HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Health

HESA • NUMBER 071 • 1st SESSION • 41st PARLIAMENT

EVIDENCE

Tuesday, February 5, 2013

Chair

Mrs. Joy Smith

Standing Committee on Health

Tuesday, February 5, 2013

● (1530)

[*English*]

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

Welcome to our study on technological innovation and all the things we're going to be discussing today. We're very pleased that you could come to the committee to share your expertise and your knowledge. We're excited about having you here today.

We'll start with Dr. Jalali, who is appearing as an individual.

You have 10 minutes for your presentation. Thank you.

Dr. Alireza Jalali (Medical Doctor, As an Individual): Madam Chair and honourable members, thank you for having me here. I am Ali Jalali. I am a professor of anatomy in the Faculty of Medicine at the University of Ottawa. I also do a lot of research on innovative methods in teaching.

I'm going to start by talking a bit about the innovative technologies we use in medical education and that I've seen being used. I'll talk about some advantages, some disadvantages, and then some main points that I think are important for you to know about.

Why is all this talk about technology coming out right now? It's because of the digital native.

It is because of the new generation that we are trying to teach: a bit in medicine, a bit in nursing, and a bit in physiotherapy. These guys all come from an era when the Internet was always there. These guys were born with the Internet. They were born with technology, so education needs to adapt for them a little bit.

What type of education is out there? Probably you have all heard about e-learning. E-learning is electronic learning, so you really don't need classrooms anymore in many settings. This has its own advantages and disadvantages. The bigger part of e-learning now is m-learning, which is mobile learning. A lot of things can be developed on mobiles and given to people. I will get to the advantages and disadvantages in a second.

The huge thing that is very hot right now is MOOC. MOOC stands for “massive open online course”. Using MOOC means putting online a course that is certified, that people can get credit for, and that is open to everybody. You can have 10,000 people who have this certification from one course that someone has given.

What else do we have out there? Of course, we have Web 2.0, and for those who are not familiar with it, it's Web 2.0 against Web 1.0. Web 1.0 was the Internet, where you could go and have a look and see stuff, but you couldn't interact. With Web 2.0, you can interact with stuff. You can go to a hotel and comment on the hotel. The same thing applies in medicine. The same thing applies in education. A lot of teachers take advantage of that.

There are also a lot of wikis being born. You have heard of Wikipedia. What is Wikipedia? Is it the Internet? People can go there and write stuff on Wikipedia. Similarly, you can try to promote collaboration, communication, and inter-professionalism by using these types of tools.

The other huge Web 2.0? It's social networking. It's Twitter. It's Facebook. These are the things that our students and our residents, the people we are teaching, are using. We should embrace these. We should try to use them in education.

What else? There's simulation, of course. Everybody has probably heard of simulation. As soon as we talk about simulation, people usually think of high-fidelity simulation. They imagine a mock operating room, an OR built in a building such as we have here in Ottawa at the Civic Hospital, with a mannequin sitting on a bed and people working on it. Actually, though, simulation has been around for a while. The first type of simulation was with a standardized patient. To teach students, we brought in actors instead of actual patients.

The other type is virtual reality. I don't know if you have ever heard of a site called Second Life. It's a site that people go to where there are games, parties, and everything. It's a social network. Now in Second Life there are hospitals built by universities, where the students go to train, so this is another part of simulation.

There is procedure simulation. When I was in medical school, we used to do suturing on pigskin. That's another type of simulation. Simulation can be at different levels, but of course now what's hot is high-fidelity simulation, those Harvey mannequins that cost a lot of money and imitate a human being.

Those are the main points about the technologies I've found that are hot now and that I thought you should know about.

As for the advantages, these technologies of course help to adapt our education to the digital native, to these guys who are always technologically savvy and have their technology with them.

They also help with asynchronous learning, so the teacher doesn't have to be there. This saves time, money, and energy. Every four weeks you receive a new resident. A new doctor comes into the office and wants to work with you. You have to repeat the same things to him. Instead of the time that you or the nurses are spending on explaining this stuff to the students, you can just create a self-learning module, put it online, and ask people to look at it before coming to your office, so that when they do come in, they are ready for it. You take a passive technology such as a podcast and get more interaction with the patient out of it.

Those are the advantages. Of course, there also is a minimization of the risk to the patient. As I said, if you are suturing on pigskin, it is much better than doing it in the operating room for the first time.

● (1535)

This also gives power to students and patients. This is where the notion of e-student, to empower the student, and e-patient, to empower the patient, comes in.

If you go on Twitter, there are huge patient societies that talk about this stuff. There is no more of this “I am the doctor. I am the nurse. I am the health provider. I know everything.” No. There are patients who also have their say.

So these are the advantages I see.

As for the disadvantages, of course you need to learn all this stuff. When you have someone who wasn't born with the Internet—like me, like many of my colleagues—you have to go and embrace these types of technologies, and there's a learning curve.

Some people don't like it. If you say “Facebook” to them, they'll run away: “I'm not going to teach with Facebook. It's unprofessional.” No. You need to learn about it.

Then there's equipment failure. Everybody watched the Super Bowl. See what happens? It can happen. It happens everywhere. That was in the U.S., but it can happen here. When you're depending on technology, you need to have backup.

We need to teach our students about something that's new, which is online professionalism. They need to behave. I always tell my students, “You're a 24-7 MD. Deal with it.” For nurses, it's the same thing. When people look at your photo when you were drunk and under the table, they don't say, “Oh, that was his bachelor party.” No. For them, you're their doctor.

These are things we need to teach. You can't just tell the CMPA to, you know, go after people and.... No. They need to have policies for this.

One other thing that lots of my colleagues are afraid of is that we will lose empathy when we bring technology into teaching. When you have a Harvey mannequin in front of you, you can do whatever you want with the disease. There is no patient there. You can cure the mannequin. But when you're in the hospital, this is someone's grandfather. This is someone's grandmother. This is someone's mother in front of you. So we need to teach the students some empathy and the humanities of medicine.

Technology is great, but there are some main points that I want to get through first.

First we need to have needs assessments. Are you just using technology because everybody's giving iPads out? You shouldn't just hand iPads to people. You should not buy the hype. You need to make a needs assessment, and make sure that the people you want to give iPads to are comfortable with it.

Let's say I develop this great video, high-quality everything, and put it online with the thought that a remote-area patient will have a look at it. But if they don't even have high-speed Internet, then it's a waste of everybody's time and money. That's because I didn't do a needs assessment and didn't realize that these people didn't even have access to that. We need to be careful about this.

At the University of Ottawa, in fact at all the universities, we emphasize using technology that is based on educational theory. You know, have good objectives; know about adult learners; know about constructivism. If you're going to collaborate with each other and communicate, these are the theories of education that people need to know about.

We have two complete facilities—one AIME, the other CAPSAF—doing research in medical education to have the best practices. These things need to be based on solid ground. We need to research them.

As well, we always need to give feedback to people and follow up. You can't just give technology to people and hope that will solve all the problems. There are different levels of evaluation. You don't just give iPads to everybody, ask “So how many people liked it?”, and then write an article, if everybody puts their hand up to show “yes”, saying iPads are great. No. It's not that.

Our main goal in medical education, in health care, is patient care. That's the ultimate goal. Someone should see if this thing reduces the cost, if this things helps with patient care or not. That people are happy with it is not really what we should be after.

Finally, let's not forget about the humanities. If we just go with technology, then empathy may be lost.

Merci. Thank you.

● (1540)

The Chair: Thank you very much.

You had only 14 seconds left, so you did very well with that. Thank you.

We'll now go to our next guest, who's from the Association of Faculties of Medicine of Canada.

I think, Dr. Gold, you're the one who will be presenting today. You have backup there with Dr. Steve Slade, vice-president of data and analysis.

Mr. Irving Gold (Vice President, Government Relations and External Affairs, Association of Faculties of Medicine of Canada): Thank you very much, Madam Chair, and members of the committee, for taking the time and for inviting us to come and speak with you.

At the AFMC we spend a lot of time thinking about and enabling national projects that deal with medical education, and I would echo everything that Dr. Jalali said. There's a great deal of innovation happening in our faculties of medicine and I get to see it in my professional life on a daily basis, and it's very exciting.

I want to preface my comments, though, by saying that while we think of innovation often in terms of high technological innovation, in some ways, and in human health resources, HHR in particular, innovation is really about doing things differently than we are currently doing them. So I want to talk a little bit about health human resources, and I do want to talk about innovation. But it isn't going to be about microchips and it isn't going to be about the Internet. It's going to be about changing the way we think about health human resource planning in the country. I think that's a very important form of innovation.

I don't need to tell any of you about our health human resource challenges in this country. I know you all know them inside and out, backwards and forwards. I will make some points, though, just to show you that we understand some of the elements that I know you're concerned about. For HHR, the challenges we have go far beyond wait times. The effects of our health human resource challenges in this country are affecting consumers of health care, but other players, other people, in this country as well. It's not all about physicians. I'm here from the Association of Faculties of Medicine of Canada, but we play a role in health care delivery. We are not the end of the story by any stretch. Really, it's also more than just about shortages. That's where some of our innovative thinking needs to kick in.

Beyond wait times, I can say that we are concerned at the AFMC not only about unacceptable wait times, but things like lack of adequate chronic disease management, lack of care close to home, major health disparities among communities across the country, and a significant lack of coordinated, inter-professional care. I think I speak for all of our deans of medicine, whom I represent, and I'm sure everyone here, when I say we should be and could be doing a lot better in all of these areas.

Yes, the public feels the pinch of our health human resource challenges, but so do the provincial jurisdictions that are trying to plan their health care systems, and our national health human resource challenges affect their day-to-day lives. Every elected official I've met at the provincial, municipal, and federal levels hears stories on a daily basis from constituents about the challenges they are facing, so you all deal with this on a daily basis as well. You feel the pinch.

Our learners who are in our faculties of medicine, either at the undergraduate or postgraduate level, are facing enormous challenges just trying to decide what part of medicine they want to practise. “What should I be?” Our health human resource system and our lack of data and national modelling is making it difficult for them to make choices. Those days where we used to joke, “There's no such thing as an unemployed doctor”, are coming to an end, if they're not already here.

Finally, the provincial regulatory authorities are having a difficult time with our challenges, so this is about the patient for sure. It is about Canadians in general, though.

I'm not going to dwell too much on beyond physicians again. We all know that the role of the physician and other health care providers is changing and should be changing, but we all need to re-calibrate. I know that those charged with health human resource planning, using the current tools that are available, are not able to do this as well as they could. Forecasting scope-of-practice change and the changing role of the professions needs to be more front and centre.

Again, it's not just about shortages. For a very long time, everybody thought that our health human resource problems were presenting themselves in terms of shortages, but we now have anecdotal evidence, if not hard data, around surpluses in certain areas. In a country that faces the challenges we have, I don't think we want surpluses. The cost of training a physician is quite significant. We need to be thinking of the cost that the taxpayer pays to educate a physician as a major investment and we should be using those investments properly. An underutilized physician is an issue. They're not underutilized because they don't want to be working; they're underutilized in many cases because we haven't planned the supply properly.

You hear about geographic misalignment every day. Consumption of health care services is not the same in every province across the country, and certainly it's not the same in rural, remote, and northern communities. We have a major misalignment between supply and the needs of Canadians, I would argue. Canada has changed, and I don't think our workforce balance has changed to keep up with the times.

Finally, we have a disturbingly homogeneous workforce. We won't have the time to discuss this specifically right now, but the data clearly shows that those who are graduating and entering medical school represent a very thin slice of the upper end of the socio-economic pie in Canada. This is concerning to us.

● (1545)

I'm going to back up to what is innovative and what we want to bring to the table—and again it isn't rocket science but it isn't being done—and that's national collaborative data sharing and analysis.

We've heard in the last few weeks of three provinces that are using fairly sophisticated tools to measure needs in their jurisdictions, and the supply of people practising medicine that they are creating in terms of physicians in their province. And that's four, so that means there are several jurisdictions that are not currently using a robust tool for HHR modelling, but even among those that do, they face the immense challenge, which has been exacerbated I think of late by the extreme mobility of physicians. Provinces can no longer plan their physician workforce within a provincial lens. It's very difficult to do that with people moving around as much as they are, and that's the same for other health professionals.

So what we're missing I think, what we think at the AFMC, and we've been saying this for quite a long time, is a national approach to health human resource planning, a national tool that the jurisdictions can draw on, feed into, that would in fact examine the needs of Canadians from coast to coast to coast, and the supply today, tomorrow, and in 5 years, and in 10 years. Where are we going? Again, it takes between 8 and 12 years to train a physician. So when we play with admission levels today, we don't feel the impact of that for 8, to 10, to 12 years, and yet we make changes and two years later we undo those changes. We have this constant desire to play with the numbers before we've even seen the benefits of our actions.

I want to make sure there's enough time for questions and answers. I'm just trying to put on the table what it is we're coming with, and that is what I believe is an innovative approach to a national data and analysis modelling centre, which is the word that we're using. We used to say observatory, but people really didn't like that term for whatever reason, so now we've renamed it, but underneath the hood it's the same idea. It's a tool that the federal government could invest in, which would allow the provinces to share and aggregate their data and have a look at what Canada as a whole needs, and what Canada as a whole is currently producing.

I know that all of these issues touch on provincial jurisdictions, and that's a challenge, although I think in the area that we've identified there is certainly much precedent for federal intervention in terms of data analysis and data collection. I do think that the federal government really would be well positioned to assist the provinces in doing this work.

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

Now we'll go on to our next guest, who is appearing as an individual.

Dr. Steven Denniss, please.

Dr. Steven Denniss (As an Individual): Good afternoon, Madam Chair and honourable members of the committee. Thank you for the introduction.

My name is Steve Denniss. I've been invited here today to this committee to offer my view on the sub-topic of training health professionals as it pertains to technological innovation in health care in Canada. I would like to thank the committee for inviting me to participate. I am here today to present to you my view as an individual.

As a matter of context, I will take a minute to briefly give you my background and experience as it relates to health, technology, and innovation. I have a bachelor of science degree in kinesiology, an Ontario Graduate Scholarship-funded master of science focused on human pathophysiology and disease, and a Natural Sciences and Engineering Research Council-funded doctorate of philosophy focused on integrative biology and mechanisms of disease, for which I received a Governor General's gold medal.

Motivated by a growing interest and passion for health innovation and entrepreneurship, during the latter years of my doctoral program I began to independently seek out and take advantage of barrier-free opportunities to engage in government-sponsored business and entrepreneurship education and developmental programs, among which include the MaRS Entrepreneurship 101 program, the Ontario Centres of Excellence Value Added Personnel program, and the Mitacs Step program.

In further pursuit of a growing interest in health innovation, entrepreneurship, and business, I have spent the past year employed as a post-doctoral associate at the International Centre for Health Innovation. Within this role I have gained experience working to drive the success of innovation adoption research projects requiring the engagement and management of industry-academic-health care partners and interdisciplinary teams, as well as teaching aspiring health and business professionals. Currently, I am pursuing opportunities in the health and wellness and health-care consulting space. I am taking advantage of barrier-free business and entrepreneurship development and services, including science and technology business start-up competitions.

From my view, with respect to training health professionals as it pertains to technological innovation, I have the following key message that I would like to convey to the federal government through this committee: keep doing what you're doing in funding barrier-free entrepreneurship and innovation initiatives, consider making a few adjustments to promote their widespread success, and be patient.

● (1550)

First, in support of the message to keep on doing what you're doing in funding barrier-free entrepreneurship and innovation initiatives, I offer the following viewpoint and recommendations to consider.

If one thing is certain, the need for innovation and those who can deliver it is upon us. In the health and health care sector of the economy, this is especially certain. From the overwhelming health demands of the aging and chronically ill populations and an ever-increasing exposure to competitive global marketplaces, these needs are real.

While Canada has got better and better at scientific and technological discovery, it has not made the same progress in becoming better and better at innovation, which may reflect that Canada has got very good at generating a highly educated and highly skilled workforce, but has not made the same progress in generating a science, technology, engineering, and mathematics workforce that is also highly innovative.

As for the demand for and the desire of such trainees to pursue more innovative careers outside a classic corporate academic role, for example, I think it's there. A case in point for supporting this view is the biomedical scientist workforce. I would point to the findings of a recent National Institutes of Health study, which found that only 23% of Ph.D.-trained biomedical scientists were in tenure or tenure-track academic positions and that as many as 49% were engaged in industrial research, science-related non-research, and non-science-related employment.

While unable to find comparable Canadian statistics, I am confident that, if measured, they would be at least similar. With this view, it is encouraging to see a growing number of government-funded scholarship programs to help financially support trainees, fellows, and practitioners who wish to engage in industry or industry-academic research initiatives, and who are able to find such opportunities that are a good fit for both the company and for them. However, with a limited number of such companies in Canada in need of a specific set of scientific or technical/technological knowledge, skills, and experience, this option is quite limited at this time.

Also encouraging, the Canadian Institutes of Health Research offers a science-to-business scholarship program, which provides partial financial support to Ph.D.-trained scientists in a health or health care-related field to pursue an M.B.A. This is indeed a great opportunity for those who wish to gain and apply such breadth and depth of business skills and experience. However, these scholarships are few in number and this path has a number of significant barriers, including additional financial costs, opportunity costs, and the risk of those who complete an M.B.A. program deciding to leave the health and health care field.

In addition, if the passion and ambition of a health scientist or practitioner, at least in the early stages, is simply to find a successful means by which to translate their great idea into an innovative solution worth implementing, a full-blown M.B.A. program may not be the best fit for such individuals, as one does not necessarily need an M.B.A. to become an entrepreneur or to begin innovating successfully.

For the increasing number of aspiring and seasoned health and health care professionals seeking to gain innovation skills and experiences that meet their needs, I believe that financially supporting entrepreneurship and innovation initiatives such as local innovation hubs, incubators, and competitions so they can be barrier-free is a worthwhile allocation of government funds in supporting the training of health professionals to facilitate technological innovation in the Canadian health care sector.

Second, in support of the message to make a few adjustments to promote widespread success, I offer the following viewpoint and recommendations to consider.

There is still a majority of potentially interested, willing and able, aspiring and seasoned health and health care professionals who are unaware of government-funded, barrier-free entrepreneurship and innovation initiatives available to them. The adjustments I would suggest that the government consider to help promote the wide-spread success of such funded entrepreneurship and innovation initiatives include the awareness of available resources, and adjunct support for local competitions.

Regarding the awareness of available resources, while it is a great and necessary step to have in existence a growing number of local, barrier-free entrepreneurship and innovation resources that aspiring and seasoned health and health care professionals can engage in, a key factor in realizing the full potential of those initiatives lies in how aware and informed those individuals are of such initiatives.

● (1555)

Without the conception and rollout of an elaborate and expensive campaign, I believe there are a number of relatively straightforward and low- or no-cost steps that could be taken to promote awareness of such resources using existing channels and supports within institutions.

For example, each department head of a university or a health care facility could send out an approved email to their staff with information on such barrier-free supports, services, and competitions available within their institution and/or the surrounding community to be passed along to health students or front-line staff. If there happens to be an innovation champion within the department with industry-academic, and/or entrepreneurship experience, have that individual as a consulting resource and/or a provider of a department seminar to even further contextualize such initiatives.

Regarding adjunct support for competitions, there is a growing trend for institutions or local innovation hubs to put on government-sponsored competitions in hopes of attracting health science, technology, engineering, and mathematics students and/or working professionals with the next big discovery or idea.

However, beyond a set of requirements and an application form with a list of business plan-related questions to answer, there is rarely an offering of adjunct support to help educate these non-business trained individuals on the right set of business fundamentals and frameworks upon which to build a great idea into an innovative solution worth implementing.

Such adjunct support for competitions would serve the important purpose of helping to prevent false hope and setting competition entrants up for failure, and of not wasting the precious time, energy, and resources of both the participants and the evaluators. The latter are typically individuals in key academic, clinical, and business positions.

Again, without the conception and rollout of an elaborate, expensive, and localized educational seminar series that reinvents the wheel for every competition, I believe there is a relatively straightforward and low- or no-cost step that could be taken to offer such adjunct support services using existing channels.

For example, Toronto-based MaRS runs a free Entrepreneurship 101 course taught by credible and seasoned individuals in entrepreneurship, who teach participants the necessary and sufficient business fundamentals and frameworks needed to evaluate the potential of any next great idea. Because each session is offered and archived as a webcast, this resource could be used as an adjunct support by anyone putting on a competition.

Lastly, in support of the message to "be patient", I offer the following viewpoint and recommendations to consider. It takes time to change a culture. This is especially true in situations where things are polarized into specializations and heavily set in traditions and practices such as they are in both health care and education. It's said that even if you're doing everything right, it can still take up to seven years to successfully change a culture of an organization or a society. So if at all possible, this should be borne in mind when the government evaluates its metrics of the chosen measures of success of its entrepreneurship and innovation funding initiatives to decide whether to persist or to pivot.

With those elaborations, I will end by restating my key message: "Keep doing what you're doing in funding barrier-free entrepreneurship and innovation initiatives, consider making a few adjustments to promote widespread success, and be patient."

Thank you.

● (1600)

The Chair: Thank you, Dr. Denniss.

We're now going into our Q and A session for technological innovation.

We will begin with Dr. Sellah, for seven minutes.

[*Translation*]

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

If I may, I would like to introduce a notice of motion on drug shortages. We have been thinking about introducing this motion for a very long time. I am giving you the notice of motion today. The motion deals with drug shortages.

If I may, I will read it.

> That the committee undertake, following its study on technological innovation in health care, a study of at least five meetings on the progress of the implementation of the motion adopted on March 14, 2012 by the House of Commons aiming to establish a nationwide strategy to anticipate, identify and manage shortages of essential medication right, and that the Chair report the Committee's findings to the House.

Thank you.

[*English*]

The Chair: Dr. Sellah, we have witnesses here right now and this is a different topic. Did you wish to take your seven minutes to discuss this right now?

[*Translation*]

Mrs. Djaouida Sellah: Yes, I am going to ask questions. It was just a notice of motion, because I wanted it to be presented in public.

[*English*]

The Chair: Dr. Carrie.

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

[*Translation*]

Mrs. Djaouida Sellah: I have some questions.

[*English*]

Mr. Colin Carrie: I have a motion to go in camera.

The Chair: Okay, we'll do that.

Mr. Colin Carrie: We just did a full meeting on the business, but if she'd like to discuss it—

Hon. Hedy Fry (Vancouver Centre, Lib.): I have a point of order.

Mrs. Carol Hughes (Algoma—Manitoulin—Kapuskasing, NDP): It was just a notice of motion, just to clarify.

The Chair: Excuse me. I want to tell you that we need 48 hours to discuss this motion. You have tabled it now, but you can continue asking the witnesses questions. We'll continue there.

[*Translation*]

Mrs. Djaouida Sellah: I understand what you mean about the subject under discussion, Madam Chair. It was just a notice of motion. I am ready to ask my questions now.

First, I would like to thank our witnesses for coming here to shed some light for us on technological innovations in health care.

We know that advances in pure and applied research and in technology are leading to the development of new diagnostic and treatment modalities. Heath professionals have to be able to understand these advances and to use them safely and effectively.

Could you give the committee some examples of the way in which the new diagnostic and treatment modalities have been built into programs of study in Canada?

The second part of my question is whether medical schools have made any effort to train students to use these cyberhealth technologies, particularly in terms of electronic medical records.

[*English*]

Mr. Steve Slade (Vice President, Research and Analysis, Association of Faculties of Medicine of Canada): I think to come to your first question on the adoption of new technologies in our educational curricula, there are a number of ways we do that. I think probably the big hammer we have is accreditation. All 17 of our faculties of medicine undergo a very rigorous process of accreditation on a regular, ongoing basis. There are about 140 criteria and standards on which our faculties of medicine are reviewed on an ongoing basis, including factors such as the safety of the learning environment for both learners and patients in those environments. I think that's a large piece.

As part of our recent reviews of medical education at both undergraduate and postgraduate levels, we are talking increasingly about competencies and shifting away from a paradigm of looking at the length of time you're in a training environment and, instead, looking at the competencies and the milestones that mark your progress towards those competencies. That is a bit of a paradigm shift within our faculties of medicine.

I think Irving can speak more directly to some of the technologies that help to ensure those standards.

● (1605)

[*Translation*]

Mr. Irving Gold: Thank you for the question.

[*English*]

I can tell you that the timing is perfect. We have just completed a study in partnership with Canada Health Infoway, so to speak to the second question around what is happening in our faculties of medicine with respect to electronic health records, the report will be released in the coming weeks, but I can tell you things are perhaps better than we thought. We have large clusters of faculty members who are really driving curricular adaptation to reflect the realities of an e-health-enabled environment.

The challenge we face, though, I must say—and this is perhaps somewhat of an editorial comment—is that it's very difficult. The faculty of medicine needs to equip a medical student or a graduate to be able to practise in a real environment. The real environment, the practise environment in this country in terms of electronic medical record adoption, is probably not where we would like it to be. Because so much learning happens in the field, for lack of a better word, we can only educate students in the field if they are getting their training in an enabled environment. The two go hand in hand, but I think we are keeping up as much as we can.

[*Translation*]

Mrs. Djaouida Sellah: Thank you.

I would also like to benefit from your presence here, Mr. Gold.

You mentioned human resource challenges. I see that in terms of the provinces, politicians, students, regulatory bodies and medical educators. You mentioned the need for a tool at national level.

Could you be more specific about that tool and about what you are expecting from the federal government?

Mr. Irving Gold: Once again, thank you for the question.

[*English*]

As I mentioned, each of the provincial jurisdictions is making an effort to do its own provincial-level analysis, although the variance in sophistication of the HHR modelling is quite broad. There are some provinces that are just not equipped to do a whole lot and then there are other provinces that are investing quite significantly. What we are looking for is quite simply a federal role, a leadership role to enable a national platform. What we would be talking about is a tool —and I'll pass it over to Steve, because he's much more familiar with the mechanics of the tool—that will assist us to collect data from all of the jurisdictions not only reflecting the needs of the citizenry within those jurisdictions but what—

The Chair: Dr. Gold, I'm sorry but your time is up. I've been trying to signal you. Thank you so much for your comments.

We'll go to Dr. Carrie.

Mr. Colin Carrie: Thank you very much, Madam Chair.

I want to take this opportunity to thank the witnesses here today. Whenever you come, I have so many questions and just so little time. Where do I start?

We've already had some excellent witnesses here about Canadian innovation and the potential for jobs and opportunities into the future. One of the things brought up before was that there is a little bit of a disconnect between Canadians and how they work on commercialization.

I'd like to start my questions with Steve Denniss, if that's okay. First of all, it's great to see a fellow kinesiologist here at the committee. You mentioned MaRS. I think MaRS is a great example of an incubator and of getting people together and starting to think outside the box.

We had the faculties of medicine here, and one of the things we heard about was how the culture is a little different in the States where they have medical schools that will partner with academic industry, so you can have researchers working half-time with companies and half-time with the faculties back and forth.

Is there anything you could suggest, such as maybe the federal government working with different medical education institutions? How could we help medical schools educate a little bit more on the business side of things to help create jobs through these innovations? In Canada sometimes we lose that to other countries, because we don't have that culture here. It's great that the two of you are here together, so I thought maybe we'd start with your comments and then we could hear from Mr. Gold after that.

Dr. Steven Denniss: Whoever has the answer to that question you should definitely talk to, because that's a pretty important question. I wouldn't say that I have the answer to that question. I would say that in the States, because they're in more of a private health care environment, there's a lot more reason to adopt health care technologies, because if you're a private hospital and your hospital is more efficient, you could kind of compete on that. You could say, “Come to us because we have the latest and greatest technologies”.

In our more public health care system, there's less of an initiative to do that, but when you hear health care providers and hospitals speaking, they want to adopt the technologies. I think there might be a little bit of risk aversion, because our environment is obviously more risk-averse as opposed to the environment of the States which is more one of risk management. I think because the health care system and the way that clinicians practise are very practice-based and very best-practice based, probably the best way to get closer to that would be to try to create a framework to say this is how the hospital engages with the business that wants to come in and innovate and provide a solution. This is how we go about structuring that so both sides are protected.

● (1610)

Mr. Colin Carrie: Do you think that's something though that should be part of medical school curriculum, just like a basic business course, to get people to start thinking in that regard?

Dr. Steven Denniss: In my experience, when you talk to medical students, right from the top down there is that culture of the big bad business just coming in to take the money. I think the culture could start to change so that they really think of businesses as providing solutions to real problems that exist in society, in medicine, in health care.

One of the problems you get right now—and different programs have said this, one of which is called EXCITE and comes out of MaRS—is really trying to get companies to work with health care groups throughout the process, because right now what happens is that a company guesses what the problem is in the hospital, pours $1 million into creating the thing, throws it over the wall, puts some savvy marketing and sales behind it, and hopes it gets adopted. It's trying to solve a real problem, but it didn't really have the requirements coming back from the hospital as to exactly what it needed so it could go and do its thing and create a product that could actually solve that problem.

That would be the ideal situation that you would get to. If you could build a framework within a hospital that did that and had the right procurement channels to make that happen, that would be something to aspire to, I think.

Mr. Colin Carrie: Mr. Gold.

Mr. Irving Gold: You raise a really interesting point.

I must say that things have changed significantly, at least in the seven years that I've been working with the faculties of medicine. I think the culture among emerging researchers and medical students is less about the big, bad, private sector. The notion that Canadians, in order to survive in the health care sector, must develop ethical, principle-based relationships with industry and leverage our intellectual capital and really commercialize that to the economic benefit of all Canadians—

Mr. Colin Carrie: Are you doing that right now?

Mr. Irving Gold: We are.

I think it gets under-reported and is not discussed enough. We're a small country so the numbers are never going to be the same as they are in the United States, just because of the numbers of medical students and faculties. We have emerging researchers, young and mid-career researchers, who are embarking on new, for them, relationships with industry. If you talk to the colleagues at Rx & D, BIOTECanada, and MEDEC, they'll tell you that one of the big barriers is that we've got some legislative hurdles that federally we need to fix in order to make innovation more possible and commercialization a little bit easier. We hear all the time, though, that in terms of R and D the federal government is investing quite a bit and it's the private sector that isn't stepping up to the plate enough. Their response to us has been that it has a lot to do with the legislative environment.

There are, particularly for those students who are interested in creating a research career for themselves, many more mentors than there used to be and many more folks who are encouraging that type of interaction.

Mr. Colin Carrie: Mr. Denniss mentioned barrier-free entrepreneurial innovation supports by the government that people don't even know about.

Do you work with your students and let them know that these things are available? Were you even aware of them?

● (1615)

Mr. Irving Gold: Yes. I don't, but faculties of medicine have people, particularly in the research environment, who in fact communicate that as broadly as possible, for sure.

For instance, we have a standing committee on research and graduate studies with all the deans of research on it. The deans of research across the country and in our faculties of medicine have very close contact with their industry partners.

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

Dr. Fry.

Hon. Hedy Fry: I wanted to go back to Dr. Gold on the area of HHR. Possibly the biggest key to keeping the system working is to look at HHR. Looking at HHR, not just from the point of view of physicians but from the point of view of other health care practitioners, is a mix we need to look at.

I am glad that you brought this up, because currently we just look at the gross numbers and everyone says, we don't have enough doctors or we have too many doctors, we don't have enough nurses or we have too many nurses. The supply and demand piece and a long-term study of what's going to be coming up—given that it takes 10 years to even graduate from medical school, never mind go out and do work which could be another four years—you have such a long time that we need to look at two generations. We also need to look at what the current areas and subsets in medicine are and where they go. The bottom line in some subsets of medicine is that we don't have enough people in the subsets and then we have too many people in other subsets.

There's the whole area of incentives. Could you talk about how we can look at incentives to getting people to go to areas they don't want to go to? How do you look at incentives of getting people not to go? I know that the pressure is great when you start off owing $100,000 to want to go into the specialty that's going to give you as much money to pay off your debt immediately. How do we find the ability to say, "Everybody is 55 now, so 15 to 20 years from now we will need more students to go into a particular specialty"? How do you see that happening? I know the database will help. What incentives do you see? You can't force a person to do something they don't want to do. You have incentives. What are the incentives?

Mr. Irving Gold: Steve can add to this.

As you were speaking, something very specific came to mind. We completed a study called the Future of Medical Education in Canada. One of the elements of that report was focused on the hidden curriculum. I want to mention that it's not only incentives. It's about eliminating disincentives and those aren't always the same. You can throw money at particular sub-specialties and you'll get a certain number following the money. But if you look at family medicine, for example, you will see that a lot of progress has been made, and a lot of that progress was less about money and was more about de-stigmatizing family medicine as a lesser profession. That's an inside job. That was done within the medical profession, within our faculties of medicine. It was something we did as a profession to help fix the problem. It's not always about incenting people. It's also about eliminating some of the disincentives.

I think incentives are equally important.

Hon. Hedy Fry: And incentives need not be monetary, I'm not suggesting that.

Mr. Irving Gold: Right. But for instance, watching the demographics of Canada, I think there is the realization that we probably are not graduating enough folks who are going into geriatrics or care of the elderly. This was a very slow-motion train wreck that most of us could have probably predicted 10, 15 years ago. But geriatrics is facing, I think, in many ways, the similar stigma as family medicine. It's not particularly well paid. It's not seen as a particularly sexy sub-specialty. I think we will probably need to do in that area what we did in family medicine.

I'm sure Steve has a lot to add, but that's just something that jumped to my mind.

Mr. Steve Slade: The only thing I would add here is that the federal government I think has been quite innovative in two main areas with respect to specific programs. The Canada student loan forgiveness program, which is giving a break to rural family doctors and rural nurses, is an innovative approach that will make a difference. A couple of years ago the federal government also elected to fund family medicine residency programs in rural places—so actual specific funding for the residents in that training. I think it's that kind of innovative thinking.

And as Irving has mentioned, on this geriatric medicine thing, there are only 24 positions posted in that field of training. They don't fill. That's compared to several hundred pediatric training positions. I think there is a willingness there with our faculties of medicine to do this course correction, but the whole system has to come in line. So there's a role for the federal government to look at how we can help out the provinces, and how the provinces themselves can bring in incentives and programs that will make a difference.

● (1620)

Hon. Hedy Fry: How much time do I have, Madam Chair?

The Chair: You have about two minutes.

Hon. Hedy Fry: The student loan forgiveness, which I understand on the surface is a good thing, doesn't seem to be implementable or work well in practice. We've heard from the medical students, who say that a lot of them—as they go through medicine itself, the initial 10 years—don't want to have these big loans. So they take their loans and they put them into a bank; they take a bank loan to pay off their student loans. If that doesn't work for them, when they finish they're still looking at how they're going to pay the bank off. They don't want to go to Fort St. John to do it. They want to work in a big city with a tertiary care that's going to get them a lot of money.

How do you deal with that, which in itself is an incentive and, on the flip side of the coin, is a disincentive? How do you deal with that?

Mr. Steve Slade: I would suggest that you are in a transitional time right now. I've heard the exact same story. A lot of students contacted us when the program came into effect and they said, "I transitioned my loan to a bank" or "I talked with another organization and I got what looked like a good deal at the time. I heard from the Canada student loans people saying we would love to help you, but you actually no longer have a student loan that we can forgive." I think you're in a transition. I think that when the word is out on the street, people, before they give up their Canada student loans, are going to find out if they would qualify for the program.

But I think really the take-home message is to look at that kind of role. Because we had tons of feedback from undergraduate deans and from students saying, "I want that, I will do that, I will go out and do a residency in a rural place because that's going to help me with that loan." With that kind of innovative thinking program-wise, I think it may take a few years to see the benefit, but I think it will happen.

The Chair: Thank you so much.

We'll now go to Ms. Block.

Mrs. Kelly Block (Saskatoon—Rosetown—Biggar, CPC): I'd like to thank all of our witnesses for being here today. You can certainly tell how there is much overlap in all of the issues that each one of you have identified. You can talk about one piece when it comes to being entrepreneurial in health care and recognize that it takes folks at many different tables to make that happen.

I want to follow up on your comments, Mr. Gold, in terms of legislative hurdles. You may be aware of the Red Tape Reduction Commission and the fact that we are looking at ways to reduce legislative and regulatory burdens on different sectors and industries. I'm wondering if you would be able to give me some examples of legislation that is creating a hurdle for entrepreneurship in medicine.

Mr. Irving Gold: I wish I could. What I was sharing with you was what our industry partners are telling us. I would not be equipped to identify either the problems or proposed solutions for those. My point was merely that we are at the table as faculties of medicine and we are encouraging our researchers to engage with industry. What we're hearing, at least from our industry partners, is that the lack of commercialization is not about not finding willing partners in our faculties, but that there are other factors that are impeding that process. I guess that was the reason I brought that up.

Mrs. Kelly Block: Okay. Thank you.

I guess, then, what I'd like to follow up with is, you made reference to a national data and analysis centre, but then also to the need for a health human resource plan, and also to the federal government's role in planning. I'm wondering if you see that there's a significant difference between the centre for national data and analysis and the actual planning that you've referenced.

Mr. Irving Gold: Absolutely. We are not proposing any federal role in health human resource planning. This is clearly a provincial issue. But we are saying that the federal government could be enabling, a tool that all jurisdictions could contribute to and draw upon to inform their own provincial process. We are very clear about the jurisdictional issues and know that asking the federal government to take a planning role would be a non-starter.

But what the jurisdictions have told us—and we've now spoken to all jurisdictions—is, if what you're talking about is creating a place were we can—I'm going to oversimplify—upload our data, our needs within our population, the demographic information of our population, help you do national trending, and also allow us to upload our supply and how that's changing, and if that will allow you to create a national picture that we can then take into account as we plan, we would love that.

But the centre is not about telling provinces what they should do, it's about saying, "Well, if you're going to produce 10% less of this, you should know that your neighbouring provinces, which you draw the most upon, are also producing *y* and *z*". It's about sharing that information, because right now the jurisdictions are not aware, necessarily, of who's producing what, what the needs are, and what the needs are going to be in 5 to 10 years. That's the challenge. This is really about information flow. The precedent with things like CIHI exists where the federal government helps in terms of national data and analysis, even, but we are stopping at that point.

Thank you for the opportunity to clarify.

● (1625)

Mrs. Kelly Block: Thank you.

The Chair: You have more time.

Mrs. Kelly Block: I would like to ask questions of all of you, but I don't know if I will have time.

Mr. Denniss, you talked about building a framework within a hospital in order to work with industry and work on issues of procurement. Do you have any suggestions on what that framework might need to look like or where you would, in fact, start?

Dr. Steven Denniss: Other gentlemen at the table would probably be better able to actually give specifics. I was just saying that, at a higher level, it seems like something that would be needed. I'm not sure if there are hospitals that are doing that. The ones that are doing it—well, again, since we're on the topic of sharing and collaboration, should be sharing that with other groups to drive this innovation.

Just to circle back to the point of collaboration, because the other gentleman asked about the difference between the U.S. and Canada, I found that both health systems are in trouble. I would like to put it out there that the U.S. health care system is privatized, and that has some advantages, but it also has some disadvantages because they compete with one another within the health care space. We're a relatively public health care system, and that means that we cooperate, so there is an impetus to share any initiatives done in certain hospitals that are funded, because that will help us get out of the problems that some people say are the public health care system's problems. Some of the things that could have created it could also solve those problems.

The Chair: You've got about another minute.

Mrs. Kelly Block: Is there collaboration happening with institutions in the United States or internationally to ensure that there is effective knowledge translation and avoidance of research overlap in some of these areas?

The Chair: Who would like to take that question?

Go ahead, Mr. Slade.

Mr. Steve Slade: I'll take a crack at it. I don't have a definitive answer for you.

Certainly I would say that on the international scene that's challenging, especially where it's a commercial "survival of the fittest" approach. But I think where there has been some success—and coming back to some extent to your red tape issue—is in some of the collaborative efforts within Canada around, for instance, how clinical trials are done. It can be difficult for industry to conduct a clinical trial in Ontario at a university and to get over certain hurdles, and then, when they want to do it in Alberta at the University of Alberta, they find themselves confronted with the same hurdles.

There have been calls to have a national approach to clinical trials, so you come in once, you do your ethics, and you establish protocols. Then, centrally, you're looking for connections to patients to run the trial through. I think it's that kind of innovative approach, perhaps run through CIHR, to look at how we can do the work of research, and patient-oriented research at times, to run it most efficiently.

The Chair: Thank you so much. You gave a very good answer saying that you really didn't have an answer. It was extremely good, thank you.

We'll now go into our five-minute round of questions and answers. We will begin with Dr. Morin.

[*Translation*]

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

My questions are for the witnesses from the Association of Faculties of Medicine of Canada.

When I heard that you were coming to provide evidence, I wondered what kinds of questions I wanted to ask you. The first thing that came to mind was improving the health of indigenous peoples. I think that is one of your many roles. Could you tell me what the members of your association are doing to make sure that more first nations doctors are entering the workforce so that their communities' health care needs can be better served?

As we know, indigenous populations are in poorer health than other Canadians and they have quite a unique socio-economic situation. That is why it might be better to send first nations doctors onto reserves and into their communities to help the people there rather than to send white doctors who do not necessarily understand their reality.

You did not have the time to talk about your recommendations, but I was pleased when I read them. I was pleasantly surprised. Recommendations 2 and 3, which deal with…

● (1630)

[*English*]

medical education opportunities fund. I want to know more about that. I am so glad you mentioned that you want to allocate funds, and that you wish, if I understand correctly, that the federal government would launch a fund that would allocate funding to clear the growing backlog of eligible aboriginal students wishing to pursue post-secondary education, etc. Tell me more about that.

Specifically, you also mentioned a backlog. Tell me more about that backlog. You mentioned that this fund would invest in local pipeline projects. Can you give me examples?

The Chair: You have three minutes to do that.

Mr. Irving Gold: I have three minutes to go. I think I'll do some of that by follow-up. I have taken note of that.

Let me answer your first question first. For the last 10 years, when I arrived seven years ago at the AFMC, there was a project that had already been in the pipeline for a long time in terms of addressing aboriginal health and well-being.

There were two major components to it. One was ensuring that the physicians we graduate are capable of delivering culturally competent care to aboriginal communities. That involved making significant contributions to the curriculum, making sure that when you graduate, you are able to provide culturally competent care.

The second component was around recruiting aboriginal applicants to medical school and retaining them. As you said, the best case scenario is to graduate more aboriginal physicians. Seats were allocated across the country specifically to self-identified aboriginal students. The data that we have is not 100% correct because you can get into a seat without self-identifying. What I can tell you is that not all of the seats were even filled. It isn't that the faculties haven't gotten on board and tried to promote that.

We have larger socio-economic barriers that occur long before the decision to apply to a medical school happens. If we're going to fix the problem in this country, it's not at the medical school level. It's not at the university level. It's at the K-to-12 level, I believe, that we need to be making major investments. That will cascade across all of the other issues in terms of where aboriginal students go to school. I will follow up on those other questions to you off-line.

Mr. Dany Morin: Thank you very much.

Do I still have some time?

The Chair: You do have a minute left.

Mr. Dany Morin: Please, continue with that.

Mr. Irving Gold: In terms of the pipeline project, our proposal is mirrored after some very successful United States experiments. In the United States, the experiments we were looking at were around getting more African American applicants into medical school. In our situation, we were adapting it a little bit because the bottom line is that we have a very homogeneous medical cohort.

These involve things as simple as bringing high school students into offices and medical environments for a week-long period over the summer, and perhaps giving them a stipend to do some work.The best way to get someone to pay attention is to pay them a little bit of money. Even if they are doing filing, they are also watching what is happening. They are learning about the medical encounter.

I have to tell you that if you're an aboriginal—you as a young person in an aboriginal community—chances are, your interactions with the medical workforce have not always been particularly positive. Having them in an office working, talking, and having lunch with a nurse and physician—it's a different way of encouraging people to see that as a possible profession. That's one example. The pipeline projects are multi-dimensional and they are meant to get at all levels. It's an entrepreneurial approach.

● (1635)

The Chair: That was very interesting, thank you.

Thank you, Dr. Morin.

We'll now go to Mr. Lobb.

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

Mr. Dany Morin: Could the papers be sent to the clerk?

The Chair: Absolutely. Could you send the papers to the clerk, and we'll distribute them?

[*Translation*]

Mr. Irving Gold: I will certainly do that.

[*English*]

The Chair: Thank you so much.

Mr. Lobb.

Mr. Ben Lobb: My first question is for Dr. Jalali. It's in regard to your commentary on e-learning. You're from the University of Ottawa. How do you use an e-learning platform in your classroom to better affect the outcome of your students?

Dr. Alireza Jalali: I teach anatomy, and in my classroom we had lectures and labs. As you know, with all the active learning that is around, more active learning is promoted, and with the accreditation that the AFMC was talking about.... We eliminated all the lectures in anatomy and we replaced them with short podcasts. Before coming to the class, the students have to listen to the podcast, and then we use a method that's called a "flipped class". What happens is the lecture is outside the class, and when they arrive at the laboratory we sit around the specimens and discuss the objectives of the day. That's the way you can use e-learning.

The other thing we do is YouTube videos, so they can have a look at the images, and online learning where they can go online and colour the muscles, etc. Everything that people can memorize, frankly, you don't need to teach them. If something can be memorized, just give it to people and let them memorize it. Let's bring it up and discuss this kind of stuff. That's the very important part of e-learning.

The other thing is that you can also promote collaboration and communication this way, instead of everybody just sitting there listening to me, and they say I'm a professor and I'm talking. Let them talk, let them teach each other.

Mr. Ben Lobb: What platform do you use?

Dr. Alireza Jalali: For the podcasts?

Mr. Ben Lobb: What software platform do you use?

Dr. Alireza Jalali: All of them are independent. My site is hosted by Yahoo. I do all of it myself. I have a server that I put the podcasts on, and it just generates an RSS feed that goes out. And as I said, for the videos it's YouTube, because it's free.

Mr. Ben Lobb: Basically, it's pretty low cost to provide this. If you go back.... I'm not sure how long you've been a professor—

Dr. Alireza Jalali: For 10 years.

Mr. Ben Lobb: If you look back to 10 years ago, obviously a lot of what you just mentioned wasn't available. Just explain to the committee how this has changed the outcomes. We're talking about technology in health care. Using technology, how are we producing better students, better doctors?

Just go into that a little bit.

Dr. Alireza Jalali: It links very much to the AFMC changes and the CanMEDS role, the competencies that are out there. Before that—and I'm not talking about just the last 10 years; I will get to that—we had doctors who were experts. They knew everything about medicine, but there wasn't much emphasis on their being health advocates, how to be collaborative, how to be communicators with the patients.

With the arrival of technology about 10 years ago, as I said, I removed all the lectures, so it gives me more options in an anatomy lecture to tell my students how they should communicate with each other. From the first year of medical school it's no longer just about books, it's about how to talk with people. And it's important for a health care professional to know how to talk to patients. These are the changes that are made.

One thing I must say is that I know about this stuff, so it was easy for me to produce my own. But now we have a lab where people can come—clinicians, nurses, kinesiotherapists—to sit and produce these. Many of this generation of professors are not tech-savvy, so we still need to have a central place for people to go to produce this.

Now, for the outcomes, just to tell you for the anatomy, I teach a lot and I'm also unit leader, so I look at the curriculum in different ways. I have been in contact with radiologists.... You need to know why we teach anatomy. I don't want my students to know anatomy just for anatomy. Anatomy is the base of a physical exam. When a doctor is examining you, that's the base of anatomy. To tell me this is an artery on a cadaver is not the point. They're trying to go with a higher level of stuff.

For example, radiologists—

The Chair: I'm sorry, Dr. Gold, before the time runs out, I think you want to add to what Dr. Jalali says.

Mr. Irving Gold: Just very briefly, I wanted to mention—my colleague just reminded me—the Future of Medical Education in Canada project first looked at undergraduate medical education, and then it looked at postgraduate education. We're very much hoping to be positioned to do our third component, which is continuing professional development. One of the things we need to do is bring folks up to date in terms of some of the technological innovations that are going on.

The only other thing I would say is that the AFMC has several projects that are meant to enable these types of innovations.

One of the things Canada does not do well is diffuse its innovations. Something really neat will be happening in Saskatchewan, and they don't even know about it in Manitoba. That's not just in the health care system, it's all over the place. One of the things the federal government could do is try to stimulate some of that sharing of innovation amongst jurisdictions.

● (1640)

The Chair: That's exactly what we're trying to do now, Mr. Gold and Dr. Jalali. I have to tell you it's very interesting and very exciting to hear what you're all talking about today.

Now we'll go to Mr. Kellway.

Mr. Matthew Kellway (Beaches—East York, NDP): Thank you to the witnesses for coming today.

Mr. Gold, I noticed you were thankful and eager to clarify your comments on the planning role for the federal government. I hate to say that your clarification confused me a bit because it seems to me that we talked about a couple of roles that the federal government may take to assist with planning, like the distribution of physicians across the country to make sure the supply is spread out where it needs to be. We talked about the loan forgiveness program as a planning role. I was going to ask you what other things the federal government can do to assist in ensuring that the supply of physicians is the supply we need.

That brings me to the second question. I'm hoping I'm clear enough that you get the connection. The second question is this issue of diversity that you talked about. That's not just about first nations doctors and that cultural competency, but it seems that you have a broader perspective perhaps in competencies that emerge out of a more diverse workforce.

I wonder if you could talk about those two things: again, if you could clarify for me the federal role that you see in planning and what planning maybe means to you; and if you could also specify the value that your organization sees in diversity.

Mr. Irving Gold: I'll take a stab at clarifying and you can tell me whether I've done a decent job. From my perspective, effective planning needs to be based on data that is as complete as possible. I believe that at the moment there are large gaps in the data that we have at the national level. What the federal government can do is create a mechanism whereby the provinces can truly understand the need and the supply. We'll never answer this question, we'll never be able to align supply and demand unless we understand both.

What the provinces do with that information is within their jurisdiction. We are not asking this entity to tell Manitoba it needs to create more *x*. What we want, though, is for Manitoba to be able to see not only what its provincial needs are but what the national picture looks like and whether Canada is heading for a surplus of cardiovascular surgeons. Does that mean maybe in Manitoba we should train fewer? Does it mean maybe we should try to recruit some? In other words, look at the national picture because physicians are mobile and provinces could do things to attract or disincent certain sub-specialties. What this centre is about is ensuring that all the jurisdictions can look not only at their own data relating to needs and supply, but the national picture.

Mr. Matthew Kellway: Can't one imagine a relationship between the federal and provincial governments that is different from the centre just saying—planning—meaning the centre just tells the provinces what to do? Isn't there room for a more collaborative, multi-governance approach to this, a shared role?

Mr. Irving Gold: Absolutely. This proposal is this proposal. We believe that this proposal in the current environment is achievable, possible, and will contribute to the solution.

Mr. Matthew Kellway: All right. On the issue of diversity, can you explain why you're talking to us today about the value of diversity?

● (1645)

Mr. Steve Slade: The recommendation concerning diversity largely comes out of our Future of Medical Education undergraduate review. The data is very clear. We have only seen a greater polarization of medical students with respect to parental income; it is grossly misaligned with the averages for Canadians.

We know as well that representation of black populations within our medical schools or of Filipino populations doesn't fit. There are other areas—southeast Asian populations—that are misaligned. Part of this is about correcting disparities of the past. Really, it's that, writ large. Do rural kids feel as drawn into medical school as urban kids? I come back to Irving's earlier comments about K to 12. A lot of the messaging really has to happen at that age, that a medical career is possible.

So whether you look at it in terms of geographic dimensions.... We really do look at diversity quite broadly. Geography, socio-economic status, ethnic diversity—these are all factors that we've not measured properly, I think, and we've had little in the way of a forum in which to formulate a plan. Not to be too circular in the thinking, by looking at a forum that first focuses on data, let's just get a clear picture of what the challenges are—

The Chair: I'm sorry, Mr. Slade, that picture will have to be forthcoming, but your answer is very good.

We'll go to Mr. Brown now, please.

If you want to pick up the same vein, it's up to you, Mr. Brown.

Mr. Patrick Brown (Barrie, CPC): I didn't know I was next.

The Chair: Would you like me to go, then, to Mr. Wilks, so that you can gather your thoughts?

Mr. Patrick Brown: Sure; I'll follow up Mr. Wilks.

The Chair: Mr. Wilks.

Mr. David Wilks (Kootenay—Columbia, CPC): Thanks, Chair.

I don't have much of a background in the medical field; I am a retired policeman. My only two analogies with the medical profession are that I can drive fast as long as you don't die, and that when someone calls us from the hospital and asks us for help, I just tell the doctor to say, “You're going to have about eight to ten seconds after I apply carotid control”, so that you can get that person to understand that it would be better to cooperate.

I have a couple of questions to Dr. Jalali and then one in general.

First of all, you mentioned self-learning modules, which I see as an advantage in some senses. But being retired from the RCMP, when the force moved down the road to some self-modules, I had mixed feelings about it and I still do. Sometimes you can get to the point where the students start trying to teach themselves.

You can't teach common sense. You either have it or you don't have it. Do you see a point at which there needs to be some intervention? In your classes, when there are self-modules, if you see a student starting to stray, at what point do you feel that you need to intervene and say, “Just a second, that's not what we meant by this” and bring them back?

Dr. Alireza Jalali: That's a very good point.

With the self-learning modules, you need to mostly put basic stuff in, stuff that isn't very confusing and that they can get on their own. Then you bring them back—in my case, in the lab, or it may be at the patient's bedside or something—and then, when they're all working together, I usually wait, if someone is making a mistake, for the group to see whether they can correct it. We are all based on problem-based learning, which shows that if someone is in front of the problem, they learn better than if you just give them the answer right away. So we try to go with problem-based learning. We do that also in the small group sessions we have.

But then slowly, if they're really all going to the wrong side, you have to bring them back. You need facilitation.

Mr. David Wilks: I have two more questions, so go ahead quickly.

Mr. Irving Gold: I just want to add that some of the new e-learning tools we're talking about not only present new ways of teaching, but new ways of evaluating. There are some very exciting opportunities, I think, facing medical educators in terms of rethinking the way we assess. There are some really neat things going on. The use of virtual patients and the way the faculty can assess learning progress is pretty exciting.

Mr. David Wilks: It certainly is. For first responders such as EMS or police, who are normally first on scene and don't have the benefit of a doctor being there, could you give us some idea of what kind of technological innovation could help them with a person who is in distress at the scene—particularly in rural Canada—when you have that golden hour and sometimes are standing there going "oh, crap"?

Voices: Oh, oh!

Mr. David Wilks: That was the technological term that is used by police.

● (1650)

Dr. Alireza Jalali: Two things come to mind right away. Right now—you may know this, you may not—the stethoscopes that all the doctors have around their necks, these are already out. Nobody uses stethoscopes that much any more. Most doctors still use them. Why? Because ultrasound machines are so portable and much cheaper than they used to be so that many doctors are replacing them with ultrasound.

And on iPhones, all these smartphones, you can actually grab apps and then have hookups to them so you can hook them up and do an ultrasound right away. So that's an area where you don't have to carry that machine with you. The same goes with the EKG. Now you have apps and a cover that goes around this, with a metal back, so you can just put it on the patient and right away it will show you an EKG. It's not that it's coming; it's already there and it has been there for the last four or five years.

So just off the top of my head, these are two technologies that can be used right away.

Mr. David Wilks: Do I have any time left, Chair?

The Chair: You have about 30 seconds.

Mr. David Wilks: Quickly, in rural British Columbia, where I'm from, we practice the primary health care model, which I think is a good thing, but part of the problem we have is that some of the doctors from time to time have to leave to update their abilities, and we have a difficult time getting locums. What types of online opportunities are available to them to keep their skills up?

Mr. Steve Slade: Very quickly, in terms of keeping up skills, I would leave that aside, but I do think there is a cross-jurisdictional question. A lot of times, locums are about moving across jurisdictions. I think the national effort to develop an application for medical registration in Canada is on the right track, so it is much easier for a doctor to license in multiple jurisdictions now, and it should be.

Mr. David Wilks: Excellent. Thank you very much.

Thanks, Chair.

The Chair: Thank you so much, and now we'll go to Ms. Hughes.

Mrs. Carol Hughes: Thank you very much. This has been quite interesting. I have a son who is doing his thesis right now and working at the cancer research centre in Sudbury, so we hear a lot of medical terms.

First of all, I want to thank you for putting your deck together. That was quite useful, and of course, Dr. Fry was actually talking about some of the issues that the medical students brought to us. So we were lobbied this week and I'm just wondering if it was a coincidence that they happened to come at the same time as you're here. Obviously, it's the same message.

You talked about the geriatric need. There's a void there, and I'm quite well aware of that. I have a sister with Alzheimer's and I know how difficult it was for us to get a geriatric specialist to have a look at her. Not that long ago, I think it was two years ago now, we did an HHR study, and the key word was multidisciplinary teams. Although there was some movement there, I think we're still very far from where we should have been, and that's the problem sometimes with these studies. We do get recommendations and not very much gets moved on, unfortunately.

You talked about the legislative environment that hinders especially the area of research. Could you maybe elaborate on that?

I come from a rural area. I have the riding of Algoma—Manitoulin—Kapuskasing in northern Ontario, and we have some of the best doctors there, as far as I am concerned, but it is very difficult sometimes to attract a lot of professionals there. You talked about hospitals as well, and I just want to mention that recently I was in the North Bay Regional Hospital, and it's quite the facility. I think a lot of people see that as a place to really consider as they're looking at graduating.

Could you elaborate a bit more on the legislative environment that's holding things back? And do you have other recommendations?

I know that Mr. Denniss hasn't said very much at this point. You might want to add something in the time that we have left.

● (1655)

Mr. Irving Gold: I'll be brief and then I'll pass it on.

Yes, it's a complete coincidence, actually, that CFMS was doing their lobby day with the same messages, because we were only invited to present here on Thursday. So they had planned their lobby day long before we were actually confirmed here.

I think the reason their message is the same is that it's an urgent message and I think we're all singing from the same songbook now in terms of health human resource planning and the federal role. I know it was the number one recommendation of this committee's report, in fact, two or three years ago. We've been talking about this for quite a while. I think it's unavoidable that we do some national level planning and all of us are starting to realize that we all need to be saying the same thing at the same time to hopefully get this truck out of the mud because it's stuck. The problem we face—you mentioned geriatrics—is that even if tomorrow we decided to make major changes, we would not see them until 2023. I will be much older and making probably the same presentation if we don't get moving.

Mrs. Carol Hughes: Or you'll be in need of them.

The Chair: And I would be amazed.

Mr. Irving Gold: That's right.

My plea is that the writing has been on the wall for a very long time. There's a reason why our slide deck is called “From Analysis to Action.” We are in analysis paralysis. We keep talking about this issue. It needs to get done.

The amount of money we're talking about—and everybody who comes to this committee with an ask says this, I know—is what the government probably spends on coffee whitener. Really, it's a very small amount of money. The potential impact it will have across this country is monumental. There are very few opportunities I think for the federal government to do such a big thing in health that's clearly within its mandate and scope for such little money.

If I seem passionate about it, it's because I really don't want to have difficulty finding a geriatrician in 10 years.

The Chair: Dr. Gold, you have done a super job, and I think you will live forever with your enthusiasm and positive attitude. You have done a great job.

Mrs. Carol Hughes: Do I have time left?

The Chair: Now we'll go to Mr. Brown.

Mr. Patrick Brown: My first question is, since the federal government has a role in the regulation of medical products, what could we do to improve medical devices? What could we do to be more efficient in allowing that innovation to take place? It's a general question.

Dr. Steven Denniss: I'll take a crack at that. If you put yourself in the shoes of a medical device maker, they have to make certain decisions during the product development cycle in trying to gather requirements and functionalities and put them into a product or service. I know sometimes they have to take guesses on whether that product is going to pass regulation. They have to make that guess, which could be costly. It all goes into the cost of the product in the end. They make that choice because they don't get that feedback from Health Canada, for example, on whether that would or would not pass.

Then it goes there, and let's say it doesn't pass. Then they have to go back into an expensive product development cycle. Then the total cost, which has to get passed on to the customer, which is ultimately the hospital and the government, goes up.

I think my answer would be if at all possible to be a little bit more responsive and engage with the company that's saying, this hospital wants to develop this. I see this need in your community. I want to develop this, but I want to make sure as we go along and there are certain key decisions made, you can tell us up front whether that's going to pass regulation when it comes to the point in time when someone signs off on it. That would be my view.

Mr. Patrick Brown: I have another question. I remember when we had the Juvenile Diabetes Research Foundation before this committee. They have been on the Hill a few times. They were talking about building an artificial pancreas here in Canada where they are doing clinical trials. They were saying we have a chance to do that in Canada, but in Australia they are also working very quickly towards that.

How are we doing internationally when it comes to supporting research innovation when it comes to that type of technology? Do you have any observations of where Canada stands compared to other countries in the type of environment we're creating?

● (1700)

Mr. Irving Gold: That's outside of my scope of practice. I don't know.

Mr. Patrick Brown: There's another area I wanted to touch on, and maybe there would be a general comment. I know we've put a lot of money into electronic health records, and you would think the technology would be enhancing very quickly across the country. When I go to my local hospital, as much as it's a fantastic hospital, and I go to my local doctor, or go to get a vaccine, there doesn't seem to be evidence of that on the ground.

What is missing? What are the missing links in the sense that, if you go to a credit card company they can tell you your history for as far back as you want to know, and it's all digitalized. Yet if you want to know what vaccines you have taken because you might forget what you took five years ago, there is no common record.

What type of leadership do you think we need to see, to have that type of efficiency, given the fact that money doesn't seem to be the solution because there have been huge amounts put into the digitalization and that funding has gone to the provinces?

Mr. Steve Slade: I would observe that over the holidays I had an inappropriate charge to my credit card and my bank account dipped into, so I would suggest part of the issue here in health care is the firewalls in place to protect patient information. I think that's a real and probably valid concern around the protection of personal health information. I think that's a hurdle we have to get over. I think probably your privacy officer of Canada is one place to look at in terms of some of the protection there. I think that's one.

Before you get to the “how do we have a better platform, a more common platform, so that labs can talk with clinics and they can talk with the pharmacy as well”, I think there has to be more of a forum to have that conversation in.

Mr. Irving Gold: My editorial comment there—and I'm not speaking based on evidence or on behalf of my organization at this particular moment—is that I think it takes more than money to change culture. What we're talking about is changing the culture of an entire profession, and that is not going to happen just because a lot of money flows to the provinces. I think uptake of electronic health records is a monumental change for many folks practising medicine, and it's going to take a little bit of time for that to happen.

In terms of the very specific challenges, though, no one would be better to outline those than Canada Health Infoway, I suspect.

The Chair: Thank you so much, Dr. Gold and everyone who has participated in this.

We'll now go to Mr. Lizon.

Mr. Wladyslaw Lizon (Mississauga East—Cooksville, CPC): Thank you to all the witnesses for coming here this afternoon.

My first question is for Dr. Jalali.

Going back to the new methods of teaching, how would you say they compare to those in other places in the world? Are they changing and going in the same directions? The other part of the question I would like to ask is, if someone decided to stay and do traditional teaching, would you say that the results would be different? Would you assess a graduate from one university and one from another as being on the same level, or would there be a disparity? What are your views on that?

Dr. Alireza Jalali: Actually, this is an interesting question, because I actually did my MD degree in Belgium, and I did my specialty in France, so I can clearly compare Europe to here. I'm Iranian in origin, so I've been to Iran. I have seen what's happening.

The medical education in North America is evidence-based, so they go with what evidence shows to be working in educating people, whereas in Europe and in other parts of the world maybe it's more traditional. So you will see in many European countries that they still do lots of lectures whereas here we don't. We don't do that here because not only are we evidence-based, but also it has been shown that active learning creates a long-time memory. What is the problem doctors have? They do medical education; then they do residency; and then they're out, and you have them for 20 years, 30 years after and they still need to remember this stuff. So you want long term and you want them to be independent, and the AFMC has actually done a very good job at accrediting.

When you ask if someone can do lectures all the time in Canada, they can't. They can't in the U.S. either, as the lecture hours have been cut because it has been shown that small-group teaching active learning is much more proficient in the long term. All these are evidence-based in active learning, in actually how adults like to learn. We always consider our students to be adults so we know they're motivated. We know they want to learn, so we give them all the tools and make them learn how to learn this stuff. As the information changes, what I tell them now on how to treat hypertension maybe in 20 years will not be the way. They need to be able to find it out.

Do you want to add anything?

● (1705)

Mr. Irving Gold: I would concur with everything that was said.

Mr. Wladyslaw Lizon: Going back to the future planning and shortage of doctors in certain specialties, do you have anything in place now that would do early streamlining? As you heard here, you can't force anybody to enter a certain specialty, but do you streamline students? Let's say you have 10 places for surgeons, but you would have 20 or 30 at some point for geriatrics. How do you do it on your side?

Mr. Steve Slade: I think it's done jurisdictionally.

In Quebec, for instance, there is a venue in which the provincial government sits down at the same table with the faculties of medicine and with hospitals, and they look at expected vacancies. They actually look at the number of surgeons expected to retire at the hospitals in the jurisdiction, and they allocate their residency quota accordingly.

Ontario has quite an elaborate model. They've tried to look at the data in a more robust way, weighing it against expected changes in the population, and again that table exists at which the provincial government sits down with the faculties of medicine and they make decisions about what the quota will look like.

So, again, I would repeat the point about the system-wide approach to this. There are more residency positions in geriatric medicine than are filled by residents. Graduating medical students are looking at that specialty and they're making decisions based on whether they would be doing a lot of on-call, whether they are going to be paid in a way that they want to be, whether they will have opportunities to teach and do research. I think there's a bit of a package that has to be looked at.

The Chair: You only have about 30 seconds left.

Mr. Wladyslaw Lizon: A quick question is, how do you fit in all of these foreign-trained doctors? That includes young Canadians who go abroad and immigrants who come in.

Mr. Irving Gold: All I can say is, that's not a quick question. We could have an entire day-long conversation—

Mr. Wladyslaw Lizon: I asked quickly, but—

Mr. Irving Gold: It is a big issue and one that I could not possibly do justice to in a short comment.

Mr. Wladyslaw Lizon: But maybe you can provide the committee with some kind of comment later.

Mr. Irving Gold: I'd be happy to.

Mr. Wladyslaw Lizon: It would be appreciated. Thank you.

The Chair: Thank you so much, and now we'll go to Dr. Fry.

Hon. Hedy Fry: I had a quick question. I'm not trying to cause trouble, although that is not something I shy away from, but you were talking about how long this has been going on. I remember chairing a Canadian Medical Association committee in 1987 that talked about the fact that we were going to need primary care obstetricians—well, primary care people to do low- and medium-risk obstetrics.

Well, because everybody was 55, new people weren't coming into that. They didn't want it, and we've been trying since then. Nothing's happened, and we now have the problem that we don't have anybody doing primary obstetrics; we're just going to have to go straight to specialists.

I think the thing about it is it costs the system a lot more money to pay an obstetrician to deliver a low- or medium-risk baby and then for a pediatrician to do the well-baby care, which could be done in some places by nurse practitioners or by family physicians, but nobody wants to go into that.

So this is not simply a case of saying let's get a mix, let's pay off your students loans, let's help you with monetary incentives, and let's look at the disincentives.

How do you actually get groups of physicians to want to go into the labour-intensive, long hours of certain specialties that require that? You think you've just worked a long day, and the next thing it's three o'clock in the morning, and you get called out to deliver a baby, or your kid has a piano recital, and you're going out to deliver a baby. So people don't want to do it anymore because their lifestyles aren't doing it.

There has to be a solution to that, not simply financial or whatever; it's a lifestyle thing. Have you any suggestions for that?

● (1710)

Mr. Steve Slade: In terms of answers, sorry if I'm going to shy away from it, but I think the problems or the issues are complex. For instance, right now there are efforts under way in various jurisdictions to look at resident duty hours, the amount of time that is allowable to have a resident doing a shift, and this exacerbates the problem, to some extent.

That said, for instance in Quebec, there are some very elegant solutions to this problem in terms of looking at how the hand-offs work, the transitions from one shift to the next, and how to readjust the schedule. The point I would make is that I think there are successes and solutions that are happening at a very local level.

McGill has looked at how they're going to adjust their resident shifts in internal medicine to address the fact that they can only have residents working for a maximum of 16 hours. I would look to those examples—

Hon. Hedy Fry: That's for training only. I'm talking about getting people to go into it so that they can go out there in the community and practise that kind of stuff. People don't even want to go into it, never mind during the residency.

I also wanted to point to.... The troublemaking piece was that during the 2004 accord, HHR was specifically deemed by the premiers of the provinces to be a co-jurisdictional thing. The federal government co-chaired and British Columbia, if I recall rightly, was the province co-chairing it, and they were to come up with a pan-Canadian HHR strategy looking at supply and demand, and the federal government would play its role, and the provinces would play their role. It was coordinating to get jurisdictions. Why did that not ever happen? After 2006, nothing happened.

Mr. Irving Gold: I wish I could explain why these things don't happen.

Hon. Hedy Fry: That was a rhetorical question actually.

Voices: Oh, oh!

Mr. Irving Gold: I know. I wish I could explain.

With respect to your first comment, the only thing I would say is, I think that in all of these discussions what we need to be putting first and foremost are the needs of Canadians. Those are what we should be using as the organizing principle for our health care systems across the country and for any national approach to HHR planning.

Finding incentives and disincentives, sure, that is a subtext, but what we need to understand is what the needs of our population are, and that should guide us.

The Chair: Thank you, Dr. Fry—

Hon. Hedy Fry: Did I have any seconds left?

The Chair: Sorry, no.

Hon. Hedy Fry: No? Because I wanted to—

The Chair: Wishful thinking, but no—

Hon. Hedy Fry: I had presented a motion 48 hours ago that I would have hoped we could have discussed—

The Chair: Well, the bells are about to ring, I've been informed.

I want to thank you so very much for your presentation today. It was very, very well put.

I want to thank the committee for all their questions as well. This was a very good committee day.

With that, I will adjourn the meeting, and I would encourage my colleagues to get their coats on.

Thank you.