HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Health

HESA • NUMBER 084 • 1st SESSION • 41st PARLIAMENT

EVIDENCE

Tuesday, April 30, 2013

Chair

Mrs. Joy Smith

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● (1530)

[*English*]

The Chair (Mrs. Joy Smith (Kildonan—St. Paul, CPC)): Good afternoon, everybody. I am Joy Smith, chair of the committee. I want to welcome our witnesses. We certainly have a very impressive panel today.

As you know, we're doing the technological innovation study.

The Chronic Disease Prevention Alliance of Canada is here. We're going to be hearing from Craig Larsen, the executive director, and the Honourable Mary Collins, chair. Welcome. I'm so glad you're here.

As an individual, we have Cameron Norman, principal, CENSE Research and Design, adjunct professor, Dalla Lana School of Public Health, University of Toronto. Welcome. It's very nice of you to come as an individual.

From Gateway Rural Health Research Institute we have Ken Milne, chair of rural medicine. Welcome. I understand you have a presentation, but it's not bilingual.

Dr. Ken Milne (Chair, Rural Medicine, Gateway Rural Health Research Institute): Yes.

The Chair: I'm sorry, but we can't present it.

Dr. Ken Milne: That's fine.

The Chair: I could ask the will of the committee, could I not? Is it the will of the committee to see this PowerPoint, even though it's not bilingual?

No. I just thought I'd ask. It was worth a try.

Dr. Ken Milne: I appreciate your asking. They're just pretty pictures.

The Chair: That's okay.

From Beagle Productions we have Dale Friesen, chief executive officer. Welcome.

We have a very impressive group of people.

We will begin with Mary Collins, please.

Hon. Mary Collins (Chair, Chronic Disease Prevention Alliance of Canada): Thank you very much, Madam Chair, and members of the committee.

We're very pleased to be here from the Chronic Disease Prevention Alliance of Canada.

I'm Mary Collins. I'm the chair of the alliance, and Craig Larsen is the executive director. We're going to give a general view around technology and innovation for the prevention of chronic disease. I know that we're going to be hearing some really interesting, very specific ideas and applications, which we're looking forward to hearing as well.

Just to give you a little background, CDPAC is an alliance of nine national NGOs. We share a vision of an integrated and collaborative approach to promoting health and preventing chronic disease in Canada. Our key activities include knowledge mobilization and advocacy for evidence-informed policy. We work primarily at the federal level, although we also communicate with the Council of the Federation to help inform provincial and territorial action.

I know you've been working on this for quite a while and have had a lot of input from a whole variety of folks. I know that you are aware of the impacts of chronic disease, but given your studies, we want to reiterate a couple of facts to keep in mind.

As you know, three in five Canadians above the age of 20 are living with a chronic disease, and four in five have at least one risk factor. The costs of managing chronic disease in Canada currently account for 58% of all health care spending and are estimated at $68 billion annually. Indirect costs associated with the loss of income and productivity are estimated to be about double that, about $122 billion.

In Canada, 67% of deaths are caused by the four major chronic diseases—cancer, diabetes, cardiovascular and chronic respiratory diseases. Of course we know that diabetes is one of the fastest growing diseases, particularly among aboriginal populations, and that the current generation of Canadians are likely to live shorter lives than their parents, given the trajectory we're on.

The good news is that the four major risk factors for chronic disease—unhealthy diet, lack of physical activity, tobacco use, and inappropriate alcohol use—are in fact modifiable and much of chronic disease is thus preventable. We just have to get there.

How can technological innovations help us bend the curve of chronic diseases, which have grown so extensively over the last decade not only in Canada but in almost every developing and developed country in the world? This is a field that's just beginning to open up, and the opportunities are virtually endless. We've already witnessed the tremendous benefits of technology assisting those with chronic diseases to manage their diseases. Whether it's the modern monitoring devices for heart disease or those for tracking their conditions, some of these technologies are well down the road and are being used effectively, and there are certainly many other examples of success stories. But not as much work has been done around technological intervention for the prevention of chronic disease.

So how do we target the greatest areas of need while at the same time taking advantage of some easy wins to help advance technology for healthy living? With the plethora of information available through web sites, applications, or apps, as we all have come to know them, and social media, consumers are becoming much more health savvy than ever before and increasingly amenable to using technologies to support their healthy living. Electronic tools are critical.

We know that the provision of data and information alone will not necessarily mitigate the preventable risk factors of chronic disease. Often they need to be partnered with the mentorship and buddy system, but they play an important role in making it easier for people to access, interpret, and apply the confusing masses of information they may have at their fingertips.

I guess you already know that 48% of Canadians are using mobile smart phones, that 70% have downloaded applications, and that 34% of those relate to health, fitness, and wellness. So Canadians are already getting there.

Clinicians, of course, are certainly looking at technologies to provide them with quick, accurate, and efficient assessment tools. They don't always have the specialized time or the ability to make dietary assessments or offer practical strategies to support patient behaviour changes and thus are increasingly avid users of apps. Technology accelerates such clinical processes for practitioners and patients alike, and helps improve the accuracy and completeness of measurements.

There's been particular development around smoking cessation apps, and a lot of good practice and some good results. Usually they have to be associated with a physician or another health practitioner helping you, but at least you have the app that tracks what's happening with your smoking behaviour and that can help you avoid it. It's the same thing with alcohol use.

● (1535)

Nutrition apps, we think, hold a huge amount of potential. I mean, this is the thing that's really tough. I keep thinking that I'd like to be able to go into Second Cup and hold my BlackBerry up against the food choices, and it would tell me, “Mary, uh-uh, not that blueberry muffin; that's 350 calories and 16 grams of sodium. How about that nice salad over there?”

Some hon. members: Oh, oh!

Hon. Mary Collins: Obviously, you need all the backup to do that, but I think that's going to come. It's probably an application that we'll eventually see.

To date, knowledge about diet and nutrition, and cancer and chronic disease prevention has been very slow to move into the mainstream practice. In our daily lives, we're all having to navigate a very complex and overwhelming amount of information when we go to grocery stores or to restaurants. Quite often, people just give up on it. They don't have the time and they just don't have the energy. It's not user friendly. It's not easy to use at this point.

An interesting example, though, is one in San Francisco, in a project called iN Touch, which used what they now call medical mobile technology to work with teenage boys who were overweight and obese and from low-income families. With the app that had been developed, along with mentorship and buddy support—and this was academically reviewed—they were able to show a strong impact and a reduction in weights. We don't have that many scientific studies yet. This, we found, was a really interesting one. We think that's something that needs a lot more work. More evaluation is needed.

I'm not going to talk about health records because I think you've heard a lot about that, but I can't believe that after all these years we still don't have interoperable, up-to-date health records, even between Vancouver Coastal Health and Fraser Health. It's absolutely mind-boggling.

What do we think the challenges are in moving ahead?

Certainly, there are privacy challenges, and we all know that. We have to find a way of dealing with that, of protecting people's privacy but not letting that be a barrier to being able to move ahead on these issues.

We also think that quality control and evidence-informed messaging is critical. There are challenges in being able to differentiate between scientifically valid information versus that's only pop, you might say, or commercially driven. The public and other users of online information need mechanisms, protocols, and protections to help with this. Certainly, the federal government, along with other partners, could play an important role.

I remember, as some of you may, when there was that whole program on the Internet in which Health Canada was involved in helping to validate information about health that you got on the Internet. It doesn't exist anymore, but we need something like that.

We basically have two asks in terms of what we would like to see in the development of mobile medical technology in the prevention of chronic disease.

First of all, we think there's an opportunity for the federal government to encourage innovation and excellence in this area with various government departments in programs through Trade and Industry, and with Health and the Public Health Agency, and also in partnering—P3 partnerships are really critical these days—with the private sector, NGOs, and academia in the development of technologies that really will work and that are scientifically validated, which we think is so important.

The FDA in the U.S. is already regulating some of the mobile medical technology. They're regulating the ones where there is an interface with the body, the monitoring ones. Like the FDA, we think it's really important that there be that kind of regulation.

However, we don't think it's likely or possible that you can regulate every app. That's just beyond the ken, but we think there should be some system of verification. Maybe it's something like the Heart and Stroke Foundation health check program. We can put our minds together and work together, again with partners in the NGO community, to develop a program of verification that can help consumers really differentiate between all the kinds of stuff out there as to what works and what doesn't work. Of course, behind that, we need to have more scientific validation of many of the technologies that are out there.

In my generation, some of us are still a little fearful of where technology may lead us. This has been a huge change in our lives, but the reality is that it's going to continue to progress.

● (1540)

If we can harness the best approaches that technology can offer and blend them with the time-tested mentoring and buddying—we still think that's absolutely critical, because people need to be able to talk to other people and have their reinforcement—then we may have some real winners that will help us reduce the burden.

The Chair: Are you just about finished?

Hon. Mary Collins: Yes. This is it.

We want future generations to keep healthy and avoid chronic disease.

The Chair: That's great. I gave you some extra time, Ms. Collins. I just wanted to make sure I didn't give too much, so that we could get everybody in. Thank you.

Now, as an individual, we'll go to Dr. Cameron Norman. He's part of CENSE Research.

We were wondering what CENSE stood for.

Dr. Cameron Norman (Principal, CENSE Research + Design , Adjunct Professor, Dalla Lana School of Public Health, University of Toronto, As an Individual): It's one of those things that have evolved, but initially it was designed intentionally to be a little amorphic. It stands for Complexity E-health Network Systems and Evaluations.

The Chair: Does the “C” stand for Canadian?

Dr. Cameron Norman: It stands for “Complexity”, actually.

The Chair: “Complexity”, and the “E”...?

Dr. Cameron Norman: “E” is for E-health, and “N” is for Networks, “S” for Systems, and “E” for Evaluation.

The Chair: We have been trying to find that on the Internet. Thank you. I just thought I would ask as you're right here.

Dr. Cameron Norman: It's interesting that it started like that, but “cense” also, the definition of that spelling is to perfume and to make a little more palatable.

The Chair: We will begin now so that you will have your 10 minutes and I don't detract from your time.

● (1545)

Dr. Cameron Norman: Thank you.

It's my real pleasure to be invited as an individual to speak before you today on a topic that has been near and dear to my heart.

I was talking with Craig and Mary beforehand, and I realized that it's been about 20 years I've been doing this work, which, if you know much about the web, basically means I started doing this stuff when the World Wide Web was just starting.

In fact, my initial foray into this was as an undergraduate at the University of Regina. I was fascinated by how people were finding solutions to problems globally using Usenet groups, and then eventually this World Wide Web. At that point, truly, it was almost like “www” was the “wild, wild west” of everything.

Somewhat surprisingly, given that this is about technology and innovation, and innovation being as disruptive often as it is, I'm going to do something a little disruptive and actually use no technology—outside of something to make sure I'm on time. I'll do something that you might even say is more primitive: use simple stories.

I'll do that because ultimately that is what these technologies, these information technologies, which is what I'll be speaking about, are really good at. I'll share a few of the insights I've had as a student, a professor, a consultant, a teacher, a learner, and of course, a user of all of these technologies.

To give you a bit of background, I've been doing work as a researcher for many years. This initial project started out in the 1990s. I was fascinated by this new thing. I'd never billed myself as a techie beforehand, and I'd never really thought of myself as technology focused, but I was fascinated by that. It carried over to some graduate work I was doing at Wilfrid Laurier University. I became a special education assistant with the Waterloo Region District School Board in a program that was designed for kids with special needs, mostly behavioural problems and conditions.

As I was preparing for today, I actually thought of two stories that happened simultaneously, that really illustrate the potential power of information technology, and that maybe will provide some guidance. Even though they happened almost 20 years ago, I think the lessons learned then are still as relevant, if not more so, today.

The first story is about someone I'll call Jonathan, just to protect his name. We had a very small program of only 25 students. It was a multi-sectoral partnership. At the time, we had one computer connected to the Internet. It was a dial-up, and every student had at least an hour a week with it. If any student wanted to do additional time, they had to do it before school or after school.

Now, most kids don't like school, but this particular group of kids hated school more than most. The idea of their spending anything more than a minute longer there was just about unbelievable to them.

Nonetheless, Jonathan was so fascinated by the fact that he could connect to other teens, particularly ones who had the same kinds of experiences he had—which were not particularly pleasant and the reason he was there—that he came early and he stayed late to do this, so much so that we would come to school at 6:30 in the morning and he'd be on the steps waiting for us.

The interesting thing is that back then the web was not yet very graphical. Most of it was text. You had to read. This particular student was five grades lower than he should have been. He was in his early teens. What happened as a result of his fascination—or obsession, which we might have thought of as problematic today—with the Internet was that he spent every hour he could on the Internet at school, under supervision. Within about two to three months, he had raised his reading level by two grade points. Actually, within a year he was almost up to his developmental stage. It was fascinating. I was blown away by it.

At the same time, when he wasn't able to come to school early, his peers would fill the vacuum. They would get online and they'd be searching for all kinds of things, such as where to live. These were kids who often could not live at home, were chased out of their home, didn't feel safe, and were looking for new places, or places where they could crash for the night.

This was before Google. This was before Facebook. This was before Twitter. It was hard to find things. I don't know if you even remember back then, but it was hard to find stuff. These kids were finding stuff. I found that fascinating.

As a result of this, I started to do a lot of research on that particular area, looking at how it could benefit. One of the things it taught me was that there was a lot of power in the social connectability of the World Wide Web and its technologies.

● (1550)

Fast-forward 20 years and there's more computing power in these hand-held devices than in powered spaceships in the 1960s. It's fascinating. Yet, the same kind of things that made the Internet powerful 20 years ago still make it powerful today, for health reasons.

These young people are able to find things. It got me interested in how they find things, not just for young people, but the fact is that they are innovators. I'd like to think about some of the lessons that have extended from that original time to today, having spent six years as a full-time professor at the Dalla Lana School of Public Health, where I'm still a part-time professor and a consultant, and a student looking at innovation.

Really, it comes down to what I think are three fundamentals: a toolset, a skill set, and a mindset.

The toolsets keep evolving. We keep getting new devices, new technologies, high definition, social media, and those kinds of things. Those things are going to change quite rapidly.

The skills to be able to use those things change a little less so. I think the ability to use social media, generally speaking, you can use Facebook, Twitter and that sort of thing relatively easily, with the same set of skills.

Fundamentally, what I would like to impress upon the committee is the idea that mindsets may be the area we need to spend a little more time looking at, and what mindsets around the technology are, because the technologies themselves will change. Yet, I can look back 20 years and think that we're still wrestling with the same things. I don't know if we'll solve them, but they're things that we can benefit from.

One of the key things about mindsets I learned from these kids is that they weren't afraid to fail. That's one of the things we do in the health system too much. We are very risk averse to the detriment of the health system. To follow on from the previous testimony, there is an inability to want to try new things. I'm not talking about risking people's lives in the ER. I'm talking about very small things, making subtle decisions about how, as an organization, we treat technology.

These kids were trying absolutely everything, and a lot of it was failing, and yet they were able to proceed. One of the things we do in the health system is that we're not willing to, and I don't like the term "fail", but hypothetically fail a little bit, and continue to work through that.

The other thing they were really interested in was networks. They knew they didn't have all the answers, but they didn't have to. They knew places where they could go to get the answers. They knew people who even knew other people who could get the answers. I think the idea of network thinking is part of a mindset that makes a lot a sense for what we need to be doing.

The other thing is they had organizational support. We wouldn't have thought about it quite like that, but the fact is that the school was supportive of their spending time online. We might not have done that today, but they were under supervision. They had a chance to go online and they had the support to do that, but we made sure that they weren't accessing inappropriate content. One of the things we do in the health system, whether it's public health or health care, is we often expect people to just do it on their own without organizational support. I train health professionals in the use of social media and other technologies, and they consistently say that they don't have the support of their organizations, whether they're doing policy work, research, or other things.

Something else that made these young people so effective at finding solutions was that they were curious. I do think the idea is not knowing what they're going to find but being excited about wanting to find new things. We need to be mindful of how we engender curiosity in our organizations and as a health system, to know that it's not something we need to fear, that it's something we can have a lot of discovery about. We very often think that we're going to find the right answer.

Part of this comes back to an overall climate we have now in Canada. We need to think about what that curiosity means in terms of our science policy and technology, making sure that we keep pace with that.

Thank you very much.

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

We'll go to the Gateway Rural Health Research Institute, with Dr. Ken Milne and Dr. Feng Chang.

Who is making that presentation?

Dr. Chang, would you begin.

Dr. Feng Chang (Chair, Rural Pharmacy, Gateway Rural Health Research Institute): We will both be speaking. I will start this off, and then I will pass it on to my colleague, Dr. Milne.

Thank you for this opportunity.

My name is Feng Chang. I'm an assistant professor with the School of Pharmacy at the University of Waterloo, as well as the chair of rural pharmacy with the Gateway Rural Health Research Institute.

I will start by talking briefly about what Gateway is all about and why we're here. I will give two quick examples of the types of research we have been involved in that demonstrate a link to technological applications. Then I will pass it on to Dr. Milne, and he will wrap it up.

Gateway Rural Health Research Institute is the first community-driven centre for rural health research based in Canada. It was established in 2008 in a farming community in southern Ontario, in Huron County.

Gateway's mission is to improve the health and quality of life of rural residents through research, education, and communication. In the last few years we have established collaborations with a number of academic institutions, working with the University of Waterloo, Western University, and Georgian College, specifically to bring some of their education programs to the rural communities via distance learning. We also have a diverse research team with seven research chairs in areas ranging from seniors wellness to mental health to healthy sustainable communities.

We are interested in chronic disease prevention and management because, as Mary mentioned earlier, the burden is significant, but the burden is disproportionately higher in rural communities. Depending on the definition you use, 19% to 30% of Canadians live in a rural area. Past studies have already shown that life expectancies and disability-free life expectancies are shorter in rural communities. There is also a higher incidence of chronic illnesses when it comes to smoking, heavy drinking, and obesity. As well, even in our very own area in Huron County, there are higher incidences of hypertension, obesity, and chronic lung diseases. These are as compared with the Canadian average.

We see technology as a method of support to implement better measures for prevention as well as management.

I'm also a practising pharmacist with a specialty in geriatrics or working with older people. I'll give two quick examples of the types of research that I've been involved in with Gateway as well as with the School of Pharmacy.

When we talk about apps, and there are so many of them, a lot of them are targeted toward seniors or older patients. For example, medication adherence is a huge problem. There are a lot of reminders or calendar systems out there on the market that promote having users more independently track their medications, to take them at the appropriate times, etc.

We did a project at the School of Pharmacy working with some seniors and using these senior-directed health apps. It was interesting, because there were things that just weren't taken into consideration when it came to development. For example, the volume might have been too low and people weren't able to decipher what the app was saying. Also, there could be a button that the user would touch that would bring the user to the next window. This was considered self-explanatory to the developers or to users who are more familiar with Word or laptops or desktops, but it wasn't to all the users from an older patient perspective. There are certainly some gaps that we can aim to fill in that area.

Another example was using point-of-care technology applications, especially when it comes to diagnostics. Geographical areas in rural communities are quite expansive and we have a shortage of specialists or even of community primary physician support. I'll use INR testing as an example.

● (1555)

Patients who are on warfarin, which is a lifelong anticoagulant used to prevent heart attacks and strokes, have to receive this on a weekly to monthly basis for as long as they are on this medication. They need to go to a physician for a lab rec, which they take to the lab and get the test done. They go home and the lab takes a day or so to get the results back to the physician. They either go back to the physician or get a phone call, and then they go to a pharmacy to get their medication.

● (1600)

The Chair: I'm sorry, you're halfway, so if you're sharing your time, you have to make a decision now.

Dr. Feng Chang: I'm wrapping up right now.

With INR testing at the point of care, that could potentially shave it down to one visit to the pharmacy, for a total of five or ten minutes to wrap up the process.

The Chair: Thank you so much.

Now, we'll go to Dr. Milne.

Dr. Ken Milne: My name is Dr. Ken Milne. I'm a full-time rural physician in Goderich, Ontario. I'm also chief of staff at South Huron Hospital. I'm also a professor at the University of Waterloo, McMaster University, and the University of Western Ontario. I've been doing research for 30 years now.

I'd like to leave the committee with only three things. There are just three things I want you guys to walk out of here with.

The first is, I want to bust up a myth. I know there are some other doctors in the room, but there's a myth out there that intelligence is inversely related to the distance you are from an academic centre. I'm sorry, but it's a myth. We have really smart people in the rural areas, and really smart physicians in the rural areas. That's the first thing. I'm glad I got that out of the way.

Second, rural centres can be academic centres of excellence. We are providing great care in rural areas. I'll use one example. I'm leaving the committee with 20 research papers that Gateway has done in the last three years to say that we can prove this. We have data that can prove that we are rural aces. We are rural academic centres of excellence. For example, you have a heart attack, you have the Ottawa Heart Institute here. The door-to-needle time is how fast you need to get that heart attack treated, to get that liquid Drano to open up that heart. No centre has ever published anything less than 60 minutes. The gold standard is 30. For the hospitals in our area, of 100 consecutive patients, it's 24 minutes.

If anybody is having chest pain right now, I suggest you go to a rural hospital. We will see you quickly, and we will treat you well, and we have the evidence to prove that.

Third is health innovation, which is why we're here today. One thing on health innovation, and Feng brought it up earlier, is hand-held technology. We have a validated tool using the iPhone, the smart phone, to assess people's health literacy. Health literacy equals health outcome. The more literate you are, the better your health is, especially in chronic disease management, such as diabetes, COPD, those things. if you are health literate, you have a better health outcome.

However, to assess somebody's health literacy, doctors use big words from time to time, and they can be confusing. How literate are our patients? We can assess your health literacy with an app in 10 seconds. I could go around this committee and peg people at less than grade 3 level—oh, sorry, nobody in this room—grades 3 to 6, grades 6 to 9, or greater than grade 9. I could do this in 10 seconds using a hand-held app with voice recognition. We can target these chronic diseases with the front-line health workers going out to the patients to say that they don't want to see Dr. Milne in the emergency department. That's bottom-of-the-cliff technology, bottom-of-the-cliff management. It's expensive for me to catch them falling off the cliff. What you want is me up there telling them to back away from the cliff, but we have to be able to talk English or French, not doctor. There's health literacy through an app.

That's only half the problem. The other half of the problem is the physicians. How do we get physicians to practise evidence-based medicine, with the highest quality of evidence, so that their patients, because that's whom we care about, get the best possible care? We want everyone in Saskatchewan to get the best possible care, don't we? Well, how do rural physicians give that care?

We can use social media as a disruptive technology. We're going to start podcasting the evidence that we're creating on a program called JOG, just out of the gate. We're going to take information just out of the gate, critically review it from an evidence-based standpoint, get it out to those front-line physicians, and turn medical education on its head. It's no longer going to be the grey hairs and no hairs trickling down; we're going to give it to the front-line workers and let it bubble up organically from the rural physicians, from the rural researchers. We're going to treat rural patients to keep them out of rural hospitals, so they're really healthy. That's what we're trying to do.

That's the end, other than to say that I hope I busted up a myth.

Are you going to remember those three things?

I'm counting on you, Dr. Fry.

Hon. Hedy Fry (Vancouver Centre, Lib.): It's a test.

Dr. Ken Milne: I'm always teaching.

One, intelligence is not inversely proportional to how many kilometres you are from an academic centre. Two, we are rural centres of excellence. We are rural aces out there providing great care. Three, we have innovative technology not only to distribute it to patients, but to distribute it to the health care providers.

Thank you very much.

● (1605)

The Chair: Thank you very much. You're very inspiring to listen to.

Dr. Ken Milne: Well, I didn't bring my slides. I had to make up for it with enthusiasm, because I am passionate about rural health, and I'm passionate about research and what we're doing out there. I want this committee to remember that we're doing great stuff.

The Chair: I would very much like a copy of your slides. Could you send it to my office? I'll give a copy to the clerk for anybody else who wants it. I know we have several people.

Dr. Ken Milne: I'd be happy to share my passion with anybody.

The Chair: If you send it to the clerk, I'll get it translated, and then everyone will get a copy, which I think is the best strategy here.

Dr. Ken Milne: That's wonderful. Thank you very much.

The Chair: Thank you very much.

Now we'll go to Mr. Dale Friesen of Beagle Productions.

Mr. Dale Friesen (Chief Executive Officer, Beagle Productions): Thank you as well for letting me be here today to present to you guys. Similar to some of the other witnesses here, I have a unique combination of a passion for software and technology and a passion to help people and make them healthier.

I started a software company 16 years ago, which was pretty close to the infancy of the Internet. I think a 28.8 modem came out at the time. Since then we've really been focusing on how we can engage users and make a good end-user experience.

Over the last 10 years we've done that through helping athletes get better and connecting trainers with athletes. We also moved that into the health and fitness world about six years ago where we started to move with just general health and wellness. That has led us to corporate wellness and to helping youth engage in health and wellness as well.

I do have a brief that is going to come to you at a later time in more detail. It's being translated, so you'll receive that later this week I'm told. For now we'll get started with my slides.

First of all there is a health crisis in our country. In 2010 well over half of our population 35 years of age or older was considered to be overweight or obese. You guys have heard lots of stats, and the panel members all know lots of stats here as well, so I'm not going to focus on that. I'm going to take my time here to focus on how technology can help us move in the right direction in this fight.

Technology will be a part of the solution to this crisis. It's continuing to play a greater part in all aspects of our lives and is our most cost-effective way to help prevent and manage chronic disease on any kind of scale given the number of people it can touch and the number of locations it can service.

I'm going to touch briefly on how technology can manage chronic disease, but I'm going to focus on the prevention side, because if we don't fix the growing problem, we'll run out of resources to manage it.

I want to start by talking about some of the obstacles we face here.

The health and wellness industry regularly cites the lack of motivation, education, convenience, and funding as roadblocks to success. While each of these items does play an important role, the key factor for behavioural change is motivation: why am I in my current state and what would motivate me to change?

To support motivation and ultimately behavioural change, there is a requirement for knowledge. We've heard a few times now about the lack of knowledge out there. We need to educate people on the overall importance of health and wellness, on the reasons they became unhealthy in the first place, and on how we can direct them back onto a path of health.

We have created a convenient medium for people to engage in, which allows easier integration in their busy schedules and increases the chance of their success.

Funding is also a barrier to success. Having low-cost or no-cost options available allows for maximum participation, as does educating people that healthy living doesn't need to mean expensive living.

Using technology to make health education available, convenient, and fun in an interactive way will motivate users to continue with the program. With the right motivation there can be behavioural change, and that is the ultimate goal to spawn an effective health and wellness initiative.

Let's turn now to technology and how trends and technology are changing. I have an example here of stats that came out a couple of months ago from Facebook. One of the interesting things you can see—and in the brief that's coming, you'll see the full graph, but I wanted to put it on one page—is that the age groups of 55 to 64 and 65-plus are the only two age demographics that are actually increasing their participation in Facebook as of three months ago. So the older demographic is no longer untouchable in the technology world. They're all moving there and they're accepting the tool. The younger generation accepted it long ago. It is an easy way to reach youth.

Using a digital medium such as the Internet, which allows users to have access to private information virtually anywhere via their mobile devices or their computers, is the first step.

Second, we need to ensure that the content richness and the information are relevant, applicable, vetted, and personalized.

Last, it needs to be fun, motivating, and rewarding so that they continue to stay involved. Then we can improve efficiencies at all levels from users to advisers to health coaches to doctors to specialists.

In order to prevent chronic disease, we need to use technology to educate and empower our youth. This can be done directly through the school system. It can empower teachers and parents. It can be done indirectly by creating healthy workplaces and communities so that the example is set for the youth.

I'm going to show you some examples of this technology in action. I'm going to go through a bit of a process of how a company is using it to help fight chronic disease in the workplace.

The goal of this health campaign is a healthy weight for everyone in their company.

It all starts with a personal wellness account, and in that personal wellness account is an online community. All their information is private and secure, but they can connect with others in their company.

● (1610)

They can engage in fitness and weight loss challenges. They can have their own personalized nutrition tracking. They can take their mobile phone to a restaurant and take a look at what the nutritional value is before they order.

There are weight management plans. There are fitness plans. There are programs for how to deal with stress and how to deal with high blood pressure. They can choose what works for them, or they can take a health risk assessment and get recommended programs for where they are. They can connect with a coach. This could be connected to physicians and doctors as well.

There's a reward system. As they engage in health, they earn health reward points that they can use in a health store, to help incent them for their healthy behaviour.

Then, of course, finally, it's all available on mobiles.

How does it work? A company will direct their employees to their wellness account. They'll get their health evaluated with a questionnaire, a health risk assessment. If they are doing biometric health screenings, those can also be imported into the system so that their health score is verified. Then they set their goals, access guidance based on their score, engage in challenges, connect with others, track their progress, and re-evaluate their health. Then they can get rewarded.

Personalized health guidance can come in various forms. Here, it is important that it be customized and personalized to the user. This isn't a one-size-fits-all type of solution to get healthier. This can come about in a variety of ways. I have an example of meal plans and exercise plans, but this can also include testimonials, success stories, and goal-setting, all delivered on your smart phone and to your computer.

Motivation is key to engagement and keeping you going in the long term, so we have various forms of motivation. We ask, "What is the reason that you're getting healthy?" Maybe it's because you want to look good for your son's wedding. Maybe it's because you want to play with your grandkids. Maybe it's because you want to beat your brother in next year's race. Whatever your motivation is, we want to identify it and help you realize it. We give that to you readily, so that you always remember why you're doing this.

We always engage in fun challenges. Dynamic leaderboards and comment walls are ways in which people can compete, whether that's individual versus individual, team versus team, or location versus location. It's a great way to have a school versus another school, say, or a community versus another community. It's a great way to motivate and engage people in healthy activity.

What kinds of interactive health tools are in there? There's nutrition tracking, as I mentioned. There, you can sync hardware, so you can have heart rate monitors, pedometers, glucose meters. Whatever you want from a hardware standpoint, if they have an API, it can be integrated, and then you can track that result without actually logging in, which is an obstacle, obviously, in regard to people taking the time. Those results are also there if you have a coach or a specialist who's looking at your data.

We also provide thousands of examples of recipes, of how to create meals, and of how to do exercises. All that information is readily available, so the obstacle with regard to knowledge isn't there.

We provide rewards and incentives. As you interact with the site, you earn rewards and you gain points, and then you can redeem those for products, programs, and services through the health store.

Finally, it has to be available on mobiles. That way you always have it at your fingertips, and you have no reason to not be engaging in health. We push notifications to you, so that if you haven't been logging in or if you haven't been journalling, we ask you to come back. There are different ways in which we can help to engage users throughout the course of their health journey.

From a management standpoint, there are online health coaching tools. This is where we can start managing disease, whether it's identifying that you have a disease or connecting you with coaches and specialists who can help keep you accountable and motivated by assigning meal plans to you, assigning fitness plans, and assigning whatever kind of programming is best for you in our post-care, but also by monitoring you and making sure you're keeping track of what you're supposed to be doing.

Today, by using innovative technologies, we can start working with and educating our youth, whether that's in our schools, from elementary to post-secondary. We can empower our teachers. We can empower our parents with knowledge so that the smart choices don't have to be expensive and can still be convenient, because there are smart choices out there.

Employees at any workplace in any industry can start to use the same technology by simply using content that is built for them and unique to them. At home, families can engage with others in the community and participate in the same challenges, and they can engage in challenges to live healthier, more fulfilling lives.

● (1615)

The same tools can also connect doctors and specialists with their patients, removing geographical borders—I'm from a rural community—and limiting the time they need to spend with each patient, while at the same time keeping the patient motivated and accountable.

Thank you for your time.

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

By the way, I'm from a rural community, just to let you know.

We will begin with Ms. Davies. Welcome back. We missed you.

Ms. Libby Davies (Vancouver East, NDP): Thank you very much. Thank you to the witnesses for being here today.

We've had a very interesting discussion about this issue over a number of months now. I have to say that I'm beginning to sense more and more that the issue isn't the array of technological innovation. It's mind-blowing to know what's out there. It's overwhelming.

The issue is who is responsible for ensuring some level access for people. I don't want to use the word "uniformity". I represent a community where I see people in food lineups a lot. Many of those folks suffer from chronic diseases. These are the folks who probably need some of these innovations the most, but they probably have the least amount of opportunity or access.

How do we get these technologies to people? Is the individual responsible? Is it somebody who is already motivated and into apps and they'll try out a new app? Is it the individual physician, the hospital, the health authority, the province? What is the federal role?

I feel we have to address that if we're to take advantage of these amazing technologies, particularly when it comes to the prevention of chronic diseases that you've all spoken about so well. How will this happen?

It strikes me that one way might be some kind of agreement between the feds and the provinces. The health accords are coming due in 2014. We don't know what's going to happen, but is this an area that should be addressed in terms of technological innovation? It's not the development of it. It seems this is happening pretty well, and I could be wrong on that, but it's how people use it.

Would any of you like to address that? It will help us figure out what we need to do in producing this report, particularly in terms of the federal role.

The Chair: Who would like to address that question? Honourable Mary Collins.

Hon. Mary Collins: I will start, and I'm sure others will want to chime in because it has been an interesting array of good examples.

We touched on that in our presentation. We think there is a need for a mechanism, I guess you could say for quality control verification, so people have a way of knowing what works and what doesn't.

I'm not sure that we necessarily think the government has to do that, but government could support that through funding mechanisms. We've got a wonderful array of different institutes like CIHR and different groups that work in health along with NGOs to put together some of the appropriate people to form a group and set out a plan for this and how this might be developed. I think that would be our preference. Ideally it could be done at a national level so each province isn't having to replicate the same kind of thing because these kinds of apps go across the country.

Challenges would be involved. That's where we would like to see you get started. Perhaps the committee could recommend a framework for something like that.

● (1620)

The Chair: Dr. Milne.

Dr. Ken Milne: Being a physician I'm going to say that I think it's all about the patient. In this case I don't want them to be a patient. I want them to be a person and not sick, so it should centre around the individual, not around the institutions, not around the professions, but around the person.

All this innovative technology and stuff are just tools. I could diagnose your heart murmur with my stethoscope or I could strangle you with it, but it's a tool to be used for great good. We've got to make sure the content is good and the systems are set up and that the research has been done to prove that these tools work in the appropriate way, but the person ultimately needs to be the centre of this. They need their health dossier. They need all their information to go with them, no matter what provider they're working with.

Ms. Libby Davies: Are you saying that what really underlies this is the whole notion of patient empowerment?

Dr. Ken Milne: Empowering the patient into shared decision-making.

Ms. Libby Davies: That's if people even know what the information is about them, which most people don't. It's a very secretive thing.

Dr. Ken Milne: It's their information. They should have it, and they should have me or Feng, or any other health professional, helping them.

Ms. Libby Davies: Do you think that's changing though?

Dr. Ken Milne: Yes.

Ms. Libby Davies: Is that changing among physicians, this idea that there's a barrier between what they know and what the patient knows?

Dr. Ken Milne: There are two big movements going on. One is patient-centred medicine, but that's about 10 or 15 years old.

The new momentum is something called shared decision-making. I don't make the decision for you about whether or not to get a CAT scan. We talk about the risks and benefits of getting a CAT scan. You may have a bad intracranial bleed, but, you know, that CAT scan has a lot of radiation and it may lead to a brain tumour. Which is worse? I'm there to help you make the decision, but it's shared decision-making so that you ultimately make the decision based on the information I can provide to you.

The Chair: Mr. Friesen.

Mr. Dale Friesen: I also think we need to get people before they get to the hospital, and that's where a lot of the knowledge comes in. It has to be about learning how to make healthy decisions. That's purely education.

How do we get that to people? That's hard, because—

Ms. Libby Davies: How do you think we do that? I'm asking you how we get that to people.

Mr. Dale Friesen: Well, I've seen a few things that work.

One obviously is youth. We have them in our grasp at school, so that's the one place where we can get them and teach them. Mandating the use of that so it could be part of their lifestyle could potentially happen through school.

We do most of our work south of the border. The affordable care act is coming through in January, which means that companies will have to provide wellness opportunities for their employees. It is something that is being mandated and there's money being set aside for that for companies. They're actually mandating that you have to give wellness options for your employees.

There could be something that is driven through the workforce from that standpoint. That's another place where we have people.

The reality is that it needs to get to the parents too. If we can reach people in the workforce and reach kids in school, then maybe that will meet at home. We need to have the parents. Until we have the parents, who sometimes are working two jobs and getting some kind of TV dinner that has a terrible amount of calories, actually making the right choices for their kids, we—

The Chair: Thank you. We're just about at the end.

Thank you so much.

We'll go to Mr. Lizon.

Mr. Wladyslaw Lizon (Mississauga East—Cooksville, CPC): Thank you very much, Madam Chair.

Thank you to all the witnesses for coming. Each of the presentations was very interesting.

I would like to start with a very general question.

We live in very interesting times. We are in a kind of transition. I use smart devices, but I grew up without them; therefore, for me to get by without them would be fine. There's the generation of my children who are quite attached to these devices, and then my grandchildren, who do not remember life without them.

I remember a funny situation when my daughter's friend was holding her device and she said, “What? Is it raining? My app says it's supposed to be sunny.”

How do we apply all these new technologies, everything we have, and yet not lose our common sense? That's a general question.

Anybody can elaborate on this.

● (1625)

Dr. Cameron Norman: I think one of the answers is to use the concept of health literacy. I think we need to build the literacy and the critical thinking capacity around the technologies as they apply to regular life. I think there has been a tendency towards leading with the tools, that toolset instead of the mindset. We need to think about what it means to have a network and what network thinking implies, that you're actually getting information from multiple different sources simultaneously.

We saw a good example of this in the news with some of the recent events in the United States. People were reporting all sorts of stuff. If you're thinking like a network, and very rapidly, you will ask questions about the data you're getting in a different way than if you're just thinking of it as the device. The device is faulty.

I would suggest that one of the investments might be on expanding our health literacy and focusing less on the technology, although that's obviously important. We also need to think about it from a literacy standpoint. What are the fundamental skills around the foundations, around how we learn from tools? The tools will change and it's going to be something else; it will be whatever it is—wearable or anything like that. If you're able to build that robustness in a literacy, that will maintain itself beyond the technology.

The Chair: Would anybody else like to comment?

Dr. Chang.

Dr. Feng Chang: I want to connect on that point and tie in with Ken's earlier point about shared decision-making.

We tell the health care providers that it is their responsibility to be the resource person and to be the guide in a lot of these cases, but the reality is a lot of health care professionals are not comfortable with technology. They're in the learning phase, depending on what stage they're at themselves. For example, in Europe they publish a European directory of health apps, I believe on an annual basis. It outlines what apps there are for which conditions. Depending on what profession you're in, if you're a pharmacist or a physician, in hospital versus the community, it tells you what kind of apps you can take advantage of. I think those kinds of supports also will be important.

Mr. Wladyslaw Lizon: Mr. Friesen, your presentation on interactive health tools is very impressive and interesting, but how do you actually get a person to follow what he or she should be doing? You go through all the assessments and the person says, “I'm overweight, so what do I do?” You tell them that they have to diet and exercise. You tell them what is the cause of their condition in the first place. How do you reverse it so that people don't get to that condition where sometimes there is no escape and it becomes a chronic condition?

Mr. Dale Friesen: Unfortunately, a lot of times it does depend on the person. There are incentives that you can provide. Some people, employers, spouses, friends, provide incentives. Incentives help motivate people to start, but again, it really comes down to the literacy. You have to learn what you need to do. Behavioural change comes with finding out why you're in that spot in the first place. You really need to find out what happened to get you there. That's why diets usually don't work, because you're not dealing with the problem; you're just dealing with the outside part of it.

There also is a level of accountability and personalized guidance that comes from a specialist, whether it's a health coach, a doctor, or a nutritionist. It depends on the type of person you are. Some people can handle self-guidance. Some people need more personalized guidance. Some people need an accountability partner, a doctor, or a coach to help them.

Incentives have been found in the corporate world to help get people down the path. After that, they need the proper motivation and accountability to keep them going.

● (1630)

Mr. Wladyslaw Lizon: Dr. Milne, with all the technology and apps available, how would you see your role as a doctor? Is it changing? Would you see it as an educator, a preventer of disease, rather than a person who treats a patient?

How would the changing technology allow a person to still make a decision on his or her own instead of depending on what the app is telling them. It might tell them to buy something. When I go to the grocery store, I don't think I know 10% of the choices that are available. Therefore, if you go with your app, what do you choose? How do you decide? Do you depend on the device? We should still, as human beings, be able to make our own choices.

The Chair: Time is up, Mr. Lizon.

I don't know if you have a quick answer, anyone, to that.

Dr. Milne.

Dr. Ken Milne: It should be shared decision-making with the physician helping the patient, but it's patient centred. The technology allows you to customize that for each and every individual patient. The answer won't be the same. It will be unique for every patient encountered.

The Chair: Thank you.

You got your answer, Mr. Lizon, a pretty good one.

We'll go to Dr. Fry.

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

To the witnesses, you're a very interesting panel, and I like what you're saying, but let me throw a little skeptical wrench into this thing.

I understand the issue. Mary was one of our great health ministers —Mary, I need to say that—but there's one thing we need to talk about here. I can understand the validation of the apps, the evaluation component of it, etc., and I do agree with Mary that there is a role for the federal government to be kind of the clearing house —as Feng said, Europe is doing this—checking out the apps, making sure they are valid and giving the proper information. You're looking at outcomes on them. I understand that. I get that.

I think Libby brought up an issue of access. That issue is a bit of a concern for me. We're talking about young people who have easy access to smart phones and know how to use them. We're talking about seniors being the largest growing group of people who use this kind of technology. However, there's a whole lot of people who cannot: the low-income groups, the working poor, the ones on the streets, the chronically ill who are isolated and who aren't motivated. For me, the issue is how we give access to those people.

Before we even talk about that, we have to ask, and I think this is what Libby was basically asking, who gives that access? Does the province supply everybody with a smart phone so that they are able to have access? Who does that?

Before you even give access, you have to have motivation. I mean, come on; we know how long it took, in spite of the horrendous pictures on cigarette packages, to get people to stop smoking. We know how difficult it is to get people to even pay attention to the fact that as they watch their girth increasing, their risks, as everybody knows—you'd have to be living on Mars not to know—of getting type 2 diabetes are high, or that obesity is a problem.

The people you're talking about who will use these apps are the motivated people. They are people who want to take charge of their health. They are people who want to take charge of the chronic problems they're having, or prevent them from occurring.

My question is kind of similar to asking who will bell the cat. For the people who are continuing to get chronic diseases, such as type 2 diabetes, obesity, etc., while eating tons of salt, how do we get them motivated?

I understand from what Ken said that if you already are a person with a chronic disease, your physician can introduce you to the apps and say that you should get one and use it to help check yourself. I can see that, but what about the preventative piece? That's the one I'm concerned about. How we do get people to be motivated? I'm not talking about all of us, about the 25% or 30% or whatever the number is, who are motivated to use their smart phones for something like this.

How do you get workplaces to take this on? You can't mandate a private sector workplace to demand that every one of their workers does this and that they supply all their workers with it.

This is the big issue for me. How do you get that motivation going in terms of prevention? How do you give access to the people who cannot afford it? For them, it isn't on their agenda at all, because they're busy trying to make ends meet, or they're on the street, or they're couch surfing, as many homeless people are. How do you get a lot of those people, or even the youth, who think this is all about Bieber and downloading the newest music, etc., to be interested and motivated to use this?

If we can do that, I can see this being a wonderful thing, but how do we do it?

● (1635)

The Chair: You have three minutes to solve this problem.

I shall begin with you, Dr. Norman.

Dr. Cameron Norman: That's a complex question. Usually, complex questions deserve complex answers, but because we only have three minutes, I'll give you a simple one.

Hon. Hedy Fry: I think Mary wants to answer, so you don't have three minutes.

Dr. Cameron Norman: All right: one minute.

I would say that one of the key things is to really engender within the whole health system a creativity about how these tools can be used. In North America we have a tendency to have one phone, one person. That's not the way it's used in a lot of other parts of the world, where the idea is that we have the one device.

There are ways that you can empower people—teachers, physicians, educators, policy people. You can even do things in the mall using all kinds of different media. You can do it through education and through all kinds of different things that we have the technology for.

I think what happens is that we get trapped in the idea, or the thinking, but if people don't have the phone, they can't access it. It doesn't mean that a physician, a teacher, or someone else can't use the phone to demonstrate something. It's a fantastic teaching tool.

The Chair: Ms. Collins, do you want to go ahead?

Hon. Mary Collins: I may be a little heretical, but quite honestly I don't think this is the answer to everything. I still think we have to have a whole variety of strategies. Certainly at the BC Healthy Living Alliance we've done all these programs with low-income groups and have had a lot of experience on how to motivate people, particularly around the food side and physical activity. It's really hard work.

A lot of it is about connecting people and having a sense of belonging so they want to be part of a group that maybe is.... With low-income groups, we did food skills for families. You take them shopping. You help them have healthy food. It's a variety of things. I wouldn't put all my money just into apps, quite honestly.

I still think there's all the personal stuff, the community groups and community organizations that we have to count on to help people, certainly for the next decade.

The Chair: One more minute.

Yes, Mr. Friesen.

Mr. Dale Friesen: For youths, it's gamification.

Hon. Hedy Fry: That's an interesting one.

The Chair: Could you explain that? Did you say "gamification"?

Mr. Dale Friesen: Online tools.

Hon. Hedy Fry: Oh, thanks, because Ken is champing at the bit here.

Mr. Dale Friesen: No, but they like to be competitive. They're using their phones to have fun, so you can educate them while they're having fun and help them earn points.

The Chair: Dr. Milne.

Dr. Ken Milne: If I understand it correctly, Dr. Fry, your question is how to reach the people who aren't really reachable or aren't motivated, and that's why we're not reaching them. The answer is to go to them. You identify them by taking the top 10% users of emergency departments, the most frequent users, and those are your lower socio-economic, under-literate, or health illiterate people, and you identify those and you target them. You use your money carefully on those individuals who are heavy users. That's how you get them.

Hon. Hedy Fry: Thanks for the extra minute, Madam Chair.

The Chair: You're very welcome.

We'll now go to Mr. Brown.

Mr. Patrick Brown (Barrie, CPC): Thank you, Madam Chair. We've certainly had interesting comments so far.

I want to pick up on the theme we're talking about in terms of rural health.

I come from the city of Barrie in the Simcoe County area. It is part of ROMP, which deals with the lack of doctors in rural areas. As you spoke, it made me think about some of the challenges we face and solutions that might exist to enhance health care in small towns and rural communities.

One project that I thought was particularly effective was a U of T pilot project whereby they trained some of their family doctors, 12 a year, in a rural setting as part of a hospital. Half of those who did that training stayed in Barrie. I remember when our committee went to Nunavut. We looked at telehealth and how it was enhancing the reach of health care services that would otherwise not be available.

Are there other ideas or other pilot projects like that, which you think would be particularly helpful to enhance the health care in those settings where we have significant physician shortages? I look at my town where 30,000 people are without a family physician. It is a real, tangible problem.

● (1640)

The Chair: Dr. Milne.

Dr. Ken Milne: I've been part of the University of Western Ontario Their program was originally called SWARM. Then it was changed to SWOMEN, the Southwestern Ontario Medical Education Network, and it was started by Dr. James Rourke. We wrote a paper about 20 years ago about if you grow the doctor locally, you will more likely end up with the doctor in your area.

Gateway has picked up on that. They take high school students who are interested in medicine and let them do a camp with us. They pair along with me and other university students and other medical students as mentors to show them that yes, you could have a career in a rural area that's exciting, invigorating, intellectually challenging, and you could live there. Some of them are worried that if they go to the city and then come back to the rural area, their academics will stop, that will be the end of it.

They already know what it's like to live in a small town because that's where they grew up. If we can make sure that we continue that training from high school to undergrad to residency to doing research, then they're more likely to stay. We've seen success after success over the last dozen years.

Mr. Patrick Brown: Just to play devil's advocate, everyone tells us we need more family doctors, and obviously we love solutions like that. What can we do federally? That's the challenge. You think about education. That's outside our scope. You talk about a camp. I buy the fact that if you spend time in a rural area, there's a much greater chance you're going to stay. I really believe that.

What could we do federally to encourage or enable that?

Dr. Ken Milne: The federal government could help support farming families to have their children go off to post-secondary education.

Doctors are now graduating with $100,000 to $150,000 of debt because of the huge tuition increases that have taken place over the last.... When I went through medical school, it was $3,000; now it's $15,000, $16,000, $17,000 a year. They are graduating in huge debt. If there weren't that financial burden, if we had some program that would recognize people coming from rural areas wanting to go back to rural areas and showing a commitment to rural areas, that would be helpful.

Mr. Patrick Brown: I think the last budget, two years ago, had a loan forgiveness program....

The Chair: Mr. Brown, I think we have another....

Dr. Cameron Norman: If it could be done at the federal level, I have a suggestion also around the idea of supporting research in this area. CIHR, the Canadian Institutes of Health Research, does not have a panel on medical and health informatics or anything like that. There is no panel for anything dealing with technology and education decision-making. Studies are being reviewed by people who, while maybe not unqualified, may not be the best qualified to be doing that stuff.

Also, the way the scientific cycles are often done is that you put in for a grant in, say, March, or you start getting your team together over the summer—because they always make people work in the summer. You put in your proposal in September, you find out by March, and you're supposed to have the cutting-edge innovation ready to go the following summer. If there were a way to support some type of funding that could allow more rapid response stuff as well as stuff that was.... If a priority were put on health informatics, that would help tremendously in advancing some of this, so that health units at the local level and provincial level could think, “Maybe we have evidence that puts some investment in these sorts of resources”.

Mr. Patrick Brown: Another question that I've asked of previous panels is on the regulation of medical devices, which is solely a federal jurisdiction.

We’ve heard complaints that it's difficult. We also heard one doctor who said it was much easier than his attempts in the U.S., that it was quite easy to deal in Canada.

For any of the panellists, what are your impressions on the regulation of medical devices, given that they are tools of innovation? Are we making a system that is supportive of enabling that type of innovation?

The Chair: Who would like to answer that one?

Ms. Collins or Dr. Norman?

Dr. Cameron Norman: I don't know much from a regular choice standpoint. Again, from my experience in having worked with the private sector as well as the public sector and academics, I would say that we tend not to have a funding envelope that allows this stuff to be really hyper-innovative. Some people are developing some very good products. We've seen some examples, but they are being done by people who are very bold and very risky. It's not supported at a systemic level. I think if it were, you could get a lot more innovations out there and find those that might be the best, not just reward the people who are the gutsiest, because they will still do that.

If we had a systemic ability to support that at a research level, whether it's practice, industry, academic, whatever, we could advance things a lot faster and get to a much better panel of innovations that the regulatory bodies could look at. Right now, they're looking at a handful and I'm not sure that's healthy for everybody.

● (1645)

The Chair: Okay, thank you so very much.

We're going into our second round, of five minutes. We have to be quite tight on the time. If you would be so kind as to pay attention if I give you a little signal, it allows me to not to have to interrupt you. Thank you so much for that.

We'll begin with Dr. Sellah.

[*Translation*]

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

Thank you to all our guests today.

My first question is for the representatives from Gateway Rural Health Research Institute.

Dr. Chang, you said that between 10% to 30% of the rural population suffers from a chronic illness and that their life expectancy is lower than in the past. How can you explain this? Is it because people in rural areas are becoming more and more impoverished and thus don't have access to healthy food?

My second question is for Ms. Collins.

You gave the example of the FDA regulating and verifying certain mobile technologies. Is Health Canada not the equivalent of the FDA? If not, could you explain the federal framework in more detail?

[*English*]

The Chair: Dr. Chang.

Dr. Feng Chang: I understand that the question is asking for basically some of the reasons or factors behind why rural residents have poorer health status than urban residents. There are numerous factors that play into this. I think a lot of them are interrelated.

The other comment I'll make briefly is that there is also a regional difference. If you were to go to the health status in northern B.C., what they have difficulties with there would be different from what we have difficulties with in southwestern Ontario. There are geographical factors. For example, with lung disease, some of it is related to farm work. That has been shown to be a direct causal factor.

There are also economic factors, such as the loss of industry in a lot of these areas. We heard earlier that lower socio-economic status tends to lead to poorer health status as well.

Also, rural populations are older in comparison to urban centres. There's a higher percentage of older people living in rural communities because of aging across the nation, but also because of the out-migration of young people for economic, job, or education prospects.

I think there's a whole number of factors that can play into this.

The Chair: Ms. Collins.

Hon. Mary Collins: I have a comment on the FDA.

It is quite a new thing, as I understand it, for the FDA to get involved in the regulation of mobile and medical technology. It was only just over a year ago, I think, that they went through a consultation process and sent out the drafts for everything. They were struggling themselves as to what they should regulate and in what way.

I don't actually know if Health Canada has undertaken a similar process or has come to the same conclusions about which of these kinds of apps, where there is an interaction with the human body, should actually be regulated. I wasn't able to find anything on the website on that.

[*Translation*]

Mrs. Djaouida Sellah: Thank you.

[*English*]

The Chair: Thank you.

You have another minute, Ms. Sellah.

[*Translation*]

Mrs. Djaouida Sellah: All right.

Dr. Milne, I heard you say that there is much more focus on patient-centred care now than in the past. I fully agree with you. However, I am concerned because not all of these technologies are affordable. I fear that they will only be available to a limited group of people.

Do you think the widespread use of those innovations which are really useful for tracking chronic illnesses will help significantly?

● (1650)

[*English*]

The Chair: Who would like to take that?

Go ahead, Dr. Milne.

Dr. Ken Milne: Thank you very much for the question.

To try to answer it, it would be best to say that yes, there are barriers with it when it comes to using the technology, so what we need to do is make sure that everybody has access to primary care. And when I say primary care, I don't mean me as a doctor; I mean primary care. That can be delivered through a number of different providers. At the provider level, they can afford to have the technology to help with the patient and to do the shared decision-making.

[*Translation*]

Mrs. Djaouida Sellah: Thank you.

[*English*]

The Chair: Thank you very much.

We're now going to me and to Dr. Carrie.

If the clerk will watch the time, I will take half your time. Thank you, Dr. Carrie.

Mr. Friesen, you talked about all these exciting apps. It was very thrilling to think that an app could teach people how to plan meals, how to have exercise time, and how to be assessed. You assess them individually. Let's say somebody wanted to do this. How much does it cost per person to do this?

Mr. Dale Friesen: That really depends on how it's implemented. As our company uses it right now, for the corporations that are using it, the cost is as low as 50¢ per employee per month.

The Chair: You go to businesses or to the general public and say that you have this exciting program, that you can monitor them and take care of their health, and there's a cost to it. As you were talking, I thought it was very exciting, but there is a cost to it, and it's not hooked into any health care plans that I'm aware of. Also, you said that you do a lot of it down in the U.S., south of the border. Why is that?

Mr. Dale Friesen: It's because there's a health crisis both north and south of the border, but theirs is actually more expensive than ours. They're more proactively looking at preventative measures right now, because of the correlations to what it saves on the care side.

The Chair: So many people pay so much money to go to an exercise club. It seems to me if you have this on your hand-held device right in front of you, and you have certain exercises or eating regimes, that would be more cost effective in terms of travel time, in terms of.... Could you comment on that?

Mr. Dale Friesen: Absolutely, and to actually be engaged in healthy activity....

As an example, you mentioned a health club. I'm not here to take away the benefits of going to the health club, because equipment, and trainers, and all those things are good motivation and accountability tools, but if you work out with your body weight for 30 minutes, three times a week—

The Chair: Can I ask you one question? I've only got 30 seconds left.

Let's say somebody does that and uses the apps. Do you have a before and after...? You said you assessed them. Do you have results for after, seeing if they indeed had followed through with their plan? If so, how do you handle that?

Mr. Dale Friesen: The system actually reapplies different suggestions then as well. It gives different training or different advice based on how you journal.

The Chair: My question is, how do you assess it? You start from point A and you end up at point Z, so how do you assess the increase or decrease in the person's health?

Mr. Dale Friesen: There are various health scores you can look at in assessments. It could be your biometric screening, so your blood work.

The Chair: Are they built in?

Mr. Dale Friesen: Yes. For the blood work you'd have to go to a lab.

The Chair: Great. You have to go to a lab for blood work. You don't draw blood. That's comforting.

Thank you.

Okay, Dr. Carrie.

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

I just want to say, Mr. Friesen, I think what you're doing is fantastic. Before I was a politician, I was a chiropractor and I ran two wellness clinics. When I started almost 25 years ago nobody knew what the term “wellness” was, and about prevention. Nobody looked at prevention. It was after you had a disease that you'd start to intervene.

You talked about corporate wellness and prevention, but also about the idea of changing behaviour and getting that knowledge out to people. Could you comment on what you see the barriers to implementation of these new technologies and systems being?

The second question I wanted to ask is for Dr. Milne. You talked about everything being about the patient, that it's centred around the patient. I was wondering how we use technology to encourage more personal responsibility, and as my colleague said, patient empowerment.

● (1655)

Mr. Dale Friesen: I think the biggest obstacle we are seeing, and we talked a bit about it already today, is accessibility. How do we make it accessible to people? If your employer is providing it, or if a school is providing it, then you have that, but if they're not, then you need to be self-motivated to go out and search it out. That is the gap right now. Technology is built to scale, so it could handle hundreds of millions of users. It is really how we make it accessible and what's the right way to make that accessible to everyone.

Dr. Ken Milne: Health literacy of course correlates to health outcome. We really don't know individually what people's health literacy is, and that's so key in the relationship. That's why just last year we validated the REALM, rapid estimate of adult literacy in medicine, short form. There is a 10-second test to target what your health literacy is using the REALM short form. Then I can put you into four different categories for your health literacy and then target that. It is frustrating, though, to do it even for 10 seconds on a paper-based model. My 14-year-old son was sitting behind me and saw that I was frustrated and pulling my hair out and he said, “Why don't I just make an app for that, Dad?”

The Chair: Thank you Dr. Milne. We'll now go to Dr. Morin.

[*Translation*]

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

I would like to follow up on what my colleague Dr. Carrie was saying about self-empowerment. This concerns me a lot as well. First of all, I would mention that I am an MP from a rural region of Quebec, so I am very happy to see that there is a lot of attention being given to rural regions today. Also since I am a general practitioner, prevention is very important to me.

More specifically, I would like to know what role the federal government can play in trying to improve prevention with the help of innovation and technologies. We addressed the question a littler earlier on. I mention this as an example, because oddly enough, the Auditor General published a report today in which he lamented the fact that $100 million was allotted to the Public Health Agency of Canada, Health Canada and the Canadian Institutes of Health Research in order to implement prevention and reduction strategies for diabetes.The government takes this matter seriously and has a role to play in preventing different chronic illnesses, both in urban and rural Canada. At the same time, the Auditor General is saying that no coordination took place.

Therefore, a lot of taxpayers' money was invested in this and with no results to show for it. There was redundancy. I still have the same question: is the solution to add more money that will be poorly administered by some governments, or is it to coordinate our efforts so that people empower themselves?

I will try to finish up my question. I imagine that evolving technology also has negative effects. People with diabetes or high blood pressure think that it's not a big deal, because they figure they can just take medication to solve their problems thanks to advances in the medical field. So they don't think that they need to take responsibility for their own health, do more exercise or eat better. They are happy to take their pill. Before long, it becomes a box of pills per day. I get the impression that on the whole, Canadians don't take their health seriously, or at least they don't want to improve themselves.

[*English*]

The Chair: Go ahead, Dr. Norman.

Dr. Cameron Norman: There are a lot of different roles that can be played. One of the things to think about, though, is having the right information to make healthy choices. There is also the idea of empowerment, which is important. The federal government could support the education and deployment of technologies that allow people to make informed decisions and organize around them, whether it's through a civil society advocacy mechanism, through creating new business opportunities, or through other means.

For example, with chronic disease, a lot of it has a connection to food. If you are in one of these what we call food deserts—areas where food is not accessible; you're food insecure—being informed about how to eat is somewhat irrelevant. You need to be able to take some type of action, and maybe it's about creating a new opportunity to do that, or something like that. I think there's an ability to create a mechanism to actually help people organize as well as be adaptive, with their health providers and their communities, because it's going to be quite different in different places.

It's one thing to make healthy decisions, but you also have to look at the systemic effects and be able to take action on them as well, simultaneously. I don't think it's an either/or situation; I don't think it works that way. We have way too much diversity in Canada for that to work.

● (1700)

Mr. Dany Morin: Dr. Milne, when you talk about the rural population—

The Chair: Mr. Morin, I'm sorry, but Ms. Collins would like to make a comment. Is that okay with you?

Mr. Dany Morin: Sure.

The Chair: Ms. Collins.

Hon. Mary Collins: I want to add one point. There's a lot of innovation going on in the provinces and territories, with the support of provincial governments and NGOs. One of the areas where the federal government can be very helpful is in taking those best practices, scaling them up, and spreading them throughout the country.

The Public Health Agency of Canada has just developed a new approach to partnerships for chronic disease prevention. We're quite pleased to see the kind of approach they're taking. We hope it's going to result in some really good stuff. We don't have to reinvent the wheel on everything. There's a lot of good stuff going on.

Mr. Dany Morin: Dr. Milne, my opinion is that people in rural areas rely on the automobile, as opposed to just walking, as people do in the city. What's your thought on that? How can we make sure rural people walk more?

Dr. Ken Milne: They usually drive everywhere because it's so far to get to anywhere, and they're usually on their feet all day doing agricultural stuff. I don't know if it's about getting them to exercise or be more fit that way; I think it's more on the food side of things. That would be my impression. I think they're up and busy.

The Chair: Thank you very much. I'm sorry, but I have to go to Dr. Wilks. I just promoted you. You're an MP, a mayor, and now you're a doctor. Okay, Mr. Wilks, you're next.

Mr. Dany Morin: An MP extraordinaire.

Mr. David Wilks (Kootenay—Columbia, CPC): Thank you very much, Madam Chair.

A voice: Dr. Smith.

Mr. David Wilks: Yes, Dr. Smith.

I thank the witnesses for being here.

I'm going to ask my questions quickly, and then you can answer them. That way, I'll keep to my five minutes.

Ms. Collins, you spoke about encouraging innovation that is scientifically validated. I wonder if you could expand on that a bit more for the committee and on how that would fall into a federal component.

Dr. Milne, you spoke about JOG, just out of the gate, and I wonder if you could speak to that a bit more.

Mr. Friesen, I have a different view of smart phones. I think they're a great application that has come about in the last few years, but to the detriment of our kids. They've utilized them for something that might be good in one sense, but I think we're going down a road of obesity and unhealthy kids because of this.

Starting with Ms. Collins, could I get your comments.

Hon. Mary Collins: First of all, we'd like things to be evidence based. If you're going to be promoting apps or technologies, they should have some evidence behind them that they're actually going to work and that they're effective.

We need to do more in that area. That's where I think the federal government, whether it's through the CIHR or some other mechanism, could be investing more in this area, like the study I mentioned in San Francisco, which was really interesting. I haven't seen too many like that here. That certainly would be one area.

The other would be what we've already talked about: some mechanism by which you would have ongoing evaluation of a lot of these new technologies and apps that would be useful both for the medical community and for the individual consumer.

Mr. David Wilks: And on JOG.

Dr. Ken Milne: Okay. For JOG, just out of the gate, what we're going to do is take in the critically reviewed relevant information for rural practitioners, who then can say, "Yes, it makes sense in my rural area." The problem with current medical knowledge translation is that it typically takes 10 years for high-quality and clinically relevant information to reach the patient bedside. Ten years is too long when it comes to information technology, so we're talking dissemination.

It's very cheap to get on iTunes, podcast that information, and tie it into a Twitter feed, a YouTube channel, and a Facebook page. We've already done this successfully with emergency medicine in this last year for the project called the Skeptics Guide to Emergency Medicine. We're going to mirror that, so if you want to see what JOG will look like, go to the Skeptics Guide.

● (1705)

Mr. Dale Friesen: I think smart phones are here to stay, unfortunately. I agree with you on the negative effect they have on kids. I see my nephews—my kids are small now—stuck in front of them. My angle would be to use them against them.

Voices: Oh, oh!

Mr. Dale Friesen: Let's put smart information on there. Really, we need to educate them, so let's provide that education through their smart phones. It might be that it's a healthy game. Again, that goes back to gamification, so that if the game shuts down for 30 minutes, you have to go and run.

Polar has a device that tracks the activity of kids. I know that a lot of parents we've had in our pilots won't let their kids watch TV until they get 60 minutes on their watch. There are different things that can be used to track their activity and then reward them with the TV or the game they want to play. That's an option as well.

Mr. David Wilks: I'll go back to Dr. Milne.

I live in Sparwood, British Columbia. It's a town of 4,000 people. In 2001, the hospital was closed. As a result, we went to our primary health care model. At first I was quite a skeptic—I was the mayor of the town at the time—but over time, it has really worked. What has happened is that it has forced people to educate themselves and to realize that they actually can do things by themselves without a doctor, unless they need to actually go to one.

I know that federally, Madam Chair, health care is not of our volition, as it is provincially, but how can we better educate people and say that primary health care isn't this scary thing that we shouldn't go to? In some places in British Columbia, they're saying, "I want you to tell me what to do, rather than me trying to figure out that, hey, this is not a bad idea."

Dr. Ken Milne: If the federal government provided high-speed Internet access to all of these locations, then they would through telemedicine, through FaceTime, through whatever, be able to have access to those sub-specialties or specialties that they need when they need to. Otherwise, they would be relying on primary care that would be delivered locally, but they need that.

If you guys could build the highway, the infrastructure, that could be the pipeline to the evidence-based content so that everyone in Canada, regardless of where they live, benefits from that information.

Mr. David Wilks: Thank you for that answer.

The Chair: We'll go to Mr. Kellway.

Mr. Matthew Kellway (Beaches—East York, NDP): Thank you, Madam Chair, and thanks everybody for coming today and sharing your thoughts and experiences with us.

Ms. Collins, you mentioned at the beginning that the application of technology for management seems to be ahead of the application for prevention. You went on to express a bit of skepticism about how useful it is, or at least you said it's not the answer to everything.

On the prevention side, how much of the problem is this the answer to?

Hon. Mary Collins: I'm not sure I can give you a percentage, but I think we do have to remember that people are social beings and we still need to interact with other people. One of the most effective things I have seen in workplace health is that somebody decides that they're going to go for a walk at noon, and they get other people to go out for a walk, but people wouldn't necessarily do it on their own.

You have to get people to work together on some of these issues. It's not only the smart phones that are going to be the answer to all of our potential ills.

Mr. Matthew Kellway: Right, because I just get the sense, and I hope this doesn't cause offence to anybody, that with respect to technology for prevention, we're still at the days where computers came into our homes and when we asked what we would do with them, we were told, "Well, put your recipes on them." It really didn't make a lot sense to be typing your recipes out onto a computer. I just get the feeling that this is where we are on the prevention, which isn't to suggest that maybe there's not a great future for it, but it seems we just haven't found it yet.

You mentioned walking, and that seems like a sensible thing to do that doesn't require a phone.

Hon. Mary Collins: I think there's a lot of potential that we have not yet explored.

Certainly there's the example we're hearing today and I've heard of others in terms of workplace health. In terms of helping to inform people and to engage them in new ways, and particularly with younger generations, I think there is a lot of potential, but I wouldn't say it's going to be the answer to everything.

Hopefully, families still sit down and eat together and talk about having healthy food and doing things in a healthy way. It is not just all going to be because it comes on an app.

● (1710)

Mr. Matthew Kellway: This question is for Mr. Friesen. I'm a bit concerned about this information coming in to workplaces for a couple of reasons. One is that when you look at labour markets these days—and others have commented on them—the vast majority of work in an urban setting, at least, is precarious work. It's people stitching part-time jobs together, it's self-employment, etc. These aren't the kind of jobs where you're sitting at a desk and having stuff pushed at you.

Where it is those kinds of jobs and these kinds of programs make some sense, I worry about what it does to people in terms of increasing their stress levels at work. You start suggesting meal plans, but the big question is whether you are even going to be home for dinner that night, whether you are going to have time to go shopping for fresh vegetables.

It's like employers building a new gym for the employees, but they're requiring overtime of everybody, so no one.... You're stressed out because you see you're supposed to be on the bicycle over there, but you can't get away from your desk.

Maybe the answer is what the Americans are doing with this affordable care act. If you could tell us a bit about that, that might be useful, but could you also respond to my concerns about putting this on people in their workplaces.

Mr. Dale Friesen: Just to piggyback on what was being said before, nothing is all things to all people. I think we've seen a lot of examples in the workplace where what the tool has done is it has actually empowered people to start walking and they use the tool to set dates to go walking together at lunch, because they're earning points for the challenge. The online actually facilitates what they should be doing off-line.

All of the evidence we've had in all of the companies, the universities, and with the students who have done it, shows it actually reduces stress. The studies indicate that exercise and thinking healthy thoughts actually do reduce stress at the workplace.

Unfortunately, in this day and age there's a lot of overtime everywhere and I'm not sure how we can stop that. There might be something you guys could mandate about that, but as an employer, I probably wouldn't want you to.

The Chair: As interesting as your questions are, your time is up.

Thank you so much.

Mr. Lobb.

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

Thank you to everybody for coming today.

My first question is for Dr. Chang.

I wonder if you could tell us if you have any projects or studies that are just about complete. In the mid to near future, what would you like to look at in regard to technology and better health outcomes?

Dr. Feng Chang: I'll mention a few examples very quickly.

Gateway was involved in a study called Artemis. The other name for it is basically "10,000 steps a day". It looks at using the BlackBerry as the hand-held device that connects into a hub of your weight scale, blood pressure monitoring, blood glucose monitoring, and a pedometer. It uses that app to feed all that information into the user's hand-held device to see if that helps with motivation. We talked about patient engagement earlier on. It's very important.

That was shown to have pretty positive results in terms of increasing the number of steps taken daily and also over time. They tracked this for a year and they were able to show a decrease in blood sugar and blood pressure. There is some positive data on that.

We talked about how to get people engaged. There is documentation that rural residents have a bit of a stronger cultural influence, in that they tend to be more independent-minded and less likely to actively seek out preventive health services on their own. We looked at who they trust and where they usually go to have a regular chat. We targeted community-based pharmacists as that group in almost every smaller community who know each other and know the patients intimately well. They have usually been there for decades and they see the patients on a regular basis, even though it may be for something completely unrelated.

We're looking, for example, at whether we can embed cognitive impairment screening, which is a short three-to-five minute test, into a visit like that, which could spot signals that could be an issue down the road. We know early detection leads to earlier diagnosis, which leads to better outcomes when it comes to management of the condition as well.

Those are some examples.

● (1715)

Mr. Ben Lobb: Dr. Milne, when we're looking at technology, as Dale was talking about, you enter your information about what you're eating in a day. Whether it's on your hand-held device or your laptop, or whatever, it goes into a database somewhere.

For instance, say I'm your patient, and I am a borderline diabetic. I've got high blood pressure and I'm overweight. I have a problem and I come into your office. You tell me to enter everything I eat, everything I do, into my iPhone and to come back in a month and you'll see what I'm really doing. Then you can work with the patient.

Are we at that point where the patient can punch it in on his hand-held device and then it comes out on your records?

Dr. Ken Milne: Some medical records will allow you to do that.

If you were my patient, I would have to tell you that sometimes I am not the best person to manage this. I would then have you see the diabetic educator who can take the time and sit down with you for an hour. I would have you see the diabetic nurse. As a team approach, we would tell you to keep an electronic diary that we could plug into our EMR and share among all of your health care providers.

Mr. Ben Lobb: As far as being a doctor yourself, when you are implementing technology, what kind of decisions do you have to make?

How do you verify the piece of technology before you bring it into your office?

Dr. Ken Milne: It would depend on whether it is a diagnostic technology. If we're using it to diagnose things or it's a treatment type of thing, there are evidence-based methods to do it that way. I look at what evidence there is for implementing it. If it improves patient care, that's great. If it doesn't improve patient care, then I won't implement it.

It's just a tool. You have to evaluate each tool independently.

The Chair: You have about 20 seconds.

Mr. Ben Lobb: That's all? Then I will just thank everybody for coming.

The Chair: It was very interesting, Dr. Chang and Dr. Milne. You made some amazing points there.

We'll go to Ms. Block.

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

I would like to join my colleagues in welcoming all of you here today.

It has been an amazing panel. This whole study has been amazing in terms of all the different ways we've been challenged to understand technology. And obviously, there are competing dollars. Whether you're looking at life-saving and life-prolonging measures or you're looking at managing health issues, or disease prevention and health promotion, there is a competition for those dollars.

I am from Saskatchewan. I mentioned that earlier. It has a relatively small population, just over one million people in a very large geographic area. That forces us to be innovative and to do what we should do long before we have to.

I was the chair of the third smallest health district in Saskatchewan, so I know full well all the challenges that rural communities face when it comes to the provision of health care.

I believe all of you are obviously champions of empowering individuals and of health promotion and disease prevention, and you obviously appear to be leaders in embracing innovation and technology.

My question for you is whether you can identify some barriers to moving forward with innovation and technology that you are facing in all of your different fields.

We've talked about incentives and the value of incentives, but what are some of the disincentives you see that exist in moving forward?

Anyone can start.

Hon. Mary Collins: Sure, I'll start.

We mentioned earlier that one of the challenges is the plethora of stuff out there and not knowing whether it's worthwhile or not. I know lots of people who've used certain apps for physical fitness. They use them for a few weeks and then get bored with them. That doesn't really work.

How do you get things that really work, and what do you need to go along with that? I think we've heard lots of good suggestions on that as well.

Some of the barriers have also been mentioned this morning, that it's very hard to drill down and really get some of this knowledge and support and technology to those who are most at risk of chronic disease, because they're living in poverty or other things. I think that's another big challenge, how to share this knowledge and capacity more equitably among all Canadians.

● (1720)

Dr. Ken Milne: From the provider side, in the package you guys will get later, when it's translated, there is one nice picture that shows the leaky pipe model. It's the various different leaks in the system that cause physicians to not adapt new information, whether it be information technology...but new information.

We're trying to address that by using social media to turn it on its head so it doesn't have to trickle down from above. We give the high-quality information to the front-line providers using social media, especially when you're talking about distributive learning.

Dr. Cameron Norman: I would say that one of the barriers, as has been mentioned, is the fact that there is not a lot of evidence for a lot of the stuff. It's partly because the research models out there are somewhat inadequate to be able to address some of that.

There are oodles of apps and they're by well-intentioned people, but they have very little evidence. Some of them may actually work quite well, but we don't have a lot of that.

I would also say that another big thing is organizational support. We've heard some great examples about how it has been used. In most of the organizations I work with, people are interested in it, but they don't feel they have the support to be able to implement it, at an individual level and a management level. They still think they need to be on social media, but they don't actually know how to do it tactically. I think the ability to create a bit of a culture around where it's possible to do that is a good one.

One of the other disincentives—just to turn it a little bit on its head—is that particularly those of us who are health professionals often are shocked when people aren't obsessed with health all the time. They're not. Most people just want to go home and have fun with their kids. They want to have fun with their grandkids. They want to go out for a run just because it's fun, not just because it's healthful. I think we get very fixated on creating interventions to try to get people to do stuff, rather than trying to maximize the enjoyment.

There was a good point made about whether people have the time to create healthy meals. Often people love to have mealtime. It's a great opportunity. So how do you have fun with it? Gamification was an idea. Turn these things into something enjoyable, rather than another thing on people's plates, which I think is probably one of the biggest barriers because very few people out there are lacking something to do. If we can actually turn it into their fun time, we can do a lot of good with that.

The Chair: Thank you very much.

We'll go to Dr. Fry.

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

I just wanted to say that the idea, when we last left off, of finding games for people to play, and then Norman—or is it Cameron?

Dr. Cameron Norman: It's Cameron.

Hon. Hedy Fry: Cameron, you came up with the idea that this could make for fun. It could be a teaching tool for the whole family to play this thing that talks about healthier eating and a healthier lifestyle, and all that kind of stuff. I think that's kind of fun.

I'd like you to give me an example of a game that would intrigue young men, for instance. Earlier Mary talked about a place in California where they were working with social media to get involved with obese lower-income kids, who are really outside the loop. You could see games being a part of that.

I'd like to hear of a game. That's the first thing.

The other thing I wanted to say is that you mentioned over and over, Dr. Milne, that there is a place where, if somebody sent you the information about what was going on, you might say, "You don't need to come to see me. You can go to the nutritionist." That would be very helpful, if we had the comprehensive, integrated community care systems of delivery that we need to actually be cost effective, to move us to getting real results.

I would like to know what you see as the barriers to our getting those done. It was one of the major objectives of the 2004 health accord. It's moved well in some areas, and it's stalled like heck in other areas. I'd like to hear what you think are the barriers.

● (1725)

Mr. Dale Friesen: A few examples of games.... Actually, Dr. Chang mentioned one.

Just tracking your steps made people walk more. People are educated if they do a step game or a step challenge that tells them they need to have 10,000 steps today. When you get to 9,500, instead of turning into your house, you walk around the block one more time until you get to 10,000. I've heard stories of people, once they got home, going up and down their stairs until they got to their goal of the day. From a male standpoint, men are competitive, and a good part of the game is just pitting one person against another. It can be as simple as getting points for general nutrition, getting points for doing activities, getting points for answering a health question. We're giving them knowledge, but it's the points that drive them, and the desire to stay ahead of their friend.

Hon. Hedy Fry: It's I beat you. Yes.

Mr. Dale Friesen: Exactly.

Hon. Mary Collins: I want to mention another example that we're aware of. It's been developed with the Concerned Children's Advertisers group and Gogoyou, a game that works with adolescent girls, I think, in a number of aboriginal communities in Ontario. It apparently has been very successful. It's a similar idea where you play the game, and then in order to continue to play it, you have to go out and exercise. Then you're allowed to come back and continue to play it.

Some of these things seem to be helping.

Dr. Ken Milne: Doctors' egos is another.

Hon. Hedy Fry: Do you think that's the only reason?

Dr. Ken Milne: What I mean by doctors' egos is that it's generational. We were raised, trained, and streamlined into being the captain of the team, and then they expected all the captains of the team to be equal team players, and that created a bit of dissonance. That's the ego part: "Wait a minute, I thought I was captain. I thought I was running the place."

Now as new physicians are coming through, you don't see that attitude. They're very happy to play part of the team.

Hon. Hedy Fry: I'd like to expand on this. Every time we talk about these comprehensive integrated models of community care, we always talk about health care providers, the nutritionists, pharmacists, physiotherapists, family physicians, nurse practitioners, anybody we can think of. I also think there might be a way—because Mary talked about community—of community players being part of that model. How about the social worker, or the housing advocate, or the school teacher, or the other people who have information, like NGOs, who could be part of that team? They bring a totally different view of how care is given and how care should be given to people.

Do you see that as being part of a good model?

Dr. Ken Milne: My hospital is part of a community health centre which involves those individuals you mentioned, from community members to social workers, and that's how we do it. We create healthy communities.

Hon. Hedy Fry: With the patient as the centre.

Dr. Ken Milne: The patient is always the centre of it, and the most important.

Hon. Hedy Fry: Thank you.

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

There has been excellent dialogue here. We, as a committee, really want to thank you. I listened to Mr. Friesen, Dr. Milne, Dr. Chang, and all the rest of you. It's been a fantastic dialogue today. What we're studying is innovation, and it was extremely innovative. Thank you for being here and thank you for all your insightful comments.

Thank you, committee.

The meeting is adjourned.