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Chair

Mrs. Joy Smith

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● (1140)

[*English*]

The Chair (Mrs. Joy Smith (Kildonan—St. Paul, CPC)): We have quorum right now, and I'm going to begin because we're late starting. I want to thank the witnesses so much for joining us today.

Before we get into the witness presentations, I need to look at two budgets that have not yet passed and which we need to pass.

One is the budget for the Hazardous Materials Information Review Act portion of BillC-45. It's a budget of $1,700. Could I have the committee accept this budget?

Some hon. members: Agreed.

The Chair: We had our juvenile diabetes witnesses—all those wonderful young people who came and presented. It's a budget of $9,600. Could we pass this budget to pay for their travel?

Some hon. members: Agreed.

The Chair: Thank you.

Ms. Libby Davies (Vancouver East, NDP): Can we do that after the fact?

The Chair: I was asked to do it now because they are behind. We should have done it before.

Ms. Libby Davies: Yes, that's what I mean.

The Chair: It's done.

Ms. Libby Davies: That was my point. They already came and went, so we're approving the budgets afterwards.

The Chair: Yes, it's okay. We didn't have a chance to do it. On the advice of the clerk, this is how we should do it, so it's fine.

Ladies and gentlemen, we also have a business meeting later. It will be centred on continuing this study in the new year. I think we all agreed that we wanted to do that. We need to have a business meeting to go over everything, so we'll discuss that later on.

The budgets are out of the way, so we're going to start with our presentations.

Dr. Mendez, you're first. Would you start, please.

Dr. Ivar Mendez (Professor of Neurosurgery, Anatomy and Neurobiology, Dalhousie University): We will present together as a group. Our presentations are coordinated, so we will do that.

First, thank you very much for inviting us here. What I want to do is show you and open a bit of a window on what I think the future holds for the delivery of health care. We have been working over the past five to six years on a new technology that will allow an expert physician to provide medical care to a citizen anywhere in the country, regardless of the geographical location. This technology involves not only robotics systems, but portable systems that allow a doctor to take care of somebody anywhere.

The first one is what is called the RP-7 robot system. It is a system that can be controlled by any physician who has a computer. The really amazing thing about this system is that is works with regular Internet communications. There is no need for any specific infrastructure. What happens is that the physician who sits at his computer can actually listen to the patient's heartbeat or chest sound wherever they are, and is able not only to diagnose a condition, but to start management in real time.

We have a unique network of these robotic systems in Atlantic Canada. It's unique in the country. We have several robots in Nova Scotia.

For example, I'm a brain surgeon. We only have brain surgeons in Halifax. If you're in Sydney, on Cape Breton Island, or you're in Yarmouth and you have a car accident and develop a blood clot in the brain, you have to be flown to Halifax. It takes several hours in good weather. With this system, the neurosurgeon can see the patient in real time when they arrive at the Cape Breton Regional Hospital and can make a decision in terms of the management of that patient in real time. This is how the system works.

This is the robot here. It's walking the wards in the hospital. You can see two robots. These individuals can be in Toronto, and this individual can be in Saint John, New Brunswick. They can look at a scan and they can collaborate in real time on a patient. I was actually in London, England, to give a lecture, but I did rounds on my patients every morning. Wherever I am in the world, I can see my patients in Halifax every morning and make decisions about their management.

This is Nain, Labrador. Gail Turner and Dr. Michael Jong are going to talk to you about Nain. As you can see, Nain is in the middle of the wonderful Canadian Arctic. There is only one runway. If you have a real problem, they have to send an airplane from Happy Valley-Goose Bay, where Dr. Jong practises, to Nain, to pick you up.

The problem goes beyond that. If you are a young mother who needs a prenatal ultrasound, you need to be sent by plane to Happy Valley-Goose Bay. The flight takes a couple of hours, which may not be a big deal. The problem is if the weather is bad, you could be in Happy Valley-Goose Bay for two weeks. Mothers in Nain have a very low rate of prenatal ultrasounds. Maternal mortality rate is high.

This is the nursing station in Nain. There are no doctors in Nain. There are only nurses in a nursing station. Here are the nurses with a patient. There is a doctor with the robot. This is how it looks. The nurses are in Nain. The people of Nain have given this robot the name Rosie, just like the robot on *The Jetsons*. Rosie can be called whenever Rosie is needed, and Dr. Jong, who is in Happy Valley-Goose Bay, and his colleagues can go ahead and take care of a patient.

This is what a doctor sees. He actually can see the nurses. He can see the patient. He can use these peripherals, such as the stethoscope or ophthalmoscope, to diagnose a patient.

● (1145)

What I'm going to present is going to revolutionize the way we practise medicine in the future. We now have mobile systems that work with regular mobile cell phone communications. This is a portable system, and we're testing it in Halifax.

With this system, we were able to receive an ultrasound of an abdomen of a patient who had just had an accident on an ATV. The first responder was a firefighter. The doctor was 300 kilometres away. The doctor directed the firefighter to do an ultrasound of the patient's abdomen so we could detect if the patient had an internal injury. This technology allowed us to start management right away and do the appropriate transportation to the hospital. This is going to cut distance and time. This is the first ultrasound in the world like this. It allows patients to be seen from a remote location by the emergency room physicians or the trauma surgeons. More important, a critically ill patient can be followed in an ambulance.

This is a first in the world. I could be in Halifax, and about 250 kilometres away the ambulance could be going 100 kilometres an hour on the highway. This technology enables me to do an ultrasound of the coronary artery of a patient to see if there's an injury. I can tell the paramedic where to put the probe so I can see the coronary artery. You don't need an expert on the other end; the doctor is in control of the whole situation, and the doctor can direct the paramedic to do the ultrasound. I'd be able to see the coronary artery in real time 250 kilometres away while the patient was being transported to the hospital. That's going to have huge implications in our ability to save lives.

We have a special program in Halifax where we put special electrodes into the brains of patients to control movement disorders, such as dystonia and tremors. We have all these patients who come from all over Canada to Halifax. They may have to fly in from Vancouver. Previously, to follow up, we'd need to have these patients come back to Halifax, because we need to program their computers. Now, we can send this box with the patients, wherever they are. I can beam into their homes, examine them, look at their wounds, and program their internal computers. I can be in the kitchen of an elderly patient, examining him. I can see the wounds perfectly from thousands of kilometres away. I can program the computer of this patient using this device.

● (1150)

I treated a patient with tremors; I had the nurse turn on the computer that I'd implanted in the patient's brain. I did this from Halifax, and the patient was in Newfoundland. You can see how much tremor she has. She can hardly hold the glass. These people are totally disabled because they need somebody to feed them because they can't hold cutlery or anything in their hands.

The computer is in the chest. I'm going to turn the computer on remotely. Here it is. She is moving the table now, and now you can see she's quiet, terribly relieved by that. You can see now she's going to hold this glass in her hand. This is hundreds of kilometres away, and there she is.

We are leaders in the world in this technology, not only in the remote presence but also in controlling these abnormal movements.

Before I ask my colleagues to continue the presentation, I want to invite you to come with me to Halifax. What I'm doing in this room is a first in the world. You have this very powerful firewall, so we cannot connect with your Internet communications, so I've actually connected a cellphone modem here. I'm going to control a robot in Halifax using this cellphone modem. I hope it works.

This is the control station. We're going to go to the hospital in Halifax. This is a regular computer. The only thing that I have here is a control extension. This is Halifax. I'm going to talk to the nurses.

Hello?

A voice: Hi.

Dr. Ivar Mendez: Hi, how are you doing?

A voice: Great. How are you?

Dr. Ivar Mendez: Very well. I'm here in Ottawa. I'm just going to go around. All right?

A voice: Great. Have fun.

Dr. Ivar Mendez: Thank you.

As you can see, nobody pays attention to the robot anymore. I'm going to move the robot. This is me. I'm moving the robot in the hospital in Halifax in real time. I am going to the nursing station. You can see our Christmas tree. I'm just going to show how powerful the cameras of these robots are. It's instant communication using cellular phone connectivity. Let's go and say hello to the nurses.

Hello, how are you doing? I'm just going to go by.

The amazing thing is I'm controlling this robot in the middle of the —

Hi, Theresa, how are you?

A voice: I'm doing well.

Dr. Ivar Mendez: I'm just going to increase that.

How are things going in Halifax? How's the weather there?

A voice: It's cold and snowy.

Dr. Ivar Mendez: Yes. I'm just going to the MICU for a second. I just want to see the monitor of one of our patients. Would you mind coming with me? I'm just going around you. Thank you.

I'm navigating a very busy nursing station from here in Ottawa. I'm just going to look at the monitor of one of our patients.

Is one of the monitors open there?

I'll just look at our monitors here so you can see.

● (1155)

These are monitors. You can see that none of the patients are connected yet, but you can actually see with total accuracy the lines on the monitor. You can see them moving.

Is one of the monitors on?

A voice: I don't think any of them are on.

Dr. Ivar Mendez: Good morning. How are you doing?

A voice: I'm doing okay.

Dr. Ivar Mendez: Good to see you.

I'm going to stop the demonstration here and let Michael come. I will disconnect here, Theresa. Thank you very much.

You can see, we have been in Halifax. I talked to the nurses. I was able to see my patients. You can imagine the potential of this. Of course the potential is greatest in the places where people need the most and have the least. This is where Michael is going to come in and talk to you.

The Chair: I broke a few of the rules today because we're doing these robotics. I didn't want to interrupt this magnificent demonstration. Forgive me, committee.

Could you continue? Thanks.

● (1200)

Dr. Michael Jong (Professor, Memorial University, As an Individual): Thanks a lot for this opportunity to talk to you. It's not very common that someone from Labrador can come here and speak to the committee, so I appreciate it very much. To those people behind the scenes who made it happen, this is very important for us.

I will talk about robotic medicine for remote communities. This is an innovation that Dr. Mendez started in Halifax. We're lucky enough that he's willing to share this with us in the north. He has great vision. There are parts of Canada where there is no access to service, so I think the best innovation is to make this all simple.

The biggest problem in Canada is the rural-urban divide. The death rate is much higher in rural Canada than it is in urban Canada. It's as much as 30% higher in rural areas. The further people live from an urban centre, you can actually see a linear increase in death rates. One of the reasons for this, of course, is access, but there are other reasons, too. Lifespan is shorter by three years if you live in rural Canada.

In our region Nunatsiavut Inuit is a big component of the population and if we look at Canadian Inuit, their lifespan is 12.6 years less than that of the general Canadian population. This is a big thing. If you want to address the backyard of Canada, this is where we need to address it. It affects the young population as well.

Of course, there is more than one solution, but one of the solutions is access through using this computer that you see right here. This is me in Goose Bay.

This is what Dr. Mendez tried to show you. People in Nain can have access to a physician by robot. There's the Nain emergency department where I would be able to see anyone who comes through the door. Any physician can see anyone who comes through the door.

What we've been able to do for the last four years is literally perform resuscitation remotely. In the past, when someone had no pulse and was not able to talk to you, you might as well assume the person was dead because by the time we went to pick them up, it was too late. Now it's possible to save lives. This is possible.

We can also do remote ultrasound, as you can see. This is what Dr. Mendez showed you. Basically, the nurses will do it for me and I will see it. It's so fast, and so easy. No guesswork is required. I can simply see what's happening.

There's a lot of mental health work being done, in terms of psychotherapy. Now there's also management of chronic conditions. In rural Canada there are high rates of diabetes, high blood pressure, and heart problems.

As we try to get more health providers into remote communities, what we have to try to do is train them in those remote communities, but now we can actually supervise them.

We have done an analysis of the impact. The patients are very satisfied. For the nurses who live and work in remote northern communities, it can be very stressful, and for a physician listening at the other end of the phone line, it can be equally stressful, not knowing what is actually happening. With this, our job is a lot easier and we're much more satisfied.

At the end of the one-year assessment, we were able to avoid medical transportation for half the patients who would otherwise have had to be transported somewhere else. Besides better patient care, it translates also into savings in health care costs.

As Dr. Mendez said, Rosie is now a member of the team. Even in Nain, I roam around, and it makes no difference. They know. They're so used to it. It basically provides citizens in remote communities with access to physician services 24 hours a day, 365 days a year. You can live in a remote community and have access to physician services; it's possible nowadays, if you have Internet access.

I think the road to success, as Dr. Mendez has said, is always under construction. We are always finding new things, new applications.

● (1205)

I think if Canada wants to be proud of what we are doing we can always innovate and be a leader, as Dr. Mendez said.

Before I finish, I want to acknowledge that I am very grateful for FNIHB and Health Canada to facilitate this process, to connect us with Dr. Mendez and bring this to Labrador

Without Debra Keys White, who is here in the audience, robotic telehealth would not have happened because she introduced the idea to me. For the Nunatsiavut government to allow me the privilege to do this in their communities and to allow me to help and be part of the community, I thank Gail Turner.

Ms. Gail Turner (Consultant, Department of Health and Social Development, Nunatsiavut Government): It is an honour to be here representing the Inuit land claim of Nunatsiavut, as an Inuk and as a former director of health for that region.

On the map you will see the Nunatsiavut land claim, the last of the four Inuit regions of Canada to be proclaimed, in relation to the rest of Labrador, and of course it is part of the province of Newfoundland and Labrador.

Nain is the most northerly community in the province of Newfoundland and Labrador. The population varies between 1,200 and 1,500. It is the administrative capital of the land claim. The word Nunatsiavut means beautiful land, and I think if you look at the photos you will see why.

Nain is nestled among many hills, and while that makes it picturesque, it creates very particular challenges for flying. It is the only community in Labrador where a medevac flight cannot go in after dark. This obviously increases the stress on the staff in the clinic and also the staff in Goose Bay when they are trying to manage patients.

Mount Sophie is in Nain. This is the view from the clinic. This is the weather vane. If the staff in Nain say they can see Mount Sophie, you can fly; If you can't see Mount Sophie, you can't fly.

This is the outside of the clinic in Nain, which is responsible through Labrador-Grenfell Health for delivering primary care both through this clinic and through the hospital or the health centre in Happy Valley-Goose Bay. The secondary level of care including diagnostic, surgery, obstetrics, and access to physicians comes from here. On a good day with fair weather we could be up to Nain and back within four hours, if we didn't need time to stabilize a patient in Nain.

We have a collaborative model of care. The community side of care, public health, home and community care, is delivered by the Nunatsiavut Department of Health and Social Development. Their staff is in Nain.

What was our role in this process? There were several committees at different levels, and I would like to acknowledge the deputy minister of health and social development, Michelle Kinney, who I am replacing here today, but who's been a very strong advocate for this project throughout its implementation. We're also responsible for endorsing it, meaning because we had a voice in what happened with this project, Inuit were much more readily open to it as part of change.

If the Inuit can be part of change, then obviously it increases our access to health care. We use data from non-insured health benefits as part of our data-sharing agreement. At the moment Nunatsiavut is the only aboriginal group in Canada which manages its own non-insured health benefits program. We were involved in the development of the evaluation and we were also champions among Inuit.

We used the fact that we were an Inuit land claim sitting at a table with our colleagues through Inuit Tapiriit Kanatami to promote this type of technology as a way forward for improving access to health care for Inuit in Canada.

As you've just seen, we had seen computer footage of Rosie in Cape Breton, but it was still hard for us to conceptualize how that would work for us in the clinic in Nain. We didn't know what Rosie could do. We didn't know how the community would accept her. We didn't know whether it would truly bring service closer to home, or what the outcomes would be.

What we did know was that people in Nain, as in most Inuit communities, do not always want to have to travel for medical service. They have to leave families and their homes and they are often gone for days or even weeks. We knew that supporting nurses, helping the nurses feel more confident in their decision-making, improves their retention, and if we improve their retention, we're more likely to have culturally safe care. We knew that Nain was ideal for this pilot because of the restrictions on flying. They have fairly stable staff, and they've worked for several years with the traditional telehealth system, so they would be much more comfortable with the technology.

We knew that as a government we would do everything we could to support this project. We knew that the philosophy Dr. Mendez brought to this project matched what we believe. We believe we have to do much more to bring care to the Inuit and not Inuit to the care.

● (1210)

What did we learn? Rosie very quickly became a member of the staff, and I think the nurses now would feel a loss of confidence if she were to leave the clinic and they lost that support piece they've had.

The community actually loved her. They called her that old robot doctor. She saved lives. She saved travel time. She became an integral part of health delivery in Nain, so much so that the Nunatsiavut government has recently purchased Rosie Two, which has even greater capacity for the community of Nain.

What about the future? We believe we have to do several things. We certainly have to continue with the excellent work being done. We think we need to expand the use to make sure we're using it in the best capacity we can. We have to explore some increased utilization with other peripherals. More importantly we need to continue to document the improved service delivery through all avenues, using presentations and opportunities such as today, through newsletters and professional journals, so we're sharing the story of what can be done with the rest of Canada.

The Chair: That was really interesting. My goodness. It was amazing. Thank you so much for coming today.

We're going to begin our questions and answers with Ms. Davies.

Ms. Libby Davies: Thank you very much, Madam Chair.

Before I begin my comments and questions to the great witnesses we have here today, I would like to make a point.

I didn't want to interrupt the presentation because I know the meeting is shorter today, but this is the second meeting where we've had material up on the screens that hasn't been in both official languages. I do think we need to reinforce this with people who come before the committee. Usually there has to be a motion to approve it, but because of the short time I didn't want to interrupt. It's a note for the future. I don't think....

The Chair: I'll let the clerk address that.

Ms. Libby Davies: I just want to put it on notice that I don't think we'll allow it to happen again.

The Chair: Let the clerk address that.

The Clerk of the Committee (Ms. Julie Pelletier): My understanding of the motion is that statements don't need to be bilingual, but everything that is shown in PowerPoint needs to be bilingual. If I have a paper copy that is bilingual, it's sufficient to meet this requirement.

If you don't think it is, maybe that's something we can discuss at a committee meeting, but yes, we had the bilingual version of each document.

Ms. Libby Davies: So you're saying if it's not displayed on the screens, that's acceptable. Anyway we can discuss it later. I just wanted to flag it because it's the second time, and I wasn't clear about it then.

The Clerk: The last time it was different. There was a misunderstanding between me and the witness, and the witness never sent me his PowerPoint presentation so I didn't have time to translate it.

Yes, we didn't have the copy in front of us. That's why we asked for unanimous consent to allow the witness to make his presentation. It's two different....

Ms. Libby Davies: Thank you.

The Chair: In other words the clerk was well within her.... She's an excellent clerk, and follows the rules.

Ms. Libby Davies: I think we can discuss it later if needed.

The Chair: You brought it up, Ms. Davies, so I thought I'd clarify that.

Ms. Libby Davies: I know. I wanted to flag it. I said I was flagging it. That's what I said.

The Chair: I'm flagging it to say the clerk did everything correctly. Thank you. Go ahead.

Ms. Libby Davies: To the witnesses, again I'm sorry I had to make that intervention, but I felt it was important to do.

I want to thank you for being here today, especially coming from so far away. I think your presentations have opened up a new horizon for us to think about as we do this study on technological innovation.

Some of my questions have to do with whether there are any risks associated with robotic medicine.

It seemed to me, Dr. Mendez, that you must be very practised now at how you manoeuvre Rosie in tight corridors, in and out of rooms, and so on. Is there a lot of training required so mistakes don't happen? Is there any study or monitoring to look at the risks in terms of mistakes that could be made because you are using a remote technology?

I'll begin with that question.

● (1215)

Dr. Ivar Mendez: That's a very important question.

The first thing I should tell you is that the robot is the size of a human being. It is roughly the same shape, width, and height of a human being. That allows the operator to know intuitively where the robot can or cannot go. The controls are so intuitive that anybody can learn to drive the robot in 10 minutes. We probably have the most experience in the world with this. We've never had an accident with, for example, the robot bumping into something or anything like that.

The key issue is—and this is at the heart of this technology—when you're faced with a life-and-death situation, when somebody has a pneumothorax—air in the lungs that is compressing the lungs and the heart—the ability for Dr. Michael Jong to direct a nurse and save somebody's life when they would otherwise certainly die is what makes the difference. The crux of the matter is that—and this is where my philosophy comes in—we pride ourselves on the idea that all Canadians have the same access to health care, but you know that's not true. If you're here in Ottawa and you have a problem you can be taken to the Ottawa Hospital. If you live in Nain, there's really no alternative. I think this technology will allow us to narrow the gap of that inequality. That is the basic issue. Practically speaking, there have been no mishaps with the robots in all the years we've been using them.

Ms. Libby Davies: So far, this program is happening only from Nova Scotia. I know it's in other communities, but you make it sound as though the program you're engaged in is based in Halifax. Are there many other communities that are using the same robot?

Dr. Ivar Mendez: There are two programs in the country.

The first is the network of robots we have in Nova Scotia. They're used for specialized care in brain surgery. Then there is the primary care system in Labrador where the hospital in Happy Valley-Goose Bay takes care of the remote community of Nain. That shows you the ability of the system to work in a reasonably well-urbanized territory like Nova Scotia with different regional hospitals as well as in truly remote communities where the only access is by air.

Ms. Libby Davies: One of the issues we're facing is how we can make sure that the health system is equitable and that there aren't those kinds of disparities. It's fascinating to see that we have these locations that are now accessible, but it raises the question of how we can ensure that this happens across the country.

Do you have any suggestions or recommendations about what you think the federal government should be doing to ensure that this kind of advanced technology is available elsewhere?

The Chair: I'm sorry, Dr. Mendez, but Ms. Davies has used up her time.

Perhaps Dr. Carrie has his own question or something he wants to pick up from Ms. Davies' comments.

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

I'd like to split my time with you.

I'd like to direct my question to Ms. Turner. I'd like to hear about the residence and what kind of things you've heard over the years about the challenges with access to health care. How has Rosie changed that? I liked what you put up about the philosophical part of it too.

● (1220)

Ms. Gail Turner: Probably the most important thing for us is health equity. If you look at a map of Canada and you look at an Inuit travel map, most of the care that's beyond primary for Inuit of Canada is done somewhere else. It's in another province of Canada. It costs a lot of money in terms of dollars spent, but on the human side, one always has to travel for medical care. Inuit embrace technology that allows them to stay in their home community and have a physician consult without having to leave. The other piece, which you didn't see clearly, was the ability for the support staff in Nain to also be present. They're learning along with the consult and increasing their level of confidence in their nursing knowledge. Also, if necessary, it would be good to have an interpreter with the client so you could have the care translated into Inuktitut if necessary. The people love it. They love any opportunity not to have to travel for medical care.

Mr. Colin Carrie: What you're doing is wonderful.

You mentioned that you are in control of the non-insured health benefits yourselves. I wonder, kind of going along with Ms. Davies, have you had access to any federal grants that have helped to possibly impact the community of Nain and the challenges people face, being so rural? Do you know offhand?

Ms. Gail Turner: That's a difficult question to answer because Nain is part of the new land claim. The funding for health care delivery comes through a five-year fiscal finance agreement between the province and the federal government, which would include the non-insured health benefit system as part of that. We are also citizens of the province of Newfoundland and Labrador and, as such, we also gain from the provincial health system, which subsidizes some of the medical travel. It's a bit of a complex financial environment in which the health care is being delivered, and a bit of a jurisdictional quagmire, but it works.

Mr. Colin Carrie: I think we're all aware of that.

Madam Chair, I'll pass it over to you.

The Chair: Thank you for offering to share your time with me. We're watching our time carefully. We each have seven minutes.

We're very interested in listening to this, Dr. Mendez.

Dr. Mendez, as you know, Leona Aglukkaq, the federal health minister, is from the north. She has repeatedly talked about the isolation and the lack of equitable care. All of us around this table are trying to improve that, so it was very exciting this morning to see what you have done.

In the health care in remote areas in Nunavut and in the most remote places, how many robots would you need to provide service for the people? What we saw this morning was excellent, but to provide service to other communities, what would you say is actually needed? Are you familiar enough with the terrain and the area to be able to comment on that?

Dr. Ivar Mendez: Yes, as I said before, we have a lot of experience in this. The really interesting thing is that one of the portable systems I showed you, that works with cellular phone connectivity, can be bought by saving two trips on a plane. For example, the robot in Halifax that we sent to Sydney in Cape Breton paid for itself within two months because of the number of trips by air transportation that were saved. These systems allow us to provide more effective clinical care in a cost-efficient manner.

One of the really interesting things—and Dr. Jong and Gail can tell you as well—is about the lion's share of the health costs in the north. This is a very interesting statistic: Nunavut has the highest per capita health expenditure in the whole world; nowhere in the world compares to Nunavut. However, the indicators of health are not good because the model relies hugely on transportation. If an electrocardiogram is needed, the patient, plus an accompanying individual, would need to fly to a centre where they can see the cardiologist, and they could stay there for a week. This will be able to cut those expenditures, which can then be used to do what's necessary, such as to take care of the people who have the lowest indicators.

One of the biggest applications is going to be mental health. What we can do, for example, is we can send the psychiatrist in a box with a nurse to the home of a teenager who needs mental health care, so teenagers don't kill themselves at the age of 12 or 13.

● (1225)

The Chair: Well, this is absolutely amazing. You people have been so helpful to this committee, to give us these kinds of insights. I thank you for that.

My time is just about up. Mr. Easter, I'll go to you and give you 30 seconds of my time.

Hon. Wayne Easter (Malpeque, Lib.): Thank you, Madam Chair.

I'd like to thank you folks for a really impressive presentation, which I think outlines the possibilities with new technologies when combined with health care.

I remember that around 1997 or 1998, when Allan Rock was Minister of Health, in Ottawa they did an ultrasound on a woman in Iqaluit in about an hour. I was impressed by that, but this is light years ahead of that.

This question is for either doctor, or perhaps Gail. My wife is a nurse. One of the things I really believe in terms of patient care is that stress is a huge factor in terms of whether or not you get well. I expect this system for isolated communities would be unbelievably helpful in terms of reducing stress.

Would you like to expand on that?

Ms. Gail Turner: There's no question about that. We've already seen the positive impacts in the retention of the nurses in Nain. It's created a whole different working environment for them. They now feel that they have a physician beside them. It's technological, but they do feel that presence. It really has made a big difference in how they work.

For the community as well, there's new confidence now that should something happen, which it sometimes does in Nain, the response will be immediate with a physician from Goose Bay through Rosie. There's that piece as well.

It's hard to put in words how the community feels. It's wonderful.

Dr. Michael Jong: I'd like to add that to me, the nurses in Nain and all those remote communities are like angels out there. I personally feel very rewarded by what they express when they save a life. They're so proud, and I'm so proud of them.

There was nothing like that before, and now it's possible to do that. It's almost like a sin not to have it happen.

Hon. Wayne Easter: What has to be done from a federal and provincial perspective to expand the continued investment in this kind of technology? Number one, you certainly have a base number of robots at the moment, Rosies, as you call them, but what has to be done to ensure that we continue to make progress in this area from a federal-provincial perspective? Is it just money? Is it regulations? Is it coordination?

What will get us from A to Z to see that other communities have this kind of capability?

Dr. Ivar Mendez: Maybe I'll start, and then Dr. Jong can continue.

The barriers to implementation of this technology are not technological barriers. The barriers have to do with such issues as jurisdiction, remuneration, competing interests, and a lack of policies that would allow the use of this technology for the future.

One thing I can tell you is that this technology is unstoppable. It is actually going to happen whether we want it to or not. In Canada we are at the leading edge, and we can be leaders in the world.

The other thing that will happen is that although the technology may be used first in remote communities, it will impact on mainstream delivery of health care. We have a centralized health care system, which is a bottleneck. If you have a problem, you have to go to the hospital, get all the tests done in the hospital, and see your doctor. Everybody comes to a centralized location. This technology will allow us to do point-of-care diagnosis and management.

We're behind the banking industry and the airline industry. The banks now charge you for doing all your work in terms of your account.

This is what's going to happen, and I think we have a tremendous opportunity to do that here in Canada.

Michael.

● (1230)

Dr. Michael Jong: Yes. For the remote communities I think right now for, say, Nunavut, it's to be able to get this broadband access. You need to get that technology.

A second point is that we need to train people to use it. The application is fine, but people need to know how to use it.

Hon. Wayne Easter: Some around the table might say I live in a remote community, but I live in Prince Edward Island and for us when it comes to health care, we are always sending people either to Halifax or to Saint John, so it is a problem. They're always sent out by medevac. There may be possibilities there.

I do want to make a point regarding what you said, Dr. Mendez. Last weekend I was in Austin, Texas, to attend a meeting where the big issue was health care in the United States. While a lot of the discussion was on the fiscal cliff and the deficit and so on, one of the higher-ups in the treasury department said that he had been at the OECD. He was talking about the huge cost to the American health care system as compared to anywhere else in the world. He put it this way. He said that when he had to go to a doctor when he was in France—he was there for 10 years—he saw a secretary or an administrator and the doctor. When he came back to the United States, when he made an appointment to see the doctor, he saw four people first. The doctor recommended he have an MRI and an X-ray. Part of the problem in the United States is that the doctor owned the equipment, so there was a charge for the MRI and the X-ray whether he needed them or not, and he felt he didn't.

Madam Chair, I raise that point because I think that's one thing we have to keep in mind—

The Chair: Mr. Easter, I have to stop you now because you're way over time. Unfortunately we can't hear the answer right now, but you certainly contribute—

Hon. Wayne Easter: Even with your 30 seconds.

The Chair: Even with my 30 seconds, and you contributed in a major way at this committee. Thank you.

We have to go now to sharing time between Mr. Strahl and Mr. Lobb.

Mr. Strahl.

Mr. Mark Strahl (Chilliwack—Fraser Canyon, CPC): Thank you, Madam Chair.

First, I know Mr. Lobb was very excited for this meeting. He misheard that Eva Mendes was coming today, and not....

Some hon. members: Oh, oh!

Mr. Mark Strahl: Mr. Easter asked some of the questions I was going to ask about the technology.

Obviously if you're able to connect via cellphone from here, there isn't a high level of sophistication required, just a significant connection. I assume either a land line or a satellite phone or anything could work there.

As well, and you touched on it briefly, I was wondering how it worked for a doctor who is stationed in Halifax to perform a procedure in Nunavut? Does the doctor have to be licensed in each jurisdiction? Does the Government of Nunavut pay the bill? How does that work? Maybe you could explain some of the challenges that come with being located in one place and performing your procedures remotely in another.

● (1235)

Dr. Ivar Mendez: Those are the potential barriers in the future, issues that have to do with medical legal issues. For example, if you are in Halifax and you are taking care of a patient in Toronto, who is responsible? Is it you or someone else? Of course there is also the issue of remuneration.

However, there has been a lot of work done already in telemedicine, which has paved the way for this next stage, which is remote presence in medicine. Those barriers will be worked out over time.

When I said that technology is unstoppable, I was talking about the idea that 20 years ago you had to go to a bank and stand in line if you wanted to take out $10. All the issues that have to do, for example, with encryption and security have already been worked out. People, believe it or not, are more concerned about their bank account than they are about their health. They are willing to put in their data in terms of managing their account. The regulations will come together. Technology is obviously so helpful that as it advances, all these regulatory issues will have to accommodate this technology. That's what will happen in the future.

Mr. Mark Strahl: Right.

I know we talked a lot here about remote communities, but obviously you were dealing in a hospital in Halifax when you did your demonstration for us. Does this also have the potential to address specialist shortages? You're just in your office and you can be in six hospitals in Halifax as opposed to running around. In the future, will every hospital have a Rosie or a Rosie Two in it because it's so much more practical than getting to a specialist? Certainly delivery services in British Columbia, where I'm from, are regionalized. Not every hospital has the same service, so perhaps—

Dr. Ivar Mendez: That's exactly what it is. There are no neurosurgeons on Prince Edward Island. If you have a brain tumour, you have to go to Halifax.

A robot that would be able to access a specialist in real time, wherever they are, should be in that emergency room in Prince Edward Island. I think that is the key issue. The issue is timely access to health care. There are only a number of specialists. That will allow us to manage our resources better. Specifically, it will allow us to provide that access to the individual who needs that access at a specific time. That is what's going to happen: a robot will go to P.E.I. pretty soon.

The Chair: Mr. Lobb.

Mr. Ben Lobb (Huron—Bruce, CPC): What do I have left, about five seconds?

The Chair: You have about two minutes.

Mr. Ben Lobb: Oh, that's nice.

The first question is, Mr. Mendez, for a guy like Mr. Strahl, how far along are we with these Rosies to replace members of Parliament?

Voices: Oh, oh!

Mr. Ben Lobb: Are we close? What can you tell me?

Mrs. Kelly Block (Saskatoon—Rosetown—Biggar, CPC): So that he could stay home....

Mr. Mark Strahl: I could vote from Chilliwack.

Mr. Ben Lobb: All right.

Here's my first question. I don't know if I caught it, but what is the name of the company that developed the Rosie technology?

Dr. Ivar Mendez: It's a company in the United States. We have worked with them to develop all the clinical applications, the main clinical applications that we use in Canada. It's called InTouch Health. It's the company that manufactured the robots in California.

Mr. Ben Lobb: With the development of your particular needs, from the first time you made contact with InTouch Health to the time it was actually in, even in a pilot program, what length of time did it take to develop that technology?

Dr. Ivar Mendez: We had the first robot in Halifax within a couple of weeks of the first contact. The reason is that we have developed in Halifax a critical mass of individuals and experience in remote surgical applications, where we can operate on somebody at a distance. We already had the baseline.

Mr. Ben Lobb: I probably missed it, but what did you say is the cost of the robot and the software that goes along with it?

Dr. Ivar Mendez: The robot is, I think, $140,000 now, and small units are about $25,000.

Just as a disclaimer, I have no association with the company in terms of financial association. My true interest is to bring this technology to where it's needed. I want to make sure that everybody understands that.

● (1240)

Mr. Ben Lobb: I'm from Ontario. OHIP will cover some costs of machinery, but won't cover other machinery like MRI and CT scanners. Do you have to raise funds through your hospital foundation? Does Health Canada provide the funding for this? Did you do fundraising for the $140,000? Where did that come from?

Dr. Ivar Mendez: The cost of the robots came from our foundation and from individuals who philanthropically donated the resources to start the robotic program in Halifax.

Mr. Ben Lobb: What's your estimation of how many units are in Canada today?

Dr. Ivar Mendez: The only units are in Atlantic Canada. We have five units in Nova Scotia and the unit in Nain.

Mr. Ben Lobb: You also touched on mental health—

The Chair: I'm sorry, Mr. Lobb. We have come to the end of our meeting. I've gone over our time because we were supposed to have a business meeting at 12:30. I did some real quick business so we could go over our time, as we were late starting.

I have to thank the witnesses so much. I'm sure we'll see you again. This has been the most amazing presentation. We want to learn even more about it. The whole committee and I thank you so much.

We're now going to suspend for two minutes. We're going to go in camera for the business meeting. I would ask all outside people to leave the room.

[*Proceedings continue in camera*]

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