HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Health

HESA • NUMBER 083 • 1st SESSION • 41st PARLIAMENT

EVIDENCE

Thursday, April 25, 2013

Chair

Mrs. Joy Smith

Standing Committee on Health

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● (1600)

[*English*]

The Chair (Mrs. Joy Smith (Kildonan—St. Paul, CPC)): I want to explain that today we have Dr. Richard Birtwhistle, scientific director for Technology Evaluation in the Elderly Network.

Thank you, Doctor, for joining us today, and thank you for your patience as we went through our business meeting prior to your entering the room.

By teleconference we have Dr. Saul Quint. He's the chief executive officer of INTERxVENT Canada.

Dr. Quint, I'm Joy Smith, the chair of the committee. Can you hear me?

Dr. Saul Quint (Chief Executive Officer, INTERxVENT Canada, Interxvent): Yes, I can. I'm pleased to meet you.

The Chair: I'm pleased to meet you as well. It looks like God calling, or something. We don't see you, but we hear you. Thank you for joining us.

Dr. Saul Quint: It's the first time I've been called that. Thank you.

The Chair: And it may be the last time. Welcome, anyway.

From the Terry Fox cancer research institute we have Dr. Victor Ling, who is going to join us at five o'clock. I understand that Mr. Weston knows Dr. Ling. We'll give a formal introduction to you when he arrives.

You each have a 10-minute presentation.

We're quite looking forward to yours, Dr. Birtwhistle. Could you begin now, please?

Dr. Richard Birtwhistle (Scientific Director, Technology Evaluation in the Elderly Network): Good afternoon, Madam Chair and everyone. Thank you for giving me the opportunity to address the committee today about the use of technology in the management of people with chronic disease.

l am a family doctor and the interim scientific director of the Technology Evaluation in the Elderly Network—that's TVN. We're at Queen's University and the Kingston General Hospital. TVN is a national centre of excellence with $23.8 million of funding to be used over the next five years. Our mission is to improve the care of seriously ill elderly patients and their families through the development, rigorous evaluation, and ethical implementation of health care technologies, ultimately leading to better outcomes for patients and families as well as health care professionals and the health care system as a whole. With researchers from across Canada and partnerships with industry and community organizations, the network is committed to improving care for the seriously ill elderly in Canada through solution-driven research and partnerships.

We are working to foster research and dissemination of information to ensure appropriate use of life-saving technology at the end of life that fulfills patients' wishes. We will also train students in this area to continue the development of a better way to care for the elderly at the end of life. Specifically, we are looking for impact in four areas: improved care of the sick elderly; improved efficiency of the health care system; evidence-informed policy and practice; and reduced moral distress for patients, families, and caregivers.

Here are a couple of examples of the research projects that we have recently funded. One was done by Dr. Karen Burns, entitled “Practices in End of Life Care and in Discontinuing Mechanical Ventilation in Elderly Critically Ill Patients”. Another project was done by Dr. Francis Lau and Dr. Doris Barwich, entitled “A Knowledge Translation Project on Benchmarking End of Life Care Practices for the Elderly in Primary Care”. A final example is Dr. Sean Bagshaw and Dr. Ron Wald's “OPTIMAL Selection For and Timing to Start Renal Replacement in Critically Ill Older Patients with Acute Kidney Injury”.

The national networks of centres of excellence program is a federally funded program through the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council. The goal of the NCE is to mobilize Canada's research talent in the academic, private, public, and not-for-profit sectors and apply it to the task of developing the economy and improving the quality of life of Canadians. Its other goal is for the mobilization of research knowledge and commercialization of technology.

I'll focus my comments on the use of technology in the sick elderly today. TVN has defined technology in a very broad sense, from low-tech things like data collection tools to very high-tech, life-preserving machines, diagnostic tests, and treatment. As you have heard from others, there are many ways to use technology to improve the care of patients with chronic disease. As one example, I also lead a national primary care chronic disease surveillance network that collects patient health information from electronic medical records. We use this information for chronic disease surveillance, quality improvement, and research. EMRs have great promise in improving chronic disease management in primary care.

But what happens when those chronic diseases progress until the end of life is inevitable, despite all our efforts, and the patient becomes very sick? We know from previous studies that Canadians' values about their health are often at odds with how they experience their health care. The focus on technology in acute care often results in elderly people being treated in ways that are not consistent with their values, may prolong suffering without improving quality of life, and often puts health professionals in positions that are at odds with their own values.

The increase in the absolute numbers of older Canadians dying and the concomitant rise in the use of life-sustaining technologies have really created a paradox in modern medicine at the end of life.

● (1605)

Although most elderly patients prefer less aggressive treatments, they often have these life-sustaining technologies used in the final stages of illness and dying.

Currently in the western world, one in five elderly people who die in hospital, actually die in the intensive care unit. The proportion of patients 80 years or older who are admitted to the ICU in Canada has increased from 10%, in the mid-1990s, to nearly 20% today. Most older patients value quality of life and avoiding unnecessary prolongation of life through the use of technology. Yet aggressive life supports are often provided to patients during the final months of life, even when the patient or family prefer comfort care. An example of this is that rates of using cardiopulmonary resuscitation before death are increasing in hospitalized patients.

It's questions like these. Do I put a breathing tube into an elderly patient with emphysema who develops pneumonia and needs ventilation? Do I put a pacemaker in an elderly patient with dementia who has a heart rhythm irregularity? Do I start an elderly patient with multiple chronic diseases on kidney dialysis? These questions are faced daily by doctors, patients, and families. Often the right questions are not asked, the technology is started without discussion, and everyone ends up in a place they don't want to be.

Although technology can be extremely beneficial to support Canadians to live better and longer with chronic disease, there is a serious and immediate need to improve the care of seriously ill elderly patients and their families through the development of some sort of rigorous evaluation and ethical implementation of health care technologies. There is mounting evidence that the unwanted use of technology at the end of life is associated with worse ratings of quality of life for both patients and families, and result in increased family ratings of anxiety and depression. This is a fundamental issue for us with existing and future uses of technology. There is an urgent need to improve communication and decision-making about the use of these life-sustaining technologies. In particular, this includes communication among health care professionals, particularly at care transition points; communication of information about a patient's health and wishes; and communication among professionals and patients and family.

A couple of recommendations I'd like to suggest are that we need to spread the word about the very low-tech approaches, such as advanced care planning. What would it be like if all Canadians had an advanced care plan so that when they entered a hospital, family and health professionals would know their wishes? What if each of us had an advanced care plan as a smartphone app and could carry it around with us? The federal government can encourage this dialogue on advanced care planning at times of life transitions, and consider including such information in mail-outs for CPP applications.

We must develop an ethical framework about how technology should be used in the sick, elderly patient at the end of life so that they are getting the appropriate care at the right time. The federal government should make it a priority to engage provincial and territorial ministers of health in discussion of the best practices and the common metrics of care and standards.

Health care information must be available to whoever is providing the care. It needs to be timely and it needs to be easily accessible. While Canada has spent billions of dollars on the development of electronic health records, we need to continue to invest in this to get to where we want to go.

Finally, the federal government must continue to invest in national programs like the NCE to foster world-class research and the dissemination of knowledge and commercialization of technology.

Thank you.

● (1610)

The Chair: Thank you so much, Dr. Birtwhistle. Those were excellent comments.

Now we'll go to Dr. Saul Quint, please. You have 10 minutes, Dr. Quint.

Dr. Saul Quint: Thank you so much.

I'd like to introduce myself. I am a family physician as well as the CEO of INTERxVENT Canada. Ours is a for-profit organization. From listening to the previous speaker, I would say that the difference between their funding and research, and what we do, makes a point that needs to be taken. I want to emphasize that while I'd like to describe what we do at INTERxVENT Canada, as a background my entry into this world of preventative care was precisely to try to prevent the description of the seriously ill and chronic disease patient—not only the elderly but across Canada—and by my realization that the problems that result from chronic disease can so much better be managed if we prevent, rather than attempt to cure.

With that in mind, I'd like to start by providing a high-level overview of INTERxVENT's platform and product offerings, not as a pitch for INTERxVENT but for products like INTERxVENT's, and how important wellness and disease management programs are for population screening, early identification of risks, and the management of chronic disease at an earlier stage so that we can delay what is inevitable as much as possible and try to improve quality of life and health outcomes for as long as possible.

I believe that our product and many others like ours have the ability to achieve that population screening, early identification, and improved quality of life in a cost-effective and scalable fashion, as we have done in many countries.

I'd like also to very briefly introduce Dr. Neil Gordon, just to put what INTERxVENT is in context. Dr. Neil Gordon was formerly a classmate of mine in South Africa. He emigrated to the United States and has spent the last 25 years of his life totally devoted to preventative health.

He is a former professor of medicine at Emory University and a past chairman of the American Heart Association's committee of exercise, cardiac rehab, and prevention. He has been building the INTERxVENT platform and product suite over the last 16 years. He has published more than 100 scientific manuscripts and abstracts in all the major peer-reviewed medical journals and has written eight books on preventative care. The focus of Dr. Gordon's life is evidence-based care in a scalable fashion.

I'll say one more thing about Dr. Gordon and what he's doing in the United States, just to again put it into context, and then I'll move totally on to Canada.

INTERxVENT International has just recently partnered with the American College of Cardiology to bring this suite of programs to patients through 40,000 cardiology offices as well as, under the American College of Cardiology brand, "workplace wellness programs". We have followed in Canada a similar track, if you will, by partnering with C-CHANGE, the Canadian Cardiovascular Harmonized National Guidelines Endeavour, which is an endeavour by academic and scientific leaders in Canada of the eight guideline groups to come up with a harmonized group of guidelines.

We as family physicians—I'm sure Dr. Birtwhistle will agree with me—are pummelled with guidelines from different organizations that are similar but not exactly the same. These guideline groups got together and created a harmonized set of guidelines. At the Health Care Innovation Working Group, the premiers announced the implementation of C-CHANGE guidelines as one of the three main directives.

Working with C-CHANGE, Dr. Gordon and I have implemented the C-CHANGE set of guidelines into the INTERxVENT suite of programs, such that the guidelines are now able to be delivered on a participant-by-participant or patient-by-patient basis.

● (1615)

What is INTERxVENT? It's a platform that builds. It all starts with a very sophisticated, algorithmically driven health risk assessment. This is a self-reported instrument, but it's complemented by the integration of laboratory tests and biometric testing.

We are partnered in a large way with Gamma-Dynacare Medical Laboratories. They have been one of our primary funders to date. We have an integrated module whereby we can integrate labs, which are auto-populated into the health risk assessment and help us to stratify participants, whether they be employees or patients, into low, moderate, or high risk. Once participants are stratified into low, moderate, or high risk, they are offered online self-help interventions.

I will describe a little of what our health risk assessment consists of. They are online self-help interventions, which are sequenced educational kits or programs on nutrition, weight management, physical activity, stress management, tobacco cessation, medication management. Diabetes and depression are two disease management modules we've recently added.

Not only can participants take part in self-managed programs, they are also, depending on who is using the program, offered the use of a health coach. This is a health professional who has been trained on the back-end database of INTERxVENT. The participants are therefore delivered coached programs—either a comprehensive program or a program on nutrition, weight management, depression, diabetes, etc.—by the relevant experts, who are also trained on the back end of the database to ensure that guidelines are followed and that, while each offering is personalized, it is also standardized to clinical guidelines.

There is some very sophisticated reporting that comes out of the health risk assessment and the scorecards and the detailed reports that follow. In addition, we have some physician reports that I will mention in a moment.

In conjunction with Shoppers Drug Mart we have also added a medications module, whereby patients or employees—whoever the participants are—can fill in the medications they're taking by entering a drug identification number or the name of the drug or names of herbal remedies. It brings up drug-herb interactions. It alerts INTERxVENT coaches as to who has poor medication-taking behaviour. There is lots of evidence that shows that patients stop taking their medications without instructions from a health care provider. Our publications have shown that while one is on a coached program, compliance with and adherence to medication regimes are almost 100%.

As I mentioned earlier, we have partnered with Gamma-Dynacare labs, and a participant is able to download—right off the health risk assessment—a lab requisition with the required glucose, hemoglobin A1C, and lipid tests, and those for blood pressure and weight.

Those measurements—blood measurements and biometric measurements—are done at a Gamma-Dynacare Laboratory patient service centre anywhere across the country and are auto-populated into the health risk assessment, and they may dramatically change somebody's risk profile. Participants who thought they were low risk, because they hadn't had a glucose test in the last three years, might be found to be diabetic and be moved from a low into a high-risk stratification.

Obviously the intensity and duration of the programs that follow are based on the participant's willingness to change, first, and second, on the modifiable risk factor profile.

Really, INTERxVENT is in the business of behaviour change. While behaviour change is a very difficult thing to do, our coaches are trained in behaviour and in behaviour change, and we have very good results, as do many other wellness and disease management programs that follow evidence-based guidelines.

We also offer the health risk assessment, have numerous risk codes that are identified, and we refer participants to appropriate health care professionals. For instance, people with depression, anxiety, or substance abuse are referred to an EAP provider in some of our programs. Others who are identified as having diabetes are referred to a pharmacist for a diabetes meds check.

● (1620)

The Chair: Excuse me, Dr. Quint.

Dr. Saul Quint: Yes.

The Chair: Our time is up now. Can you wrap it up in the next couple of minutes for me, please, so that we can get to questions?

Dr. Saul Quint: Sure I can. I apologize for going over.

We have validated scales such as the workplace product impairment score. The workplace validated score is a screening test that identifies for participants whether they require a colonoscopy, a pap smear, etc.

Lastly, there's a physician summary report, which has C-CHANGE guidelines incorporated into it, which directs the physician, in a polite way, to relook at the treatment of their patient to ensure they're being treated according—

The Chair: Thank you very much, Dr. Quint.

Dr. Saul Quint: Sorry I went over my time.

The Chair: Thank you so much for your comments. It was very insightful.

I must say that, just to alert the committee and our witnesses, two things are going to happen.

Dr. Victor Ling will be here at five o'clock and he'll give his presentation. You'll only have five minutes to ask him questions, so whoever is on the agenda will have the opportunity to do that. He couldn't make it before that.

On the other side, bells will ring at 5:15, and as soon as the bells ring, we will have to be dismissed. So we will keep everything sharp today. We'll get through as much as we can, but we'll try to get as many people in as we can.

We'll go into the Q and A, the seven-minute round right now, and when Dr. Ling comes in, I will interrupt it so he can give his presentation.

We'll begin with Dr. Sellah, please.

[*Translation*]

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

I would like to thank our witnesses, Dr. Birtwhistle, who is here with us, and Dr. Quint, who is joining us by teleconference.

Since we have been speaking about innovation, and that includes studies we have already done on chronic illnesses, we are aware that Canadians are not all in good health as they age, and that is an enormous burden for the health care system.

Dr. Birtwhistle, I listened to your presentation carefully. You said that when people came to the end of their lives, new technologies decreased their quality of life. Could you tell us a little more about that?

[*English*]

Dr. Richard Birtwhistle: Thank you for the question.

I guess I need to understand a little bit more about new technologies that would improve quality of life. Certainly there are technologies that improve quality of life by allowing people to recover faster, if they're going to recover. In terms of the end of life, though, in fact, there are new technologies that probably decrease quality of life, rather than increase quality of life, because what happens is that people with a terminal illness or who may have a few weeks to live, have some technology applied to them that in fact results in prolongation of life in a very poor state.

● (1625)

[*Translation*]

Mrs. Djaouida Sellah: You spoke about communication between patients and health care professionals, especially doctors.

I'll give you an example from my own experience. I did my residency in Quebec City. When very ill patients came in, we had to ask the individuals themselves, if they were conscious, or their family if they weren't, if we should perform CPR if they had a heart attack or something like that. That was our approach. Since I don't practise anymore, I don't know if things are still done this way. During our residency, when we had an elderly person who was suffering, we always had to ask them this question first. It was a way of asking patients if we should prolong their life, as you said, or if our treatment should be aimed at palliative care.

With respect to best practices, I would like to know if that is done in certain areas, to your knowledge.

[*English*]

The Chair: Mr. Birtwhistle, do you want to answer that one? Then maybe we'll let Dr. Quint have a chance at doing it as well.

Dr. Birtwhistle.

Dr. Richard Birtwhistle: Thank you.

There are bold attempts by physicians and nurses and others to ask that question if they have the opportunity, but it is by no means routine. Of course the concern is that elderly persons may get into hospital but be in a state in which they can't answer. They may or may not have a power of attorney, so health professionals are left in a situation in which they actually have to make the decision on the spot. We've been trained to try to save people, so what happens is often whatever the technology, whether it's putting in a pacemaker or resuscitating a person and trying to treat heart failure, it actually ends up prolonging life when that may not have been the patient's wish.

The Chair: Dr. Quint, do you have a comment on this before our time runs out for Dr. Sellah?

Dr. Saul Quint: I'll make a very short comment. I'm not a heart specialist but it goes to our training that we always feel better if we do something for a patient, and sometimes what we do is not always improving their quality of life.

The Chair: You have a minute and a half, Dr. Sellah.

[*Translation*]

Mrs. Djaouida Sellah: I would like to continue along those same lines.

In fact, we did not just use that approach for patients who came to emergency and were suffering. I remember that, at the time, we even considered asking family doctors to discuss with their patients whether they would like us to try to resuscitate them using tools or medications, should a situation arise.

I think this new approach could be more widespread across Canada. As you said, when someone comes to the end of life stage, the best thing is to provide palliative care, rather than try to resuscitate the person.

[*English*]

The Chair: Okay. Thank you.

We are pretty well out of time, but these are very good questions, very profound questions.

We'll now go to Dr. Carrie and Ms. Block, who will be sharing their time. Who wants to begin?

Dr. Carrie.

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

I may only have one question, so I'll ask Dr. Birtwhistle. You mentioned unwanted use of technology at the end of life, and it's very interesting. We've had this conversation in my family. You talked about low-tech options, something like an advance care plan. You talked about the possibility of smartphone apps. We've heard a lot about stuff like that in this study. You also mentioned an ethical framework.

What would you suggest that people have to make sure their wishes are followed? Could you suggest what kind of technological innovation could help with this situation for Canadians facing these big questions?

● (1630)

The Chair: Go ahead, Dr. Birtwhistle.

Dr. Richard Birtwhistle: Thank you.

There are opportunities for advance care planning, as an example, and to use technology to enhance that. We're not talking about doing it necessarily when people enter hospital but even before, as was suggested, as part of their routine care that advance care planning would be discussed.

Unfortunately, family doctors and others, we're not very good at it and we need to get better at it. One of the things that can help with this is electronic medical records both from the physician side, in which there may be prompts and then some sort of template that can be used for this for the patient, as well as patient portals, in which people can put in their own input into an electronic medical record about what their wishes are.

The Chair: Dr. Quint, would you like to make a comment on that?

Dr. Saul Quint: We recently launched a program, wisely instituted by the Alberta government, for complex care patients. One of the questions on the complex care plan that we helped develop for complex care patients, which physicians go through with their patients, is “Do you have an end-of-life plan?” It encourages the physician to actually help institute an end-of-life plan, which, to Dr. Birtwhistle's earlier point, is really important to create before a seriously ill patient arrives at hospital.

The Chair: Thank you very much.

We'll now go to Ms. Block.

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

I'd like to welcome our guests here today.

Dr. Birtwhistle, in your opening comments you referenced the Canadian Primary Care Sentinel Surveillance Network. I understand you're the chair of that network. I know it's a national project funded by the Public Health Agency of Canada. I wonder if you would be willing to share with the committee how this network, this project, is generating health benefits for Canadians.

Dr. Richard Birtwhistle: I'd be pleased to give my answer.

This network has been funded by the Public Health Agency since 2008. Currently we have about 420 physicians contributing data on almost a half a million patients over every three months, so that we can now follow eight different chronic diseases over time and be able to report back around surveillance. These networks are in seven provinces so we're not quite coast to coast to coast, but pretty close.

This is a real opportunity to be able to track chronic disease in a way that we haven't been able to do before. We can collect information around medication. We have information on heights, weights, blood pressures—things that you cannot get from other types of administrative data.

With the opportunities for using this to look at chronic disease in Canada and to feed information back to physicians on how they're managing patients with chronic disease so that they can think about practice improvement and also as research opportunities, I'm perhaps a little biased, but it's a very powerful tool.

The Chair: Dr. Quint, do you have any comment on that particular question?

Dr. Saul Quint: It's only to say that those kinds of surveillance tools and databases, which track these results, are very helpful in proving which evidence-based tools and evidence-based treatments actually create positive health outcomes and a positive return on investment in terms of the expenditure on those treatments.

● (1635)

The Chair: Thank you.

Ms. Block, you still have another minute.

Mrs. Kelly Block: I could comment on what you focused on earlier in terms of end-of-life care. One can well imagine that the investment in technological innovation in health care results in a number of outcomes, not the least of which would be life saving, and thereby, perhaps life prolonging, when used in the case of treating an elderly person. I understand the dilemmas that are often faced when these technologies are there and are available. As citizens, as Canadians, we believe that research and that investment is being made on our behalf.

I was a member of a parliamentary committee that looked at palliative and compassionate care. We wrote a report. Maybe you could comment on hospice care and where that fits in terms of what you look at when it comes to end-of-life care.

Dr. Richard Birtwhistle: Thank you.

I think we have a dire need for hospice care in Canada. That isn't available. Many people end up in acute-care settings because there's no place for them to go. Home might be difficult for a whole lot of reasons. Some other sort of facility to provide care for people who do not need high-tech care is really important.

Let me add that technology is really good, but we need to do it in an efficient way and know when not to use it.

The Chair: Thank you so much.

Welcome to our committee, Ms. St-Denis. It's your turn now. You have seven minutes.

[*Translation*]

Ms. Lise St-Denis (Saint-Maurice—Champlain, Lib.): Thank you.

As I am getting older, I am very concerned about these issues.

I am in no way questioning the quality of your research; it is very interesting.

You spoke about seven provinces. Which three are not taking part?

Do people, even researchers, have different attitudes toward these problems? It's a question of attitude. The programs are perfect, intellectually, but are we really trying to respect the wishes of patients? There is also what the family wants, but what the patients want is a priority.

I'm from Quebec. Contrary to what Mrs. Sellah said, when my father was sick, his doctor, who was a woman, asked him what his wishes were should he have a heart attack. The next morning, he warned me that she had written in his report that he wanted nothing done. That was because my father, who was all there mentally at 90 years of age, had made that decision. No one even consulted me. I greatly appreciated that attitude. I think it is important.

In your programs, do you place importance on respecting people's freedom?

Also, why are three provinces not participating in your program, which is federal?

[*English*]

Dr. Richard Birtwhistle: Thank you.

The Canadian Primary Care Sentinel Surveillance Network is slightly different from the Technology Evaluation in the Elderly Network. They're two separate things. The only provinces it's not in are P.E.I., New Brunswick, and Saskatchewan at the moment, and the territories.

As far as your other question, I think it is really important for us to respect individual choice, particularly in aging people. Their choices should be respected and there are some....

I have a 97-year-old patient in my practice and up until very recently she was gung-ho. She wanted all the technology she could have if she could continue to live. So as much as I've been speaking about the downsides of technology, perhaps. But there are some really good sides and we need to be able to find the right technology for the right person.

● (1640)

The Chair: Dr. Quint, did you have any comments that you wanted to make for Ms. St-Denis?

Dr. Saul Quint: Not at this point.

The Chair: Okay, thank you.

Continue, Ms. St-Denis.

[*Translation*]

Ms. Lise St-Denis: Dr. Quint, is your organization, INTERx-VENT, public or private?

[*English*]

Dr. Saul Quint: It's a private organization originally founded in the United States and now global.

[*Translation*]

Ms. Lise St-Denis: Your programs are interesting, but how do people communicate with you? Do you advertise?

[*English*]

Dr. Saul Quint: There are essentially two different ways that people enter the program. One is through employer-sponsored programs. Ninety per cent of organizations in the United States with more than 1,000 employees offer their employees a formal wellness and disease management program. The reason for that is there is a great return on investment in terms of improvements in direct and indirect health care expenditures.

In Canada it's a little bit more of a challenge. Employers only benefit from the indirect health care expenditures, and by that I mean from absenteeism, presenteeism, and improved productivity. The actual cost of direct health care is borne by the government in Canada versus by the employer in the United States.

That being said, a lot of research has been done. A gentleman by the name of Chapman published in the 2012 *American Journal of Health Promotion* 62 workplace wellness studies, in which he showed a return on investment of 5.5:1, just on the productivity. Productivity is very important to employers. Obviously the Canadian governments, both federal and provincial, could be seeing themselves as, if you will, giant corporations that in their own right would benefit from both the direct health care expenditure—because the government foots the bill for hospital visits, emergency visits, etc.—as well as improved productivity.

Also the other channel, if you will, by which INTERxVENT is offered to patients is through physicians. Again in the United States under Obamacare, recent changes have allowed for the offering of wellness and disease management programs with in-office coaching by nurses.

The easiest way I explain this to patients who consider going on this program is, Weight Watchers. There's nothing magical about Weight Watchers other than that behaviour change is difficult. You need support. You pop into your Weight Watchers or you go online. You speak to your coach to keep yourself motivated. It's much the same with Alcoholics Anonymous.

In any lifestyle behaviour change where you have to change your diet, increase your exercise, drop or reduce your weight, it's very important to have that support that a coach brings. These are formalized programs that are offered very recently in the United States. Some studies have been done. They're very positive in terms of extending that health coaching to telephone-based coaching.

INTERxVENT's programs are scalable because the telephone-based coaching is delivered out of call centres. We offer employee programs, for instance to Sykes, which is a private company, for their own employees. They do Telehealth Ontario.

As a family physician, when we work with THAS, the telehealth advisory service, they take inbound calls. In my view, they have an unused capacity to place outbound calls to encourage people to lose weight, increase exercise, have their blood done, have their physicals done, improve their cholesterol, glucose, etc.—

The Chair: Thank you, Dr. Quint. I know it's very hard because you can't see me giving you those secret signals. I just have to blast into the microphone.

Dr. Saul Quint: Interrupt me any time. Thank you.

The Chair: Thank you.

[*Translation*]

Ms. Lise St-Denis: Do I have any time left?

[*English*]

The Chair: No.

Ms. Lise St-Denis: There's no more time. Okay.

The Chair: I would certainly let you know. Thank you.

We will now go on to Mr. Wilks and Mr. Lobb. I understand they're sharing their time, beginning with Mr. Wilks.

● (1645)

Mr. David Wilks (Kootenay—Columbia, CPC): Thank you.

Madam Chair, this will probably be more of a statement than anything else.

It's an interesting challenge for the medical profession when it comes to end of life. You get to the point when you can throw technology at it all you want. The reality is that you can have an artificial ventilator and keep someone going for a long time, with them just lying there.

To me, quality of life means a lot more than length of life. As a former police officer, I know that there were a few times when we had DNRs. That seems to be a simplistic way of doing something without using any technological innovation. Do not resuscitate: pretty simple. It's very difficult for the family to accept, but at least it gives a clear indication to the medical profession.

I'm wondering, on the idea of technological innovation, is there a way that we could create an electronic database that shows deterioration in the life of a human being?

Just use me as an example. It gets to a point where I'm 87 years old. I've shown that I have degenerative heart disease. We've tried 15 different things. There's just really no sense in...and I say I don't want it; please let me die with some dignity.

I don't know. What are your thoughts on that, Dr. Birtwhistle?

Dr. Richard Birtwhistle: Thank you, Madam Chair.

I absolutely agree that we could have some sort of electronic ability to capture that.

Again, an advance care plan, structured right, in the right way, may actually capture some of that information—a record of people who've had multiple treatments, for whom really there are no more treatments, and for whom any further attempts at life-sustaining or life-lengthening therapies are not worthwhile.

I think you could do that in an electronic way.

The Chair: Mr. Lobb.

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

My first question is for you, Dr. Quint. You have quite a nice outline here with regard to the number of different companies that you've founded and been able to grow—and then, probably fortunately for you, been able to sell.

We're looking at technological innovation, and really we're looking at using this to improve patient outcomes. I'm just wondering if you can give us an idea of why there aren't more people out there like you in Canada. What factor have you experienced in your career that maybe we're lacking in Canada with the entrepreneurial spirit?

Dr. Saul Quint: I think I'll take that as a compliment. Thank you.

I just get a thrill from trying to build something new. I think it takes passion, really, and I have a passion for preventative care. I have a passion for trying to do something early on and changing the course of somebody's life before disease hits.

I've been practising medicine for 28 years, and I've seen a lot of ill people. We've spoken a lot about end of life and the elderly and chronic disease. If you were to get a chronic disease and just die, without having that poor quality of life between the time you developed the disease and you died, then there'd be no need for this.

There are very many entrepreneurs, and I think you'd be surprised at how much competition we have in Canada. What we're doing in Canada is in its infancy. In the United States, it literally is a multibillion-dollar industry. As I said, 90% of corporations offer these programs. Probably 2% or 3% do in Canada.

I think it's a harder challenge here because of the government-funded health care system, if you will, and the reliance of employers on government to take care of it all.

INTERxVENT Canada is a MaRS-sponsored company. We've presented at MaRS. We've presented at the global health conference. There are many entrepreneurs working with us, partnering with us, talking about building in incentives, challenges, social media. We're exploring lots of different partnerships as we speak.

So I think Canada is growing in the world of proving itself on the stage of health care innovation.

● (1650)

Mr. Ben Lobb: Okay. I probably have time for a quick last question.

What has your experience with patents and trademarks been like through the years, and have you had to defend those in courts in different countries? Has that been a difficult issue for you?

Dr. Saul Quint: We haven't really defended any patents in Canada, because our U.S. colleagues were fortunate enough to get, or apply for, patents in the United States.

In our world, it's not as much a patent issue as it is an evidence-based intellectual property issue. For instance, we have a way of stratifying people into low, moderate, or high risk that is built into our programs. No one knows what the algorithms are, but the programs put people into the right brackets. This is why corporations like Chevron in the United States use INTERxVENT. We offer programs to their employees in twelve countries and six languages. It's just because they're better programs. We don't really have patents.

The Chair: Thank you so very much.

Now we are going into our five-minute rounds. There have been absolutely amazing questions and amazing answers. Thank you, committee, for doing that.

We will begin with Dr. Morin.

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

My first question is for Mr. Birtwhistle.

In your presentation and in replying to questions, you mentioned several low-tech things we could use to improve the health of our seniors. You mentioned, for example, advanced care planning and patient portals. Are there any other low-tech solutions you would like to share with us that we could put in the final report as good examples to adopt and to share throughout Canada?

Dr. Richard Birtwhistle: Thank you. That's a challenging question.

I'm tempted to say, "Just have people talk to each other", but that's probably not something you want to put in your report. I don't have any other examples I could provide you with at this moment.

Mr. Dany Morin: Okay.

In your presentation you also talked about sharing best practices between federal and provincial governments. Do you have any tips respecting jurisdictions on how we can improve our intergovernmental sharing?

Dr. Richard Birtwhistle: I'm hoping that our Technology Evaluation in the Elderly Network will actually be able to provide some of those opportunities around developing best practices as part of our knowledge translation activities.

I hope that as we go forward in doing this, both as research and as a knowledge translation activity, we will be able to share it widely, at both a federal and a jurisdictional level. How that can happen, we'll leave up to you.

Mr. Dany Morin: Thank you very much.

My next question is for Dr. Quint.

In you presentation you talk about preventive care, cost-effective care, and evidence-based care, and you also mention several virtual programs.

It was a very good presentation, but what is the next step? How can the federal government really help the different industries related to health care or the different health care systems in the provincial governments to adopt preventive care, cost-effective care, and evidence-based care?

Dr. Saul Quint: Thank you. That's a very good question.

It's been our experience that when we've gone to present to workplace HR departments, and to CFOs of different large corporations, they all ask for the same thing. They ask for Canadian-centric proof that there will be improved outcomes, improved productivity, decreased absenteeism, and presenteeism.

Where government could greatly help is, number one, to do pilots with products like ours, not necessarily ours, but with health risk assessments, with evidence-based programs that are concordant with C-CHANGE and other Canadian guidelines. Offer those programs, do research on them, and prove that the ROI in Canada is no different to that proven in many other countries and published in major peer review journals for independent research.

The second thing that I think is probably the killer application, if you will, is to offer corporations tax incentives for offering such programs to their employees. As I mentioned, Chapman looked at half a million people and 62 different studies, and there were huge benefits in outcomes, drops in medication usage, compliance in those who needed medication, and improvements in all the other factors such as blood pressure, satisfaction scores, etc.

Given that government, and not the employer, benefits from the direct health care expenditures, if they were to transmit some of those savings back to the employer, I think that would be the catalyst that would get some of the large employers in Canada to start adopting these formal workplace wellness programs, much as they are across the United States and the rest of the western world.

● (1655)

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

We want to welcome Dr. Ling to the committee.

We've been awaiting your arrival and are very grateful that you're able to join us, Dr. Ling. The other two doctors have given their presentations and we've gone through the first round. We're into the second round of questions right now.

Can you hear me, Dr. Ling? There's someone there to give you assistance.

Dr. Victor Ling (President and Scientific Director, Terry Fox Cancer Research Institute): Yes. That's perfect.

Thank you.

The Chair: Thank you so much.

Dr. Ling, as I've said, we've had some questions. We've had other presentations.

At 5:15 the bells will ring and I will have to bring our committee to a close. If you would be so kind, I'd very much appreciate it if you could take 10 minutes now to give your presentation. Could you do that?

Dr. Victor Ling: Yes, certainly.

The Chair: Thank you, Dr. Ling.

Dr. Victor Ling: Thank you. It's my pleasure to be here.

I really appreciate everybody being here. I think everybody has a copy of our briefing. Am I correct?

The Chair: Yes, we do.

Dr. Victor Ling: If I could just simply walk you quickly through the PowerPoint presentation, that would be the easiest thing for me.

The Chair: It should be in your handouts, members.

Dr. Victor Ling: The very first slide is just to say who we are. We are the Terry Fox Research Institute. We are a virtual institute. Across Canada there are now about 55 organizations. All the major universities, cancer research centres and cancer hospitals across the country have agreed to be part of this virtual institute. The headquarters is in Vancouver, but we have a very small staff of five people. From there, we help to organize and direct the investments of the Terry Fox Foundation into various types of cancer research.

I don't have to explain to everybody why we need to control cancer in this country. We all would like the rate of cure for cancer to be improved and the number of people getting cancer to be reduced, etc. We also understand and know that a lot of innovations have been developed in Canada. There have been investments made in CIHR—which I was here all day for—and other areas, such as Genome Canada, Canada Foundation for Innovation. All these investments have been made to support the universities, and yet all of us appreciate that somehow at the consumer's level we don't think we see those investments.

I'll just give three examples, in cancer at least, of what we have experienced. We believe that genome science is very important. We believe the area of immunotherapy, using the immune system to attack cancer, is very important. There's a lot of work going on there. As well, the whole area of imaging is very important.

How do we actually advance cancer research in Canada? How do we actually do it? We can do it, I think, by applying these kinds of innovations, but I'm not here to tell you how to apply these innovations. There are very many innovations. I'm here to tell you about our experience at the Terry Fox Research Institute, where we find it actually challenging, and actually very instructive, as we move innovation to the clinical level. This is what we say: the kind of innovation we expect to see very rarely happens, and doesn't happen systemically. What is needed is for organizations to do pilot experiments to show that it can actually work before it is applied to our health care system.

What I'm really talking about is translational research. This is research that requires teamwork. It requires many organizations to come together.

The Terry Fox Research Institute was created in 2007 to focus on translational research. We support many team-oriented, multi-disciplinary programs that are milestone-driven. I don't want to get you all hung up on the details of all this. I just want to tell you about one project we're doing. We have learned a lot of lessons from doing that one project. We did a project on detecting lung cancer early.

So here's the rationale for the Terry Fox early lung cancer detection study.

We know that in this country, and in every country in the world, lung cancer is a major killer. It has killed more people than breast cancer, prostate cancer, and colon cancer combined. It's not the most frequent cancer, but it kills more people than all these other cancers combined. We also know that if we detect lung cancer early enough, it can be cured by simple surgery. We all know that. But often by the time a person has lung cancer and they cough up blood, it's too late.

In the United States, they spent $250 million. In 50,000 people, they showed that if you can detect lung cancer early enough using a low-dose CT scan, the mortality rate goes down by 20%. That's huge. So where is the Canadian innovation? Well, we don't have $250 million. We certainly don't have it, and I don't think we can afford $250 million just to do screening in 50,000 people.

● (1700)

We decided that we needed to detect people with early-stage lung cancer much more efficiently than our American counterparts, and much more cheaply. So the team that came together developed a web-based questionnaire to improve the efficiency of detection.

You can view the questionnaire on the website. It asks a number of questions about smoking. How old were you when you started smoking? Are you still smoking now? On average, how many cigarettes per day do you smoke, etc.?

It also asks you to name the highest level of education you have completed. You might not think that question is relevant, but it has been shown that your level of education and your chance of developing lung cancer actually correlate, which is surprising. There are other things of that nature.

So we did this, and as this pie chart indicates, on average, for about five people in 100, we were able to detect early-stage lung cancer when there were actually no symptoms. The efficiency of doing this was at least three times better, or more, than in the United States.

This was done in Vancouver, Calgary, Toronto, Hamilton, Ottawa, Quebec, and Halifax. We have been able to show that across the country that level of efficiency is possible. This is through a lot of cooperation from everybody. It has been great. The 114 people who have gone through the tests and had their early-stage lung cancer detected and treated are grateful.

What have we learned from this project? We're going to do it tomorrow, right? Are we automatically going to put it in the health care system?

The answer is, no. We're not going to do that. We learned from this process how difficult it is even to launch a pan-Canadian project of this sort. There have been so many jurisdictions siloed, and ethics approval has to be received from essentially every hospital to participate. In fact, one hospital in Ottawa was not able to start this thing until about a year later than everybody else just because we had trouble getting ethics approval for this study. It's the administrative red tape, etc.

We also know that what we're trying to do is build a group of people interested in working on lung cancer, but in the past all these groups had been competing with each other. We had to build trust and collaboration and cooperation. Finally, of course, the health care system required that we do this to try to show that it was economically feasible.

What have we learned from this project? We have learned that Canadians can actually work together—it's amazing. When you give them a vision that they can work together on and do something important, people actually do work together.

The other point we've learned is that you can't plug and play. You can't import the technology from the United States and just put it into our health care system. It doesn't work that way. We really have to field test the innovation first to see where it is useful for our system.

The final point we've learned is that even though we have done well, all the people who came to the study came from large cities. Canada is not made up of people from only large cities. We have underserved communities, we have people in rural areas, and these kinds of tests also need to be available to them.

We need more innovation to reach those kinds of people. That is what we have learned. We have to think about using mobile units in northern Canada, perhaps, and things like that. These are the innovations we're thinking about.

Finally, on project number three, this Canadian innovation is actually recognized outside of the country—in Taiwan, for example. I know that John was there recently.

This is important for us. They've collaborated with us, and they are field testing this in their population. That will affect our population, because we're a country of immigrants.

● (1705)

I think the challenge remains that any innovation requires implementation at the health delivery level. We can invent everything we want at CIHR and Genome Canada, and invest in CFI, but if it doesn't get delivered, everything stops. Nothing happens.

The Chair: Dr. Ling, we are out of time. Thank you very much.

I guess we'll have one question.

I know you know Mr. Weston very well, and he's on the list next.

Go ahead.

[*Translation*]

Mr. John Weston (West Vancouver—Sunshine Coast—Sea to Sky Country, CPC): Thank you, Madam Chair.

It is a real honour to be here with you. This is the first time I have had the opportunity to be on the Standing Committee on Health.

● (1710)

[*English*]

This is a day for incredible coincidences. I just completed a document for my constituents that was exclusively delegated to health, and it's the first day I get to meet Dr. Ling, though we've spoken many times.

It's also the first day, Dr. Ling, that I actually pulled out my Terry Fox shirt that Judith Fox gave me before going to Taiwan, a carbon copy of which I presented to President Ma Ying-jeou in Taiwan. He is very supportive of the Terry Fox institute. He in fact led the Terry Fox run in Taiwan for many years until it had its last episode a few years ago. He wants to get it going again.

So I'm very pleased to meet you. On behalf of I think everybody here, we're all very proud of Terry Fox and his memory. We're delighted that you're part of extending that.

You talked about a virtual organization. It's pretty good that you've in fact attracted almost $600 million for a virtual organization and continue to innovate.

In a world where we tend to judge people and organizations on their experience, or their education, or their balance sheets, your emphasis is on collaboration—international. When I was in Taiwan, I learned of four scientists who are working with the Terry Fox institute, in Taiwan, on lung cancer, leukemia, and I believe, liver cancer.

To what extent are we Canadians innovating in the way we use our relationships, both in Canada and around the world? How much of a unique thing is that?

Dr. Victor Ling: I think Canadians are quite innovative. They're quite competitive in the area of discovery, of making great discovery. We're just not very innovative at applying the knowledge to the health care system.

Part of the problem is that I believe our health care system has very little incentive to innovate. Why? Where I live, the health care system takes all the money it gets from the federal government and elsewhere and applies it to just maintaining the system, not trying to improve the system.

It's not that people aren't interested. It's just that they need incentive. They need to have a designated dollar for the delivery level. We have innovation dollars at the front-end level, but we don't have innovation dollars to deliver innovation at the health care level.

Mr. John Weston: I'm new to this committee, but I think the topic is technological innovation. What I'm trying to get you to comment on is whether there's something special about the use of a dollar when people collaborate. Are we deriving more with less by doing what the Terry Fox institute is doing around the world?

Dr. Victor Ling: Absolutely. As scientists, we collaborate. We collaborate with Taiwan and we collaborate with other countries. That is very important. Collaborating with other people enriches our dollar, clearly, and as I said, because of immigration to Canada, whatever other countries do there helps us as well. It's a win-win for everybody.

The point I was trying to make is that often a lot of these discoveries are at the invention level, but at the application level.... We are buying health care at the retail level. We're buying drugs from the United States and from Europe. We're not developing here. We're buying diagnostic tests from the United States and elsewhere. We're not developing them here.

Why are we not? It's because our health care system does not have a mandate to develop the tests to actually show they work in our system. They work in the United States' system, and Taiwan was sure that their tests would work in their system, but we may be buying from them to apply to our system.

Mr. John Weston: Maybe I have time for a little more.

I know our chair is very keen on preventive health care. In fact she turns up to the parliamentary fitness swim on Thursday morning as a role model.

Do you have anything to say about preventive medicine, something that was brought up by the other doctors earlier today?

● (1715)

Dr. Victor Ling: Absolutely. I think prevention and a healthy lifestyle are the ideal situation. In Canada, we are wonderful. We have east coast to west coast. If you look at the gradient of health from east to west, the west is healthier than the east. You can see the lifestyle, diet, and habits change as you go across the country. So the data is there. There has to be some innovation. There has to be a will to try to change lifestyles.

Mr. John Weston: We have the Terry Fox run here on Friday, May 10, at the Delta Ottawa City Centre hotel. Would you like to say anything about that to this committee?

The Chair: I'm sorry, Mr. Weston and Dr. Ling, we're just over time.

I know Mr. Kellway has a quick question before the bells ring.

Mr. Kellway, could you give it a go?

Mr. Ben Lobb: Madam Chair, out of respect for Mr. Ling and to give Mr. Kellway a chance, I'm prepared to stick around for a couple of minutes so he can ask a question or two just to give him a chance.

The Chair: We're going to dismiss at 5:15, Mr. Lobb.

Mr. Kellway.

Mr. Matthew Kellway (Beaches—East York, NDP): Thank you, Mr. Lobb. I appreciate that.

With all respect to all our guests. I appreciate your attendance today. You all had very interesting things to offer.

I wanted to ask Dr. Quint a question about workplace health, simply because I worked on this from a union side for so many years. I always understood the value of lifestyle changes and the wellness perspective and bringing that perspective into the workplace. If you go to Health Canada's website and you look at workplace health, you'll find a summary of decades of research on workplace health that talks about the issues of low worker control in combination with high demands imposed on workers. It talks about three times the incidence of heart problems, three times the amount of back pain, mental health issues, and five times the incidence of certain cancers.

So, Dr. Quint, I'm curious about whether in the course of your business you talk to employers about—

The Chair: Mr. Kellway, I'm sorry, the bells have started to ring now. Just very quickly could you give the question?

Dr. Quint, we're going to have to adjourn now.

Mr. Kellway, would you finish your question really quickly?

Mr. Matthew Kellway: Sure. I was two words away from the end, I think, which was to say, what do you do to advise employers on healthy management techniques?

The Chair: Dr. Quint, could you please send that answer to the clerk and we'll distribute it amongst the committee members?

Dr. Saul Quint: Yes, I will.

The Chair: Thank you.

The meeting is adjourned.