dr. Morin, can I interrupt you? I'll give you some time, but I think Dr. Price wanted to make a comment.

I didn't notice, Dr. Price. My apologies.

Dr. David Price: Very briefly, and that is, define a question and look for an outcome. For example, with a chronic kidney disease, what is the problem? It's too many individuals moving down the slope towards dialysis. How can we address that? That has to be your outcome, so what are the innovations to address it?

Don't tell me what to do. Tell me what the outcome has to be.

[*Translation*]

Mr. Dany Morin: Thank you.

Mr. Lepage, the data that we have received over the past couple of hours indicate that between 80% and 90% of doctors use electronic records in some countries. We are talking about 50% in the U.S. and 40% in Canada. I am a big fan of our made-in-Canada products. But should we not look at what is happening around the world and copy what others do exactly as it is? Do our nice Canadian system and the very complex jurisdictional issues make the situation impossible? I also don't think the solution is to invest more money. In my view, that would not solve the problem.

Mr. Paul Lepage: To answer the first part of your question, I think the private sector is ready to play a bigger role and to try different models to solve the problem. Instead of receiving billions of dollars, we can choose models that are similar to those used by telephone companies, for instance. That means developing systems where you pay for usage. Many players, including Telus, would be fully open to the idea of letting the private sector develop some of those solutions in exchange for compensation when those systems are used.

As to the second part of your question, you asked what the winning formula is. Many studies show that it does not depend on one factor only. When you are at a turning point, a number of factors come into play. I still believe that changing the compensation system for doctors is a good idea. I am not saying to increase the wages, but to change them. In my view, doctors also need to be encouraged to use those technologies. Finally—and this is a key factor—we must ensure that some standards are in place. At some stage, some players will drop out of the race.

Mr. Dany Morin: Thank you.

[*English*]

The Chair: I think you've run out of time.

We'll go on to the next one.

Dr. Carrie and Mr. Lobb, I understand you're sharing your time. We'll begin with Dr. Carrie.

Mr. Colin Carrie: Actually, Mr. Lobb had a point.

The Chair: Mr. Lobb.

Mr. Ben Lobb: Thank you.

Mr. Lepage, I've been assured that Infoway would never fund a project where the architecture doesn't meet its basic requirements. Is that correct or is that incorrect? I want to clarify that for my own....

Mr. Paul Lepage: The reality is, standards are set. Any standards body will not go down to.... You can apply a standard in IT, and you can follow a standard, and be compliant with a standard, but it doesn't mean that two technologies that are compliant with the same standard will necessarily talk to each other 100%.

What I think has happened also is this. Look at the evolution of technology. We started that journey, let's say, in 2000. We're now sitting in 2013. What's available from a technology perspective today that's Internet based or web based allows for a lot more integration or interoperability of the technology. Where systems in the past could not talk to each other, it's a lot easier for those systems to talk to each other today.

I don't know if I'm answering your question.

Mr. Ben Lobb: Just one more quick question ,and I'll turn it over to Dr. Carrie.

To my mind, what it sounds like is it has cost us $5 billion to get this far, and it isn't going to be completely compatible. In the short term there are going to be a lot of patches to get it to work. Then in a few more years there are going to be all these huge demands to upgrade to exactly what you describe. It seems to me like that's going to be the 2.0, the 3.0, and then you're right back in, spending another $5 billion before you've completely implemented what you first set out to do.

I think that's what I've heard. Those are probably the realities of the day.

I'll turn it over to Dr. Carrie.

● (1725)

Mr. Colin Carrie: I would like to talk to you, Mr. Lepage, about smart phone innovation and web-based applications. We know that the Lawson Health Research Institute and the Canada Health Infoway have partnered for the smart phone initiative and web application for mental illness. I was wondering if you could expand on that.

It seems that people today, wherever you walk, have one of these things. Dr. Price was even saying Canadians and people in general have to start taking more responsibility for their own health. Could you give us a little bit of an update on what TELUS is doing with these things that are going to make the system a little bit better for Canadians?

Mr. Paul Lepage: In this particular project, we started with 200 patients and we're going to grow this to 400. There's a first control group. The first group of 200 patients had the first version of the technology. There's going to be a third group that is going to get the new and improved version of the technology.

What the patients did is sign up via the Internet on a PC to a personal health record application. In conjunction with their physician, they set certain goals for themselves and they set certain parameters they wanted to monitor. This would be true for mental illness, for somebody who's a diabetic, or someone who has congestive heart failure. It would be true for any patient who has a chronic disease that has to be tracked over time. We created a version of that application to make the user interface more compatible with use on a smart phone. You can't do on a smart phone exactly what you can do on a PC.

Reminders are sent to the patient. If in his care plan he was supposed to exercise, he was supposed to do certain things, those reminders are pushed to the patient, and then the patient will do the assigned task. That information will flow from the smart phone to the personal health record and is stored somewhere.

What we're doing, basically, is creating an interaction between the patient and the physician, but you're also creating a sense where the patient is taking charge of his chronic disease. If we're going to be successful in doing that today, we have to do it on technology that people are carrying with them. If you're creating a third or fourth piece of technology that you're going to have to carry with you, people won't adopt the technology.

A lot of our thinking is we have to push our applications to smart phones, to tablets, because more and more doctors are using tablets. The idea is to make it accessible to individuals.

Mr. Colin Carrie: I have one quick question. We're all interested in cost savings. I think TELUS Health Solutions worked with a study recently on how much money could be saved if we started to adopt these technologies. Because—

Oh, do I have any time, Madam Chair?

The Chair: I'm sorry, the bells are ringing. I have been informed by the clerk that the bells have just started, so we're going to have to cut this off right now with our many thanks to our witnesses and the committee.

The meeting is adjourned.