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Chair

Mrs. Joy Smith

Standing Committee on Health

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● (1100)

[*English*]

The Chair (Mrs. Joy Smith (Kildonan—St. Paul, CPC)): Good morning, everybody, and welcome to the health committee. It's great to see everybody here this morning. Pursuant to Standing Order 108 (2) we're studying technological innovation.

We have very credible witnesses with us today, very distinguished witnesses.

From the Department of Health, we have Barbara Sabourin, director general. Is that Dr. Sabourin?

Mrs. Barbara Sabourin: No.

The Chair: From the Canadian Institutes of Health Research, we have Dr. Alain Beaudet. Welcome, it's nice to see you again.

From the Canadian Agency for Drugs and Technologies in Health, we have Dr. Brian O'Rourke, president and chief executive officer. Welcome.

We shall begin with Barbara Sabourin.

Mrs. Barbara Sabourin (Director General, Therapeutic Products Directorate, Health Products and Food Branch, Department of Health): Thank you Madam Chair. I am pleased to be here today to speak about emerging technologies in health care and the important regulatory role played by Health Canada.

[*Translation*]

I am the Director General of the Therapeutic Products Directorate within the Health Products and Food Branch (HPFB).

[*English*]

The health products and food branch, HPFB, is the part of Health Canada responsible for the regulation of food and health products such as pharmaceuticals, biologics, and medical devices. A key part of our mandate is to take an integrated approach to managing the health-related risks and benefits of health products and food. We do this by minimizing health risk factors to Canadians while maximizing the safety provided by the regulatory system for health products and food. As a regulator, it is essential that we adapt to the evolving expertise required to effectively assess submissions by continually re-evaluating our approaches. Many new technologies push the boundaries between the impossible and the possible. Technologies once thought impossible are now seen as mainstream therapies to address long-standing medical conditions. I have prepared a short document highlighting a few key initiatives, and I will take this opportunity to speak more generally to how our current priorities support emerging technologies.

To keep pace with evolving scientific innovations, we are taking steps to modernize our regulatory framework by advancing the regulatory road map, implementing ways to support innovation by reducing unnecessary regulatory burden on industry, and strengthening our partnerships and alignments with both domestic and international partners.

Providing timely access to new innovative therapies so that Canadians can maximize their health outcomes is a key departmental objective. One manner in which to achieve this objective is the priority review process, which facilitates fast-tracking and shorter review time of eligible new drugs and devices intended for treatment, prevention, or diagnosis of serious, life-threatening or severely debilitating diseases or conditions. The review time for a typical new active drug substance is 180 days as opposed to 300 days. For a medical device such as a class IV, or highest-risk, device, the priority review time is 45 days as opposed to 90.

For example, Health Canada granted priority review status to the Edwards Sapient heart valve, which will provide certain patients who cannot undergo open heart surgery with the option of valve replacement. This device was licensed on June 22, 2011.

In the field of oncology, Health Canada has granted priority review for drugs that serve disease states with high unmet needs and drugs for personalized medicines. An example is Jakavi, which is intended for the treatment of the effects of a rare blood cancer. It received priority review status because it demonstrated a marked and durable improvement in overall patient quality of life. This drug was approved on June 19, 2012.

In the area of innovative biologics, Canada became the first country in the world to license, in May 2012, a stem cell therapy for the treatment of complications of transplant in children.

Other mechanisms that enhance access to innovative therapies include setting internationally competitive performance targets for review times, facilitating earlier access to drugs by physicians and patients based on promising evidence of clinical effectiveness, adding a 30-day default review period for all clinical trial applications, and expediting the review of alternate sources of drugs that were recently in a shortage situation.

The increasing pace of technological change and the globalization of the health products industry present opportunities for HPFB to seek and promote harmonized standards and technical requirements, regulatory convergence, reduction of duplication, and increased collaboration with international regulatory counterparts. We continue to introduce guidance, when applicable, to assist sponsors in meeting the regulatory requirements relating to evolving technologies.

HPFB is highly respected worldwide and continues to strengthen international ties with other key regulators through our active involvement in all aspects of the International Conference on Harmonisation and through collaborative agreements such as the oncology cluster. In addition, the branch continues to build knowledge capacity by using foreign reviews and pooling expertise with international partners in innovative areas.

● (1105)

[*Translation*]

In an effort to facilitate innovative therapies, HPFB has also implemented new regulatory frameworks allowing decisions to be made for new drugs that are intended to be used in emergency situations, based on limited human studies that are supported by animal studies.

[*English*]

To conclude, HPFB places considerable emphasis on supporting innovation and emerging technologies to improve the health and safety of Canadians. As well, Canada has strong patent laws that provide eight years of market exclusivity for sponsors of innovative products. This makes our country attractive for clinical researchers and drug developers in the area of emerging technologies.

[*Translation*]

Thank you for the opportunity to appear before you today and I would be happy to respond to questions.

[*English*]

The Chair: Thank you very much. I appreciate your insightful comments this morning and your presentation that you handed out.

I will now go to the Canadian Institutes of Health Research. Dr. Beaudet, go ahead, please.

Dr. Alain Beaudet (President, Canadian Institutes of Health Research): Thank you Madam Chair.

Medicine is evolving incredibly rapidly. The future of medicine is a world where doctors use their smart phone instead of a stethoscope to examine a patient's heart rate, a world where novel biomarkers will be used as part of early detection systems for physicians to better treat rejection of organ transplants, a world where an electronic nose is able to detect tuberculosis immediately and non-invasively from the patient's breath in order to replace testing with sputum, a world where a surgeon from Toronto can perform surgery remotely on a patient in Yellowknife.

All these examples have the common attribute of representing new opportunities for improving the quality, the accessibility, and the safety of health care. That is what emerging technologies are all about, innovation. The future of health care in Canada lies in our ability to innovate. This means we must think differently, be bold, and be prepared to engage partners not traditionally associated with the health sector.

[*Translation*]

In other words, this means daring to support ambitious and groundbreaking projects that involve researchers from various disciplines, including biology, of course, but also physics, chemistry, mathematics, computer science and engineering. This means promoting co-operation and opening up to the international scene.

CIHR has been working more and more with its federal partners, including the Natural Sciences and Engineering Research Council of Canada, the National Research Council of Canada and Genome Canada, with a view to supporting research in this cutting-edge area of technology where various disciplines meet.

One of our initiatives is the advancing technology innovation through discovery program. This program allows researchers to apply new genomics technologies to identify the genetic causes of childhood diseases.

[*English*]

I am pleased to inform this committee that, in terms of emerging technologies, Canadian researchers are leading the way in many fields. In September, the Council of Canadian Academies released its assessment of science and technology performance in Canada and confirmed this. In the field of psychology and cognitive sciences, for example, Canada has both an extremely high output, with twice the volume of publications one would expect based on our population, and the fifth highest impact in the world.

In terms of nanosciences and nanotechnology, the assessment noted that Canada is growing the fastest in the world. The Canadian Institutes of Health Research are directly supporting the development of emerging technologies in a wide range of research areas. These include the development of new tools and applications in fields as varied as robotics, nanotechnology, genomics, regenerative medicine, and medical devices, but they also include innovations in the field of health care delivery, such as e-health and telemedicine, to name only a few.

● (1110)

[*Translation*]

Since 2006, CIHR has funded over 200 projects related to robotics, nanotechnology and the development of applications and medical devices. Those investments represent more than $200 million.

Maurice Ptito form the University of Montreal is a concrete example. With the support of CIHR, Dr. Ptito developed a sensory substitution device that could potentially help blind people with navigation. This tongue display unit retransmits visual information through a camera; the pixels are translated by the tongue. Results show that not only is the information perceived by the tongue unit through the camera sent to the brain, but also that this information is decoded in the brain with sufficient accuracy to enable the person to develop strategies in order to avoid obstacles and to move adequately.

[*English*]

Another fascinating example of futuristic brain machine interface is the work carried out at the incubator of Ryerson University by two young biomedical engineers who, in addition to developing such products as artificial lungs and assistive walking tools for paraplegics, have developed an artificial muscle-operated arm. This experimental device allows one to control an artificial limb just by thinking about it, a little bit as we normally do when thinking about moving a limb. It offers a greater range of movement than traditional prostheses and does not require the amputee to undergo invasive surgery. It is also easy to use and is relatively inexpensive to make.

Not only have these young researchers-entrepreneurs pushed the limits of the application of cybernetics to health, they have also made it a commercial success by creating a start-up, Bionik Laboratories, which has already attracted interest from major hospitals in the U.S. and Canada. The federal government has an important role to play in assisting companies like this one with the uptake of research activities and with ensuring that their successes are brought to market.

Other areas that hold great promise for new advances in helping those living with incurable diseases are genomics and stem cell research. Already, genome sequencing is changing the way we treat and prevent disease. For instance, thanks to early funding through CIHR's regional partnerships program, Dr. Patrick Parfrey and his colleagues from Memorial University in Newfoundland have made substantial strides in the research that led to the discovery of the gene responsible for young Newfoundland men falling dead suddenly from heart failure. Now, a simple blood test can reveal whether or not a person carries the fateful genetic mutation. Those identified with the gene have defibrillators implanted near the collarbone, with the result that Newfoundland's sudden death syndrome has virtually disappeared. This example illustrates why CIHR and Genome Canada have launched a major strategic partnership on personalized medicine.

It is often said that the brain is the last frontier. Unravelling the mysteries of the brain so as to offer hope and cures for patients suffering from neurological and mental health disorders is another of CIHR's major thrusts. Brain research is one of the areas in which we can hope to gain most from emerging technologies, in fields ranging from epigenetics to brain imaging.

Take, for example, the work of Dr. Antoine Adamantidis, who is the Canada research chair in neural circuits and optogenetics at the Douglas Hospital at McGill University. Dr. Adamantidis is studying the brain structures involved in the behaviour and psychological state of sleep and wakefulness. He has pioneered the use of optogenetics, which has opened new perspectives and unprecedented experimental strategies to probe the nerve circuits that control wakefulness. His research will help identify new treatments for illnesses associated with sleep disturbances, including depression, schizophrenia, and cognitive-related disorders.

Madam Chair, I wouldn't want this committee to feel that the emerging technologies projects supported by CIHR are only about new tools, new gadgets, and new devices. They are also about developing new business models, integrating services in different settings, and scaling up successful initiatives into new models of care and services.

This is reflected in projects like that of Dr. Mikiko Terashima from Dalhousie University, whose research initiative seeks to track the locations of all of Nova Scotia's ambulances by use of global positioning systems. The goal is to find out what happens to overall ambulance services when there is overcrowding in hospital emergency departments. Researchers hope to use findings from the project to improve emergency services across the province.

As you can see, Madam Chair, the Canadian Institutes of Health Research are supporting leading edge research endeavours that are critical to ensuring the best health care and health outcomes for Canadians. In supporting these endeavours, CIHR and its partners from the public and private sectors remain focused on the principles of research excellence, research integrity, and patient safety. These are the gold standards for supporting the best ideas and the brightest minds and maintaining Canada's competitiveness in our knowledge-based economy.

Thank you.

● (1115)

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

We'll now go to the Canadian Agency for Drugs and Technologies in Health. We will start with Dr. Brian O'Rourke.

[*Translation*]

Dr. Brian O'Rourke (President and Chief Executive Officer, Canadian Agency for Drugs and Technologies in Health): Thank you, Madam Chair, and thank you for inviting me to appear before the committee.

[*English*]

Let me begin by telling you a bit about the Canadian Agency for Drugs and Technologies in Health, or CADTH. We are an independent, not-for-profit corporation that was established in 1989. We refer to ourselves as a health technology assessment organization, meaning that we provide evidence-based assessments of the clinical and cost effectiveness of pharmaceuticals, of diagnostics, and of medical, dental, and surgical devices and procedures. In essence, we have two broad areas of work: our drug portfolio and our non-drug or technology portfolio, which covers devices, diagnostics, and procedures.

Our operating budget is approximately $22 million annually, with the majority of the funding coming from Health Canada and all of the provinces and territories with the exception of Quebec, which has its own agency. The members or owners of CADTH are the federal, provincial, and territorial deputy ministers of health, who fund the agency. We are governed by a board of directors that reports to the deputy ministers.

Madam Chair, CADTH operates with a dual value proposition. First, we are a producer of evidence, advice, tools, and recommendations that promote the optimal use of drugs and other health technologies. We also operate as a broker of Canadian and international health technology assessment activities.

As a producer, CADTH provides a range of services to support the effective management of pharmaceuticals and other health technologies in Canada. One of our flagship programs is the common drug review, a federal-provincial-territorial process used to review the clinical and cost effectiveness of new drugs and of existing drugs with new indications. The common drug review supports coverage decisions by 18 of the 19 publicly funded drug plans in Canada. Again, Quebec has its own system in place.

As you will recall, Madam Chair, the Standing Committee on Health studied the common drug review and released a report with recommendations in December 2007.

We also do therapeutic class reviews on pharmaceuticals and conduct optimal use projects, products that are the result of expert deliberative processes that provide the evidentiary foundation for jurisdictions to promote the appropriate prescribing and utilization of drugs and other technologies.

Another valuable service offering is quick summaries of the dauntingly large and complex medical literature, our rapid response service. This service is extremely helpful in that it addresses urgent jurisdictional needs for digestible and balanced information that informs policy and practice decisions concerning drug and non-drug technologies.

We also conduct more comprehensive and complex health technology assessments when warranted. Recent examples include assessments of robotic surgery, of magnetic resonance imaging units, of pharmacologic-based therapies for smoking cessation, and medical isotopes, to name a few.

[*Translation*]

As I mentioned, in addition to being a major producer of health technology assessments, CADTH also operates as a broker, helping to create and nurture an environment for evidence generation and adoption across Canada. As a pan-Canadian body, we are well positioned to work collaboratively with health technology assessment organizations operating at the provincial level, in academia, and within hospitals.

● (1120)

[*English*]

CADTH's mandate, whether as a producer or a broker, is to support the effective management of health technologies throughout their life cycle, from innovation to obsolescence. We do not make the final decisions on what technologies will be funded by health ministries or used by patients and clinicians; however, our work informs technology-related decision-making at both the policy level and the practice level.

As an organization involved in promoting the optimal use of health technologies, we support innovation. We recognize that advances in medical devices, drugs, and procedures help to improve health care delivery and patient outcomes.

We also recognize that new does not necessarily mean better and that some new health technologies offer no or only marginal improvements, but often at a much higher cost.

We see our role and the role of health technology assessment generally as providing the evidence to ensure that health technologies add value to the system, that they contribute to improved patient outcomes and/or health system sustainability, and that they are in fact innovations and not simply cost drivers.

[*Translation*]

With jurisdictions across the country dealing with significant economic challenges, the need to extract maximum value from every health care dollar has never been greater. Specifically, CADTH provides decision-makers with the information they require to make informed decisions in health care with respect to the additional benefits from new technologies balanced against their additional costs to the health care system.

[*English*]

In this way, decision-makers are able to make wise choices, ensuring that with each choice increasingly scarce health dollars gain more health benefit than they forgo.

Let me provide you with a few examples, Madam Chair.

Approximately 250,000 Canadians suffer from a heart condition referred to as atrial fibrillation, an irregular heartbeat that can lead to serious medical complications such as stroke. Most patients need lifelong therapy with anticoagulants, drugs that prevent the formation of blood clots. A drug by the name of warfarin has been the mainstay of therapy for about 60 years, but new oral anticoagulants are now available that are being touted as breakthrough drugs.

A rigorous review by CADTH showed only a small potential benefit over warfarin, no long-term safety data, and highly uncertain cost-effectiveness if these drugs were used broadly as a replacement for warfarin. Our review confirmed warfarin's continued place as first-line therapy, and our committee of experts recommended that the new oral anticoagulants be funded only when warfarin should not or cannot be used.

CADTH has made significant contributions in identifying the appropriate use of drugs and other technologies used in diabetes care. I want to highlight one example, in particular. Our research on the use of test strips to measure blood glucose levels has huge implications for the health system and for patients. Test strips are a costly and widely used technology. In 2010 Canada's public and private drug plans spent more than $500 million on them. But our research shows that people with diabetes who do not use insulin do not need to routinely self-test.

Acting on these findings has the potential to free up between $450 million and $1.2 billion between 2012 and 2015. Let's be clear. That's $450 million to $1.2 billion that not only produces no health benefit, but worse, in an economy with constrained health care budgets, it also prevents funders from spending this money on innovative technologies that would produce health benefit.

Since 2009 we've been working closely with partners across Canada, including the Canadian Diabetes Association, to disseminate this information, to educate health care professionals and patients, and to support the use of test strips only in circumstances where the patient will actually benefit.

Robotic surgery, computer-assisted surgery, and robot-assisted surgery are terms for technological developments that use robotic systems to aid in surgical procedures. This technology is, however, associated with significant capital, maintenance, and operating costs.

CADTH's work on robotic surgery, completed last year, confirmed that surgical robots do lead to improvements in some short-term outcomes, such as length of hospital stay, blood loss, and transfusion rates.

Our work also showed that there are ways to make the use of this technology even more cost-effective, such as using the robot for several different kinds of surgeries, increasing surgical volumes, and having the right support systems in place. Thus, our work is supportive of this innovative technology in some circumstances.

● (1125)

[*Translation*]

These examples show that health technology assessment provides clear guidance for public investment in health technologies—helping decision-makers choose between different therapeutic alternatives for the benefit of patients and the health system.

[*English*]

Madam Chair, I'd like to leave you with three messages.

First, now more than ever policy-makers need to be confident that their health technology purchasing choices increase health benefit. Health technology assessment is vital to informing those choices.

Second, health technology assessment helps ensure that patients attain the maximum benefit from new technologies by providing guidance with respect to appropriate use.

Third, health technology assessment is supportive of technological innovation, where innovation provides value to patients, to the health system, and to taxpayers.

CADTH, and health technology assessment in general, supports the adoption of those innovative technologies that produce health benefits. However on the flip side, it also plays a role discouraging the adoption of those innovations that do not produce health benefits.

Thank you, Madam Chair, for allowing me to present to you today, and I welcome any questions you may have.

The Chair: I want to thank all the witnesses for their very insightful commentary this morning. It's very helpful to our study.

We will begin our seven-minute round of questions and answers with Ms. Davies.

Ms. Libby Davies (Vancouver East, NDP): Thank you very much, Madam Chairperson.

Thank you to our witnesses for being here today. Today is actually the first meeting of a new study we're beginning, so you kicked it off for us. We're beginning to get into this whole issue, which I think is pretty huge, in terms of innovation and technology in the health care system. The questions I have are fairly broad. I'm hoping there are issues we will explore further as we get into our study. All of you made very good presentations. It gives us the sense of what your department and agencies are working on. I have the feeling that great attention is paid to safety issues, monitoring, and evaluation.

What bodies, whether federal or provincial, are overseeing the impact of these new technologies? There must be an impact on human health resources. If there are new technologies coming in, that may require different kinds of expertise in various facilities. Who monitors that? Who responds to that?

The other part of that is accessibility. You have a whole menu of technologies coming in, and various research things are emerging. How do we ensure under the principles of the Canada Health Act there is even application across the country and that cherry-picking is not involved? For example, province X can afford this and, therefore, it gets some new technology and another one doesn't. There is an issue here of health equity. There are many players, and you're just at the federal level. It's not clear to me, with all the players involved, who keeps an eye on the bigger picture in terms of our health care system.

Could you address that question? Is anybody doing that, and if not, where are the gaps and what should we be doing?

The Chair: Who would like to take that question?

Mrs. Barbara Sabourin: Perhaps I could start and my colleagues could join in if they have additional comments.

The Chair: Go ahead.

Mrs. Barbara Sabourin: In terms of the impact of technologies, the Food and Drugs Act and regulations provide us with some ability to oversee especially the safety side and the adverse events that might happen with the use of new technologies, especially drugs and devices. We take that role very seriously.

For many products, we do safety assessments when we see that the number of adverse events or the type of adverse events might be troubling, and then we might ask the manufacturer, for example, to change something on the label to more clearly prescribe or describe the risks and benefits of the products. We do certainly have a role.

That said, the Food and Drugs Act and regs focus on sale. As I'm sure you're aware, our role is somewhat limited and the provinces certainly have jurisdiction in the delivery of health care and monitoring of health outcomes for Canadians.

The Chair: Go ahead, Dr. O'Rourke.

● (1130)

Dr. Brian O'Rourke: Perhaps I could speak to the second question regarding accessibility and the cross-border issues in Canada.

Our common drug review, for example, was a program that was set up by the provinces and territories and the drug programs within the federal government. They created it about 10 years ago because of that issue. They were all dealing with their own processes and all looking at the information in a slightly different way. The common drug review has balanced that information. We do that assessment on behalf of all of the provinces and territories, except Quebec, and produce a recommendation that informs their decision-making. Our statistics show that about 92% of the time when they make a decision, it's consistent with a recommendation we put forward.

Ms. Libby Davies: What about some of the technologies? I heard you on the common drug review, but what about the technology side?

Dr. Brian O'Rourke: It's very different on the technology side. Drugs are so much easier because it's very top-down in most provinces. They have a drug plan and people in the ministry who do have controls in place. Devices are very bottom-up. New devices and new technologies are introduced into the system when, say, a manufacturer provides something to a surgeon or to a nurse and it slowly and easily becomes diffuse within the system without having a lot of information or assessment done of that technology. There are many decision points involved with the non-drug technologies.

Ms. Libby Davies: Before Dr. Beaudet answers, I would ask you whether or not you could provide the committee with some notes. We're going to visit a facility in Montreal. I think it's called CAE Healthcare. They are producing some of these new robotic-type devices. It would be really helpful if the agency had any general notes about what we need to watch for. I don't know whether you could produce something for us. We're going on November 6. That's maybe too short a time, but it would be very helpful if we had some background if you're able to produce anything.

Dr. Brian O'Rourke: We'll work very closely with the clerk and see what we can produce.

Ms. Libby Davies: I wonder if Dr. Beaudet has any comment.

Dr. Alain Beaudet: As you know, we're supporting research. More and more we are mindful of the importance of evaluating the impact of these new technologies.

The best example I can give is the recent initiative on personalized medicine that we've launched with Genome Canada. It's a major initiative, $67.5 million to be matched equally by the provinces. We're talking $135 million on personalized medicine. It is about discovering new ways of producing care, diagnosing disease, and stratifying patients to ensure that treatments are appropriate. Imbedded in the request for application, RFA, and in the initiative itself is a clear intent to ensure that we measure the social impacts, economic impacts, and health impacts of these new technologies, and ensure in particular on the economic side, as my colleague explained earlier, that the expenses that will undoubtedly be linked with personalized medicine and genome sequencing linked to that will be compensated for by improved health, improved care, and actual savings, also, let's say, for all the patients we won't have to be treating because they don't have the right profile to respond, for instance, to a given drug.

The Chair: Thank you, Dr. Beaudet.

We'll now go to Dr. Carrie, please.

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

I want to thank all the witnesses for being here today. As my colleague said, we're just starting this new study, which I'm incredibly excited about. I want to thank each and every one of you for showing a leadership role in Canada and working in partnership with our provinces and territories. I know sometimes that can be very complicated with the complicated system we have here in Canada. It's wonderful to see you taking a leadership role in that regard.

My first question would be for Dr. O'Rourke. My question is about red tape. We hear about industry and about communication between provinces and territories. I know you've worked closely with Health Canada giving advice to help streamline, if possible, advice to provinces and territories and different decision-makers out there. You've been a part of the efforts to reduce this paperwork burden and all the stuff we hear about with industry. Sometimes we hear industry complain about that burden in Canada and about how it stops them from moving forward. I wonder if you could talk a little about that.

● (1135)

Dr. Brian O'Rourke: Madam Chair, there are probably two things I'd like to say about that. One would be related to the common drug review again. When it was established, every province and the federal programs that deliver health care had their own systems in place. Over the 10 years or so that the common drug review has been in place, there have been some independent analyses that have actually shown that we've reduced that duplication and we've actually allowed quicker access to some of these innovative technologies. That's been a great advancement on the drug side.

One of the recommendations that came out of the review done by this committee in 2007 was about priority reviews and about how we could maybe streamline the process for some of these new breakthrough or first-in-class drugs. We did have some very good discussions with our colleagues at Health Canada about how we could perhaps streamline that.

The typical process is that Health Canada does their risk-benefit review, and when they give market authorization, then the manufacturer makes a submission to us. We wouldn't do our work until that market authorization was given.

For these priority review drugs that my colleague mentioned, we now start our process anywhere from two to three months prior to market authorization. There is a type of pre-notice of compliance program. Initially we put some criteria on that. The drug had to demonstrate significant benefits or safety issues, or it had to create the opportunity for some significant cost savings to the provinces. We've just decided that we'd like to remove those criteria and leave it totally open to the manufacturer to make that submission. If they'd like us to start our review in parallel with the review at Health Canada, not exactly when they start but somewhere in the process, that's their choice. That's been very helpful to us and very beneficial to the sponsors as well.

Mr. Colin Carrie: I did have a question just out of curiosity. You mentioned the common drug review, and you said “everyone except Quebec”. Then you said another thing regarding innovation and technologies and you said “except Quebec”. I just wondered why that is.

Dr. Brian O'Rourke: It's probably a better question for our colleagues from Quebec. They have their own agency, *Institut national d'excellence en services sociaux*. It does very similar work to what we do. We do have a memorandum of understanding in place with that organization as well, so we do some collaborative work. We are always looking at the reports that each of us does so there is some consistency.

Mr. Colin Carrie: Does each province have its own decision-making processes sometimes in this regard, jurisdictionally and things like that?

Dr. Brian O'Rourke: All provinces still have their own decision-making. We're not the decision-making body. We provide the recommendations to them, but we have taken away the need for them to have this major review done.

Mr. Colin Carrie: Excellent, thank you very much.

Dr. Beaudet, you mentioned different investments. I appreciate the leadership role you are taking at CIHR. You gave some examples about innovation at Ryerson and Dalhousie. You were saying it's not just about the new tools and gadgets, but it's about business in this country as well. I was wondering how these investments in emerging technologies aid in Canada's economic recovery and in helping to create wealth and jobs. We are investing in science and research, but in the end we're getting good quality jobs out of it. Could you elaborate on that?

Dr. Alain Beaudet: Certainly. It acts on creating jobs at many different levels. For instance, it starts with the grant. As you know, we are giving out over $900 million in grants per year. These grants pay people. They pay students and graduate students. They pay for research professionals who work on the research projects. In fact, the expendables account for only 20% of our grants. This is in itself a job creation enterprise.

In addition to that, as you well know, in many cases these discoveries will lead to start-ups, as I explained with the example of Ryerson. These start-ups will bring in capital and will provide jobs. They clearly benefit our economy. We have heard it from many fronts that we need to foster better collaboration between industry and the academic sector so that there is a takeover by industry at one point and greater industrial investments in R and D, which as you know is one of the weaknesses in our country. It would obviously also lead to job creation.

Economically, we cannot ignore a very important fact. A population in good health is a productive population. Productivity is a huge issue for Canada. I can tell you that the day we are able to control mental health in the workplace and low back pain, we will have increased productivity to quite an extent, and that will affect our economy.

● (1140)

Mr. Colin Carrie: As a chiropractor, I am really pleased to hear that.

Dr. Alain Beaudet: I knew you would be.

Mr. Colin Carrie: I know what you are talking about.

Do I have time for another quick question about nanotechnology?

The Chair: No, you don't, Dr. Carrie. I am sorry about that.

Thank you so much for your questions, Dr. Carrie, and your answers, Dr. Beaudet.

We will now go to Dr. Duncan. Welcome to the committee, Dr. Duncan.

Ms. Kirsty Duncan (Etobicoke North, Lib.): Thanks, Madam Chair. It's nice to be here and see you all. Thank you to the witnesses. Thank you for sharing exciting research.

I am just filling in today, so I don't know the history. I know this is the first day of this study. I am going to ask about innovation more broadly, not just technical innovation.

Ms. Sabourin, in 2010 the FDA introduced plain language labelling for drug labels and monographs. Health Canada has been talking about introducing a similar policy since 2000. I am wondering when the agency will do so.

Mrs. Barbara Sabourin: Plain language labelling is certainly one of the initiatives we are trying to move forward. It is something we feel is important for all Canadians. That's because it's important for Canadians to understand the risks and the benefits of the products they are taking. That is an initiative under the regulatory road map that I mentioned earlier. It is in the first phase, so we are trying to move that forward on the regulatory side fairly rapidly.

Ms. Kirsty Duncan: Could you give me a timeline for that, please?

Mrs. Barbara Sabourin: It's very difficult to give you a complete timeline for regulatory processes because they go through the formal Government of Canada process, the *Canada Gazette*, part I, and then the *Canada Gazette*, part II.

My understanding is that we're hoping to have something in the *Canada Gazette*, part I, I believe this fall, which would mean prior to December, but I would rather not give you full dates on that because I might be off a bit. Let's even say that by the end of June we would have something in the *Canada Gazette*, part I. Our normal process is to have them published, as you know, for a 75-day comment, and then to analyze the comments and come back through the *Canada Gazette*, part II.

Ms. Kirsty Duncan: That's fine.

Mrs. Barbara Sabourin: In these kinds of—

Ms. Kirsty Duncan: No, that's fine. Thank you.

Mrs. Barbara Sabourin: If I could—

Ms. Kirsty Duncan: I'll move on. Thank you.

Mrs. Barbara Sabourin: Okay.

Ms. Kirsty Duncan: The FDA and the European Medicines Agency now make the studies it bases on drug approval public. I'm wondering when Health Canada will do the same.

Mrs. Barbara Sabourin: This relates to openness and transparency on the part of our department and specifically our branch. We do have a number of initiatives to move forward in that area. At the moment, we already make available publicly product monographs for each drug that is approved. Those can be found on the Health Canada website. Those documents outline the conditions of use and the risks and benefits for the particular products.

In addition, we make available what is called a summary basis of decision for many drugs and medical devices that are approved through the priority review process. Those documents are meant to be a complement to the product monograph and outline the basis on which we made our decision to approve the products.

As recently as September we—

Ms. Kirsty Duncan: Dr. Sabourin, I'm aware of that. I did ask a very specific question. I'm wondering if you could answer that specific question, please.

Mrs. Barbara Sabourin: I'm sorry, could you repeat that part?

Ms. Kirsty Duncan: The FDA and the European Medicines Agency now make the studies it bases on drug approval public. I'll give you some background. Since May, I've tried to find out about the drug review process for Gilenya. I was promised a briefing. Then on July 3 I received a call from the Minister of Health's office, who asked that I retract my public order paper question in order to have that briefing. I said that I would not do that and they would get back to me on July 4 about the promised briefing. On August 23, I learned that the review was finished.

People would really like to understand, particularly when there are risks to taking certain drugs, how the decision is made. Will Health Canada be doing the same in the future?

● (1145)

Mrs. Barbara Sabourin: I won't be able to speak to the specifics of the Gilenya file. My apologies, but I don't have that information in front of me.

What I can tell you is that the concerns around knowing the information that led us to a decision is why we went to the second phase of the summary basis of decision project, and we hope that responds to the needs of Canadians.

On the FDA, my understanding is that there is information published through the equivalent of the Access to Information and Privacy Acts. There's a process whereby those kinds of things go on a public website. In Canada, there is also the opportunity for people to apply through the ATI Act as well. From our perspective we think there is reasonably equivalent access to information.

In terms of the—

The Chair: Thank you.

I'm sorry. Your time is just about up.

Now we'll go to—

Ms. Kirsty Duncan: Isn't it seven minutes?

The Chair: I'm sorry, go ahead and finish. You have two more minutes. I was mistaken; my apologies to you.

Ms. Kirsty Duncan: Sorry, Mrs. Sabourin, I'll move on. It's okay. You've given me something so at least I understand the rationale.

I'd like to get in one more question. You may not be able to answer, but I'm wondering why Health Canada approved renal denervation surgery under its access to care programs when the one study that looked at safety and efficacy was funded by the company that makes the $6,000 catheters that are used in the procedure.

Mrs. Barbara Sabourin: All I can say is that Health Canada, at the health products and food branch, approves products. It doesn't approve medical procedures. I'm not aware of the specifics around that issue; however, we would have looked at any particular products that have that claim. We can go back and take a look at that particular one.

Ms. Kirsty Duncan: Great. If you could table that, or send that information to me, I'd be grateful.

What are the federal regulations that control off-label use of a medical device that's already approved in Canada?

Mrs. Barbara Sabourin: Off-label use is actually not covered under the Food and Drugs Act and regulations specifically. That would be an issue for the practice of medicine, and the provinces have the jurisdiction in that area.

To get things on labels, the manufacturers have to come forward with the information that supports the risks and benefits and the claims they wish to make, and we evaluate that information, so I can't speak to that.

Ms. Kirsty Duncan: Thank you.

The Chair: We'll now go to Mr. Lobb.

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

Dr. Beaudet, you diagnosed the two things that are truly holding me back from greatness: mental health and lower back pain. I thank you for that.

You have mentioned a number of different pieces that you study, and a number of different grants that go out to researchers from coast to coast. What percentage of your research would be applied research, at least what I would call applied research, where there is an issue identified, and industry, academia, and government may come together to work on the issue?

What percentage would be what I would call blue-sky research, where they are trying to fix something or create something that may be many years down the road?

Can you tell us that?

Dr. Alain Beaudet: First of all, that's terminology. Blue-sky research is roughly 70% of our budget; 70% of our budget is what we call open. In other words, it's investigator-driven. May the best win in terms of best idea, best mind. It is totally open. You're coming with your best ideas; it doesn't mean that it's not applied.

Very often people think if it's open, it's basic science. Not necessarily. If we look at what we fund through our open grants competition that you call blue-sky research, we have some very basic research in there, but we also have very applied research.

In addition to that we have a number of strategic investments that can be specifically in applied research. That would account roughly for the remaining 30%, although some of our strategic investments may also be for more fundamental research. We cannot equate what we call top-down or strategic with being entirely applied and the rest entirely basic.

We often try through our strategic investments to encourage partnership with industry. For instance, in some cases, we have a program with NSERC that is totally focused on applied research and research that stems from the collaboration between the biological side and engineers.

● (1150)

Mr. Ben Lobb: Fair enough.

I think the number you mentioned was $900 million a year. Was it $900 million a year?

Dr. Alain Beaudet: That's correct. Our total budget is $1 billion and what's going to grants....

Mr. Ben Lobb: Is it fair to say that $250 million or $260 million would go towards applied research then?

Dr. Alain Beaudet: Again, I wouldn't say applied research.

Mr. Ben Lobb: Okay. Of that, how much can you leverage when you have other people in the industry willing to—is that something you do? I know in the auto industry they do that.

Dr. Alain Beaudet: It is something we're doing, and we're doing it increasingly.

For instance you may have seen last week's announcement of our leveraging $12.5 million from a private donor to support a clinical research network in mental health in adolescents. That's really a fifty-fifty leverage. We're putting $12.5 million and the donor's putting $12.5 million.

We leverage money from industrial partners for certain types of programs. We leverage money from charities for other types of programs. By and large, we try to partner and leverage federal funds for everything that is strategic, that is targeted research.

Mr. Ben Lobb: One other question I had was for Ms. Sabourin. In your report on page 3 you talked about priority review time of 45 days as opposed to 90. Does everything get classified as priority review, or are there different review levels? A priority review would seem to me to get the quickest treatment. Are these things triaged?

What would be another term other than priority review? What would be lower down the scale? What would you classify that, and how many days would it take to have that reviewed?

Mrs. Barbara Sabourin: The priority review process is for products that have substantial evidence of significant improvements for severe diseases, life-threatening or severely debilitating diseases. Those are the high-level ones.

Mr. Ben Lobb: How do you make that claim? If I have a product that I say should be priority reviewed, how do I convince you of that?

Mrs. Barbara Sabourin: We have a whole process set out in guidance on our website on how that happens. What happens is that the manufacturer develops a package that meets our requirements for those criteria, and that sets up a meeting.

Mr. Ben Lobb: How long would it take to go through that process to get to priority review?

Mrs. Barbara Sabourin: We have a 30-day review period for those packages. Generally, we have a meeting with the manufacturer as well at that time, and point out any considerations we have. I'm talking about the drug side; the exact timeframes I'm more familiar with. Then there's a commitment for the manufacturer to file the submission within a certain time, between the decision that we grant them priority status and when they come in with the package.

Generally, there's no requirement for companies to come in at a certain time after the presubmission meeting. Then we go through the process.

Mr. Ben Lobb: How many devices per year would be in priority review? How many and what percentage of total submissions? Would it be 50 a year that get priority review, or how many would it be?

Mrs. Barbara Sabourin: No, the percentage is down below 5% for us.

Mr. Ben Lobb: Five per cent would get priority review?

● (1155)

Mrs. Barbara Sabourin: Yes.

Again, I'm sorry. I'm familiar with the drug side, but there are equivalent policies on both sides.

Last year, on the drug side, we got about 14 applications for a priority review. Of those—and I'm adding up numbers in my head—we granted six. The other eight were not granted.

Mr. Ben Lobb: I have one last question.

The provincial budget for health care in Ontario is $48 billion, almost 40% of the province's total health care budget. Obviously, the delivery of care is a huge cost to all provinces, in the form of transfers and everything else.

What do you do, or can you do, to help reduce the costs of delivery of care, to find new ways? Research you've talked about, but also the delivery of care.

The Chair: I'm sorry, the time is up, so if you could just give a brief answer on that, please.

Mrs. Barbara Sabourin: Okay.

We do a few things. I've already mentioned the priority review process, where we think something has a really significant opportunity to contribute to health care and health outcomes for Canadians. We also approve generic products. We do this in a way that respects the patent requirements and market exclusivity for brand-name products. Generic products, in general, are much lower cost versions of the products that innovators have developed.

The Chair: I know I cut you off, but we've had such nice answers. With the indulgence of the committee, Dr. Beaudet, I think you wanted to say something.

Dr. Alain Beaudet: I want to point out that we're working very closely with the provinces to set up what we call the patient-oriented research strategy. We want to develop mechanisms to support research that is focused on what we call intervention research—supporting interventions, evaluating interventions—and integrate in these evaluations a healthy economic aspect to ensure that we not only help the provinces make the right choices in terms of interventions that they use and refund, but also to ensure that we stop doing what's not working.

The Chair: I have to cut this off now. Thank you so much.

We'll now go into our five-minute round of Qs and As. We'll start with Dr. Morin.

[*Translation*]

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

Ms. Sabourin, I have a question for you.

On your Internet portal, you provide an electronic health service for Aboriginal and Inuit communities. Could you tell us more about the services provided through this Internet portal?

Mrs. Barbara Sabourin: I am sorry.

[*English*]

I cannot give you the information you're looking for. I'm here from the regulatory branch, which deals with the regulation of health products and foods.

Mr. Dany Morin: Okay.

In that case, my question will be for Dr. Beaudet.

[*Translation*]

Just now you talked about personalized medicines and about identifying biomarkers that could help patients.

For example, before my grandfather passed away, he had Alzheimer's. Could you give us some concrete examples in reference to a patient who has or might have Alzheimer's? What would the process be and how could it be implemented?

Dr. Alain Beaudet: Let me give you a very clear example. Some types of breast cancer, for example, have receptors on the surface and they could be targeted by a drug. That does not apply to all types of breast cancer, but it does apply to some types of tumours. If some tumours have those receptors, they will respond very well to the drug and will be destroyed.

The problem is that we don't want to give those drugs to everyone. If we did, it would be very expensive. In addition, most patients do not even have the receptors that allow them to react to the drugs. In those cases, they would experience all the side effects of the drug without benefiting from it at all.

The idea behind personalized medicine is to stratify patients and to ensure that we are developing drugs that are better targeted to patients who have a certain genetic history and who are going to respond to those treatments. By also conducting genetic tests, known as pharmacogenomics tests, we make sure to treat each patient based on their response capacity. We do not treat patients who would be likely to have more pronounced side effects because of their genetic make-up. So we have to reduce the side effects, target the treatment and, obviously, increase the capacity for treatment.

● (1200)

Mr. Dany Morin: Could you tell us about the challenges in implementing this great innovation across Canada?

Dr. Alain Beaudet: We are only at the very beginning of this. It is starting to be implemented for cancer in particular. We are starting to see a number of types of cancer for which there are biomarkers and we know which tumour is going to respond to which drug. As a result, we can give such and such a drug to a patient who has a given biomarker. We believe that we can extend this approach to a large number of drugs, but the research is still in its infancy.

You referred to Alzheimer's. There is no personalized medicine for Alzheimer's yet because we do not yet understand the basic mechanisms responsible for the neurodegeneration that we see in Alzheimer's. Once we understand those mechanisms and we identify the genetic profile responsible for the onset of the disease or a predisposition, we will be able to have more appropriate treatments.

Mr. Dany Morin: Thank you.

I am going to change topics slightly. Let us talk about your research institute's budget that is going to be cut by $15 million over the next three years. To what extent will those cuts affect the good work that you are doing?

Dr. Alain Beaudet: Let's be clear. Our grants and scholarships budget has in fact been reduced this year by $15 million, but the government reinvested $15 million into our budget for the patient-based research strategy. Therefore, our grants and scholarships budget was completely protected in the last budget.

You are correct, though, that additional cuts of $15 million are planned for next year. We will see what the budget will be for the next year.

Mr. Dany Morin: I think that, for the cuts planned for 2012-2013, we are talking about $15 million for your research institute, $30 million for 2013-2014, and another $30 million for 2014-2015.

Dr. Alain Beaudet: It involved $15 million recurring, and this loss has been compensated in a recurring manner. It won't be $30 million next year, but $15 million. This lost $15 million will perhaps be compensated. We'll see in the next budget.

Mr. Dany Morin: Thank you very much.

[*English*]

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

Regarding your first question, on October 25 we will be having the first nations and Inuit health branch, and you might be able to save that question for them.

We'll now go to Mr. Brown.

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

It's certainly an exciting topic to study. I do some work with juvenile diabetes and I remember hearing the stats on how new technology can save funds on health care costs, whether it's a blood monitoring system, which they said can save up to $150 million, or now the artificial pancreas that they've been working on in their trials in Hamilton and Waterloo. New technology can fundamentally shift our health system. It's great that we have this time to look at it in this committee.

I remember a few years ago we had an announcement with the neurological charities at the MaRS Centre. We did a tour of it, and I remember thinking what a wonderful enterprise it was. Could you touch on some of the new technology they're working on at the MaRS Centre?

Dr. Alain Beaudet: At the MaRS Centre, we're looking, first of all, at the area of brain research and new technologies in neuroscience.

Canada is doing well across the board. We're one of the top countries in the world in terms of the impact of our publications in that sector; and in certain areas, in pain research, for instance, we're on top. Coming back to specifics, there is no question that the brain is an area where a number of new technologies will be changing things in a major way in the years to come. You're probably referring to new imaging technologies, which have totally changed the way we can diagnose a variety of brain disorders, ranging from MS to brain tumours, and also the way in which we've been able to treat patients with certain disorders such as strokes.

To give you an example, CIHR, along with the Canada Foundation for Innovation, has just commissioned a study looking at the economic impact of a very simple imaging procedure, CT perfusion. We are looking at patients who have suffered a stroke, and looking at the impact of this technology, which gives us a sense of whether we will be effective in using a drug to dissolve the clot or whether we should treat the stroke by another method.

Through this imaging technology, we've been able to improve the outcome of stroke in a large number of patients, and the economic gains are nothing short of spectacular. To give you an idea, the return on investment is ranging between 89% to 130% on that technology alone. I'm talking about the joint investment by CIHR and the CFI. The economic returns in the health system that we're getting from that are tremendous, both in net economic benefits and in the additional quality adjusted life years for Canadian stroke sufferers. Tell me about an investment that will give me an 89% to 130% return in this day and age, and I'll be very happy to learn of it.

● (1205)

Mr. Patrick Brown: It's certainly incredible.

I know we've put a lot of money at the provincial and federal levels into e-health and electronic records. I'm curious about the progress of that. When I go to my family doctor or the local hospital, it's still paper based. I know different provinces are at different stages in digitizing their records. We've made progress in many fields, such as the one you just mentioned and diabetes. It seems inconsistent that with my iPad or my phone I can change the temperature in my home or put my security system on, but the health care system still doesn't have the synchronization of health records.

Dr. Alain Beaudet: Look, you're totally right. We're lagging behind. Let's face it, let's admit it, and let's do something about it. I don't think it is a question of research. I think we have the technology. We're funding a lot of exciting new technologies, for instance, using new apps to access health records or monitor your blood pressure. The difficulty occurs in the lag between these discoveries and their implementation into the health care system. This is still quite a bit of an issue. We definitely have to support more of what we call knowledge translation initiatives to ensure that these discoveries are actually translated into use, because that's the medicine of tomorrow.

The Chair: Thank you, Dr. Beaudet.

Thanks for the question, Mr. Brown.

We'll now go to Mr. Kellway.

Mr. Matthew Kellway (Beaches—East York, NDP): Thank you very much Madam Chair and, through you, thank you to our guests. It's a very interesting discussion today.

In the summer of 2011, I had the opportunity to go to MDA in the Toronto area to see the Canadarm, but also to look at how that technology has been transferred into new surgical devices. I guess one calls these robotic surgical devices. It was quite fascinating.

One of the things that occurred to me, looking at this, was whether or not the kinds of skills required for the human resources in our health care system are changing as a result of some of the innovations and new devices that are occurring.

Dr. Beaudet, I was wondering if you are seeing new technologies changing the human resource requirements in health care. Is there a general direction in which these things are going? Is there a process where this is going back into medical schools, etc., so they know that these new technologies are coming up and skills are changing?

● (1210)

Dr. Alain Beaudet: In fact you are touching upon a very important topic of how we adapt to these new technologies and the human factor in the adaptation.

The type of research we are funding is all about discovering these new technologies and, I believe, not enough about how we cope with those new technologies. We're now getting into more research that is more social research. Also, how do we change practice? How do we get the current health practitioners to change their practice, to change their ways, to accept and adopt these technologies?

This is what we call implementation research, which is not far from behavioural psychology, to tell you the truth. We believe it is important to fund more of that type of research so that we get a better handle on implementing these new technologies, but also sometimes to change very mundane practices, such as the way you disinfect a central line. You know that all the literature says that the way you are doing it is not the right way, but to change the practice into the right way of doing it is difficult because you are dealing with people.

Through our patient-oriented research strategy, again working with the provinces, we are putting a lot of emphasis on supporting implementation research and translational research that will tell us how to better bring these innovations into practice and change practice.

It's absolutely critical, because we are talking about human behaviour, and that is not something that is as easy to change as one might want.

Mr. Matthew Kellway: In this case at MDA, you have a doctor sitting behind a glass panel with a joystick doing surgery as opposed to something else. I found that to be quite fascinating.

Do our other witnesses have any comments on the issue of technology and changing practice?

Mrs. Barbara Sabourin: I would add that it underscores the need for our evaluators to stay up to speed as well on developments. One of the things we try to do is ensure they have access to experts in the various fields. We just won't be able to, nor should we, hire every leading-edge expert for doing the reviews. We want them out there treating patients.

We have a series of advisory committees and on those committees we have experts from the various areas, so that we can get access to the expertise when we need it for review.

Dr. Brian O'Rourke: It's certainly something we look at when we're doing an assessment of a new technology or an existing technology, just to ensure that those human factors he talked about are actually going to make that technology useful to the system. You have hit on a significant issue, which is scopes of practice and who can use these newer technologies and advances.

Some provinces have started to institute changes to their scopes of practice to allow other professions to do things now that used to be only in the domain of a physician, for example.

Mr. Matthew Kellway: Thank you.

Very quickly, Dr. Beaudet, you can paint a very exciting picture not just about the potential for this research to lower health care costs, but also about the kind of economic multipliers that come out of this.

The question is whether we are maximizing our ability to do that and, if not, how we take full advantage of the development of new technologies.

Dr. Alain Beaudet: I think my colleague, Brian, could also tackle this one. We're obviously trying to maximize it. Do we maximize it now? No. The current statistics tell us that between 25% and 30% of medical acts or lab tests being done in the current health system are, in fact, useless or even harmful. To maximize this we need to stop doing a certain number of things. Bringing in new technologies is great—

The Chair: Dr. Beaudet, I'm sorry. We've gone over time.

Dr. Alain Beaudet: Sorry.

The Chair: We'll go to Mr. Strahl, please.

Mr. Mark Strahl (Chilliwack—Fraser Canyon, CPC): I thank the witnesses for their presentations.

We've mentioned mental health, and it seems to be something that touches on every study we've done so far. Whether it's chronic or other diseases, there always seems to be that mental health component. I think it's a good thing we're discussing it as an integral part of what we do here.

I was at the Mental Health Commission's fifth anniversary national mental health awards this week. There were a number of exciting social program innovations that were celebrated there.

Are there technological innovations taking place with a focus on mental health? If there are examples of that, could you share those with the committee?

● (1215)

Dr. Alain Beaudet: Absolutely there are. For one thing, we are starting to better understand, through genetics actually, certain genetic predispositions in mental health. Through epigenetics, we're starting to understand how the environment, external events, will act on your genome and modify chemically your DNA. By environment I don't mean only the physical environment or the toxins you may be exposed to; I'm talking about the psychological environment, such as maternal love, for instance. These modifications will modify the expression of your genes. That's absolutely critical for mental health. We're starting to find out what is in your genetic makeup, what is partly genetic but also partly acquired through the environmental experiences, which is absolutely critical as well, and things that are due to development versus things that are chemical imbalances. Obviously, modifying chemical imbalances is easier than reverting to what has been, often due to genetic causes, a major problem in development and the establishment of the synaptic connections in the brain. We're starting to better understand that. Are we ready to cure all these disorders? No, but we are making enormous progress.

It is an area where we have to invest in basic research, because until we understand how the brain works, we won't be able to truly develop treatments that are cures. We'll be able to play with symptoms, but we won't be able to cure things. It's the last frontier. It's a complex organ, but it is amazing to see the speed at which we've made progress in that area. There's really hope for patients with mental health issues.

You have to realize that a few years back we wouldn't even have recognized a mental health issue. It's something you wouldn't talk about because of the stigma. Now, in many areas, mental health is recognized for what it is. It's not worse to have a mental health problem than to have diabetes, and often there are similarities. You can have a dysfunctional enzyme. You can have a hormone that's not secreted properly. You can have a neurotransmitter that has either overproduced or has not produced enough. We're starting to get a handle on this. It's complicated.

Mr. Mark Strahl: Dr. O'Rourke.

Dr. Brian O'Rourke: I would echo a lot of those comments as well. One of our priorities is in mental health. We do a fair bit of work and review not just of drugs but of newer types of therapy, such as psychological therapies and other social therapies that are helping to both prevent and treat mental health illnesses.

It was wonderful that the Mental Health Commission came out with Canada's first national mental health strategy last year. We're starting to learn from that as well. We've also done some work with the Canadian Psychiatric Association to ensure that the research work we do or the recommendations we put out are matched with some of the thoughts they have moving forward .

Mr. Mark Strahl: Thank you.

The Chair: Thank you, Mr. Strahl.

That was fascinating. I just want to make one comment, if I may.

Our committee had the RCMP for the first time. They had never been to the health committee before. Do you remember? You were on, Ms. Davies, at the time, I think.

It was absolutely amazing to hear about the mental health issues they had based on environment. They didn't start out that way.

That was a very fascinating question and a very fascinating answer. Thank you.

Welcome to our committee, Mr. Nantel, and I hope you enjoyed our nice hot lunch today.

● (1220)

Mr. Pierre Nantel (Longueuil—Pierre-Boucher, NDP): Yes, it's much better than the other committees'.

Voices: Oh, oh!

The Chair: Good. You should sub on this committee. We treat you better.

Mr. Pierre Nantel: I guess the health committee has no May Wests or steaks.

[*Translation*]

Thank you, Madam Chair.

I would like to thank the witnesses for their presentations this morning.

I am replacing Ms. Sellah. I am not a specialist, but I was fascinated by your passion and all these technological advances in the health field.

Dr. Beaudet, what I particularly appreciated—and this is probably quite related to your mandate—were the explanations concerning your work. It is very concrete and you speak often about the patient.

In fact, the main question that people who aren't familiar with the subject may ask when they hear this conversation is that if we are truly talking about the patient, the goal is that every Canadian's troubles be relieved. You did a good job of summarizing the fact that it would be very productive to resolve back problems and depression in general.

I would like to ask you, Ms. Sabourin, how long have you been working in your directorate?

[*English*]

Mrs. Barbara Sabourin: I've been working in my department since 1980.

Mr. Pierre Nantel: That's amazing experience.

[*Translation*]

I very much appreciate your great commitment.

How do you intend to deal with the budget cuts that are being imposed on you? Surely, you will have to cut back on some activities. How are you going to do that?

[*English*]

Mrs. Barbara Sabourin: My group is responsible for the evaluation of drugs and medical devices. Recently, we changed the cost recovery regime, which is the regime that really allows the manufacturers to provide money for our services in reviewing and evaluating new products. That was very helpful in allowing us to get new resources. We're now able to meet our targets and our timelines for all of our product lines, with the exception of generic drugs, on which we're working very hard to continue to make progress.

In terms of the budget reductions, we were able, to a large extent, to protect our scientific resources. We feel they're essential and provide a real high-priority service for Canadians, and so we're fortunate to be able to protect those.

We did not escape untouched, and we do have some areas where we've made some changes. One example would be the consolidation of three groups, all of which were responsible basically for setting up meetings with external stakeholders. We were able to consolidate them into one area. That's an example of an initiative we've been able to undertake to save a few dollars. Similarly, across our branch, we looked at resources around internal communications. We've done some streamlining in that area. Also on the policy side, we've been able to identify a way of doing business that's slightly different and allows us to make some savings in that area.

I think we need to always stay relevant to the needs of Canadians and the needs of the health system, and as the world changes around us, we need to change as well. As a Canadian, I expect that from my government, and I expect that from my group as well.

[*Translation*]

Mr. Pierre Nantel: Ms. Sabourin, you mention that the world is changing and that we need to change with it. I'm sure you are right. There have been technological advances that we could not have imagined in the past. We all have a BlackBerry. I hope everyone is listening to you, even if we are working at the same time.

There is certainly a savings in time, particularly when it comes to transport. An average citizen will surely find that this is strange because health needs are increasing. Of course, we all want to be more efficient, but I am convinced—and I think you are very brave to appear here today—that you are in a very challenging situation. You are being asked to do more with less. That is quite something. I am aware that there are savings to be made and that there always will be, for example, with respect to office supplies, compared with 10 years ago. We can also stop buying cartridges.

[*English*]

The Chair: Your time is running out. Do you have a question?

Mr. Pierre Nantel: If it's running out, that's fine. I'm done.

Thank you.

The Chair: You've got 15 seconds.

Mrs. Barbara Sabourin: We are trying to move into an electronic environment in the review process, and that will save us money, such as on storage costs for paper. A drug submission is quite enormous, so to remove those storage costs is substantial. It also saves the industry. It fits into the idea of reducing the burden.

● (1225)

The Chair: Thank you both very much.

We'll now go to Ms. Block.

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

I would also like to welcome our witnesses here today. It's been very informative, and I've appreciated the questions that my colleagues have asked.

Dr. Beaudet, I found the series of examples that you gave in your opening remarks about the different technologies that are being developed, like using a smart phone instead of a stethoscope, pretty incredible.

I had an opportunity to tour the simulation learning centre at the Saskatchewan Institute of Applied Science and Technology campus in Saskatoon. The simulation centre includes treatment and assessment rooms, an apartment with cutaway walls for observation, a birthing unit, control rooms, and debriefing rooms. Patients are computerized mannequins. They are programmed to react as students administer CPR and drug therapies, intubate and ventilate, and insert IVs. It was incredible to see what can be done with technology in terms of training our health professionals.

Would you be able to tell me the areas of research that CIHR has invested in to support innovation by cutting red tape without compromising the safety of Canadians?

Dr. Alain Beaudet: I think, quite frankly, that CIHR doesn't have a lot of red tape. Our operating budget is between 5% and 6% of our total budget, which is among the thinnest operating budgets in the world for an agency of our type. I don't think there's a lot of red tape.

How do we manage that? We have the entire world research community working for us. All of the proposals we receive are adjudicated by peer review, i.e. they are reviewed by experts, mainly from Canada of course, but often they are also international experts. We don't always have the necessary expertise in Canada, or if it's a small base and we don't want to have conflicts of interest, we go outside.

It's marvellous to see how internationally we have a positive response to review the applications. It's a narrow door. We're funding not even 20% of the proposals that are submitted to us for review and funding.

It is highly competitive, but such is science. Science is highly competitive. We fund only the very best. I can assure you that your tax dollars are really well invested with us.

Mrs. Kelly Block: Thank you.

How is my time?

The Chair: You've got two minutes.

Mrs. Kelly Block: I'm glad you mentioned that our tax dollars are very well invested.

How are these investments in emerging technologies aiding in Canada's economic recovery and helping to create wealth and jobs?

Dr. Alain Beaudet: I gave a partial answer to that question to your colleague. It's aiding through the grants directly because a lot of people are hired on the grants. That's certainly an important economic investment. As I said, some of these discoveries will lead to patents. Patents will lead to start-ups, and of course the start-up will attract investments.

In fact, just last year we had foreign investments in health research for over $800 million, and private sector investment in health research for $1.5 billion. That is creating jobs. Then there's the advantage of having a healthy workforce in the economy and a workforce that remains healthy later.

Mrs. Kelly Block: Thank you.

The Chair: Dr. O'Rourke, you wanted to make a comment as well.

Mrs. Block, is that okay?

Mrs. Kelly Block: Sure.

Dr. Brian O'Rourke: If I may, in speaking to that first question, and probably a little to the second question, Dr. Beaudet mentioned earlier about personalized medicine and the work they're doing with Genome Canada. A great innovation is that they've started to recognize that it's not just about producing the new technology; it's about having somebody actually wanting to use it and pay for it.

With regard to these demonstration projects that he talked about, I met about two weeks ago with the CEO of Genome Canada and Genome B.C. These are technologies that we might not see for four or five years, yet they're already starting to have the dialogue with us about how they can make these products useful, from a payer's perspective.

I think that's an interesting approach, rather than just introducing this and making us determine whether we want to pay for it at the time of its introduction.

● (1230)

Mrs. Kelly Block: Thank you.

The Chair: Thank you very much.

We'll now go to Mr. Menegakis.

Mr. Costas Menegakis (Richmond Hill, CPC): Thank you, Madam Chair. I also want to extend a warm welcome to our witnesses for appearing before us today and for their very informative testimony.

I'd like to start with you, Dr. Beaudet, if I may. Many researchers and medical professionals would argue that nanomedicine is the way of the future and researchers have only begun to scratch the surface. I can tell you that our government has made significant investments since we formed government, a total of $121.5 million since 2006.

Can you tell us how these investments have helped our health care system become more innovative?

Dr. Alain Beaudet: Certainly.

It is still early days and there's no question these investments have brought Canada to the forefront of nanomedicine and nanotechnology as applied to health. It is still, in many cases, very experimental, but we see a huge promise for new ways of delivering drugs, for instance, in delivering drugs specifically to tumours through the administration of these drugs via some nanoparticles that will be able to directly target the tumour and not disseminate the drug throughout the body.

There's a lot that we've been funding. I can say that as we develop the field more, more investigators are trained, and more young investigators are coming back from post-doctoral studies abroad and starting to do research in that field.

We see an increasing demand for funding in that area.

Mr. Costas Menegakis: How about the personalized medicine signature initiative? How has this made research communities more efficient, more effective?

Dr. Alain Beaudet: I think we partially answered that question. There are several aspects to the signature initiative. It's the initiative I talked about on personalized medicine that is co-funded with Genome Canada.

I must add, talking about leveraging—I had a question on leveraging—that we're investing at the federal level $67.5 million. That's leveraged 50% by the provinces and the private sector. It's enormous. We're talking about doubling our investment to $135 million.

As you heard, what we're trying to do with this initiative is not only foster basic research to help us develop some genetic profiles for new diseases and a variety of disorders, but also to start thinking about the ethical issues linked with personalized medicine, linked with the cost of personalized medicine, and about how we're going to deal with that. We are looking at how are we going to ensure that what we're gaining in terms of quality of care is counterbalanced by affordability of care as well.

Mr. Costas Menegakis: In your opinion, do you think investments in research of this kind would help our government in the long run to improve the way it approves the drugs?

Dr. Alain Beaudet: I'm totally convinced it will.

Mr. Costas Menegakis: Thank you.

The Chair: Mrs. Sabourin, do you want to make a comment as well?

Mrs. Barbara Sabourin: Yes, if I could. I'd like to point out that for both personalized medicine or pharmacogenomics and also for nanotechnology, these are areas that have the potential to change significantly the delivery of health care.

We've had a guidance document out on pharmacogenomics since 2008. I believe it's in the list of innovations that we provided. The intent of that is to provide information to manufacturers on the kind of evidence we would expect them to collect so that they can demonstrate that their products are safe and effective.

Nanotechnology is a very interesting file. What we've done there is to have a department-wide working definition of nanotechnology. When these kinds of technologies come along, we want to make sure that our regulatory system is adequate to cope with the technology. We are actively monitoring products of the developments so that we can make sure that is the case and that we're set up well to be proactive if there is a need to add any new requirements.

● (1235)

Mr. Costas Menegakis: How's my time, Madam Chair?

The Chair: It's very short, about 30 seconds.

Mr. Costas Menegakis: Okay.

Madam Sabourin, we often hear of medications, processes, some equipment and tools that are approved in other countries, but are not approved for use in Canada and vice-versa. Can you share with us how we share information with other friendly trading partners around the world?

Mrs. Barbara Sabourin: Thank you for that question.

It's important to note that Health Canada, and specifically our branch, participates in many international initiatives with other regulators around the world. An example I mentioned was the International Conference on Harmonisation to set standards for the requirements for drugs. There's a similar group on the device side called the International Medical Device Regulators Forum. We also have arrangements with a variety of countries where we can share confidential information. As the industries are more global now, it's really important for us to do that. We have mechanisms to share the information, especially around safety issues with other jurisdictions.

The Chair: Thank you very much.

Ms. Duncan, you're up next.

Ms. Kirsty Duncan: A recent study from the JAMA identified safety concerns about the fast-tracking of three drugs. One was Gilenya. I'm wondering if you could comment on that, Mrs. Sabourin.

Mrs. Barbara Sabourin: I think the article you're referring to was in the CMAJ. Is that correct?

Ms. Kirsty Duncan: No, I think it's the JAMA.

Mrs. Barbara Sabourin: I'm not familiar with that article.

What I can tell you is that the fast-tracking process, or the priority review process, is a way for us to put the products that have the potential to have a really significant impact on the lives of Canadians at the front of the queue. I want to make sure the committee is aware, however, that we go through the same review process, and we ensure that the data is there to support the claims for those products.

It's not surprising to us in one way to think that the products that have the potential to really change the lives of Canadians with severe life-threatening diseases would also carry some risk. The diseases themselves carry great risks. It is always the case that manufacturers continue developing their products even after licensing and approval. It's not unusual for us to have more than 100 interactions with companies during the life of their product on the market. Even with these therapies, we would expect that companies continue to develop information, provide that to us, and ensure that the appropriate risk and benefits are really provided to Canadians and to the prescribing health care professionals.

Ms. Kirsty Duncan: Are drugs for MS and certain cancers, for example, held to a lower safety standard when they're fast-tracked?

Mrs. Barbara Sabourin: The priority review process in Canada —I think it's called fast-tracking in the United States, but ours is priority review—doesn't change the standards. Those standards are the same whether a drug is fast-tracked or not. What it does is it responds to a concern that was voiced by Canadians who were very ill when the HIV and AIDS crisis started. That was to find a way to provide medications to them more quickly. They voiced very clearly that they were willing to accept more risk for that. The standards are exactly the same.

Ms. Kirsty Duncan: Well, if we look at Tysabri, we fast-tracked a drug knowing that it caused a fatal brain infection. I see a real dichotomy between the way CCSVI has been treated and the way Tysabri has been treated. I have spoken to the researcher who created the molecule. If we go back to the 1990s, there were warnings that there could be infections. If you look at the adverse drug reactions on the Health Canada website, you will see spontaneous abortion and necrotizing fasciitis. I see a real dichotomy.

You explained there are no federal regulations for off-label use for a medical device. I'm going to look at stents. You said they fall under provincial jurisdiction. The question I have is why the federal government intervened for CCSVI.

● (1240)

Mrs. Barbara Sabourin: CCSVI is a medical procedure. My group in my branch is responsible for approving different products. If a product was to be used and manufacturers wanted to come forward and advertise their product for use in a procedure such as CCSVI, they would have to come through us. To date, to my knowledge, there hasn't been such a claim made for any device. This is really about physicians and surgeons trying something, trying to innovate, trying to fix a problem they notice in their patients. That kind of thing is under the practice of medicine.

In terms of the federal intervention, I think there was a lot of work done across Canada and nationally to see how to handle this. I'm sorry I'm not able to speak to the specifics of that. That's not a regulatory intervention.

Ms. Kirsty Duncan: That's fair enough. I'm going to come back to something I mentioned. I'm hoping you will be able to provide information to me, and I would ask if it could be sent, regarding the Gilenya reviews, since I was promised a briefing, which never happened.

I don't know if I said it earlier. When I pushed why I couldn't have my order paper question in the briefing, I was told they did not have the resources from the Minister of Health's office because of "government cuts".

The Chair: Dr. Duncan, you're over the time. I know you would like to go on and on, but I have to cut you off.

Ms. Kirsty Duncan: Thank you, Madam Chair.

The Chair: We'll go into another round of five minutes because we have some time to do that.

We're going to start with Mr. Kellway.

Mr. Matthew Kellway: Thank you, Madam Chair. I too like to go on and on, so I appreciate this opportunity.

We were in the middle of a question before—

The Chair: You can only go on for five minutes, though, Mr. Kellway.

Mr. Matthew Kellway: I'm sure you'll let me know when that's up.

We were in the middle of a question about maximizing the potential of research in the health care field.

Dr. Beaudet, you in particular had set out a very compelling argument about lowering health care costs and boosting the economy through this kind of investment. It would be a shame, obviously, to leave the potential of this kind of investment on the table, so to speak. I think you were in the midst of responding that about 25% to 30% of tests, etc., were in fact either useless or harmful.

Dr. Alain Beaudet: There are really two aspects to this. First of all, we not only have to introduce these new emerging technologies when they work— and they've been properly assessed and shown to work significantly and to be cost-effective—but we also have to develop a culture whereby we stop doing things that are not working. The problem with that is we need to better evaluate what works and what doesn't work. We tend to focus clinical research on the evaluation of new technologies, or new drugs, or new practices, but I think we also have to support clinical research that's evaluating what we're currently doing so that we can stop doing what's not efficient, what's not cost-effective, and what doesn't work.

In our patient-oriented research strategy, we really focus on, as I said, implementation and intervention research, on the one hand, ensuring that we change the behaviour and we modify practice. We also want to increase our capacity to do clinical research and evaluate what we are currently doing, what we call cost-effectiveness research, which is what works best and what's most cost-effective. That, I believe, is certainly the type of research that provinces are very interested in and are willing to invest in with us, because they see the direct benefit. I think there's a direct benefit for patients as well. It's a culture of evaluation that we have to develop.

The Chair: Thank you, Dr. Beaudet. I think Dr. O'Rourke wanted —

Dr. Brian O'Rourke: Yes, I'd love to speak to this as well. There's a new field within the type of work we do, and it's being referred to globally as disinvestment in health technologies. That's exactly what he was speaking to here. There are so many things we do in the health care system that were introduced without a good evidentiary platform for them.

Ontario and Alberta have some really wonderful initiatives in place right now. Ontario has created an appropriateness committee. They're looking very closely at a lot of these diagnostic tests, diagnostic imaging, and some surgical procedures to stop doing things where there really is no health benefit. That, hopefully, will create space for introducing technologies that do provide some health benefits.

● (1245)

Mr. Matthew Kellway: Are there reliable authoritative estimates on that kind of waste in the health care system in terms of dollars?

Dr. Alain Beaudet: We don't have them in Canada, but I recommend that you refer to a report of the Institute of Medicine in the U.S., which was published three weeks ago. It produced a very important and interesting analysis of the waste in the U.S. health care system. Although we have to be careful in not equating things, as our systems are very different, I think there are a number of things that you will find are akin to what's happening here.

Mr. Matthew Kellway: With respect to your two organizations, what's required to maximize or at least to enable more research into these issues?

Dr. Alain Beaudet: There are two things.

First is more money, as always. Let's face it. We're talking about having to support that research. I think it's great to see that the provinces are willing to invest with us in this area, that they recognize the importance of a better evaluation, and a constant evaluation, of not only new treatments but also current treatments and practices.

Second is the people to do that type of research. We don't have enough clinical investigators. Their time is not protected. Their salary is not supported. We don't have enough implementation researchers. We don't have enough health economists. We don't have enough biostatisticians in this country. We have to train these people. This is a type of researcher that we haven't trained enough of.

That's what we're pushing for with our partners in the universities, in the academic health centres.

Mr. Matthew Kellway: Dr. O'Rourke.

Dr. Brian O'Rourke: Those in fact are the types of people who work in our agency and who do the work in our business. I would agree 100% that there is a limited capacity of people with that expertise.

I would say as well that what is needed is better collaboration. These are tough decisions. When you're going to take something away from either the patients or the clinicians using it, it's pretty hard to do. You have to engage very carefully with the clinical community, with the patient groups.

An interesting campaign that started in the United States is called “Choosing Wisely”. They went to a number of clinical associations and asked them to come up with a list of five things they should stop doing.

Something like that would be very beneficial from a Canadian perspective, to Canadianize that sort of an approach.

Mr. Matthew Kellway: Can you name those things? Do you know them off by heart?

Dr. Brian O'Rourke: No, I don't have all of those, but I certainly could provide you with a link to the website.

Mr. Matthew Kellway: That would be great.

Dr. Brian O'Rourke: They work very closely as well with patient groups and consumer groups to ensure that the information is spread widely as well.

Mr. Matthew Kellway: Dr. Beaudet, is it the case that the provinces have money on the table and they're waiting for federal matching funds? Is that the circumstance you've described?

Dr. Alain Beaudet: This is correct. The patient-oriented research strategy is really a joint initiative. It brings together all the stakeholders. We're all facing the same issues. It brings together the provinces, the territories, the federal government, but also stakeholders from the private sector and from the charities sector, to chip in jointly to invest in the type of research that I've been talking about, the patient-oriented research.

The Chair: Yes.

I'm just going to pick up on what Mr. Kellway said. Some very good questions came from him today, in my opinion, for what it's worth. My side has allowed me the time to ask questions, so they've given me this question.

Picking up on the funds, I heard you say that there's a need for more funds for researchers and all those things. We hear that over and over again. There's never enough funds. Innovation is intended to increase the productivity and efficiency of health care delivery and research, and in 2007 mobilizing science and technology to Canada's advantage was a strategy that was put forth by our government.

When we're looking at the aging demographic, when we're picking up on some of Mr. Kellway's questions, when we're looking at what actually is needed out there, could either one of you comment on what roles the private sector, the academic institutions and health care professionals play in the science and technology strategy in a collaborative manner?

You were saying that collaborative interaction is integral to this whole process.

Would anybody like to comment on that?

● (1250)

Dr. Alain Beaudet: First of all, I would comment on funding. We're spending $170 billion a year on health care in this country. CIHR's budget is $1 billion.

Now, just think of what successful company invests that percentage of their budget in R and D. That's just a question. We want the system to work. We have to invest in innovation. That's how we're going to increase the efficiency, the quality, and the accessibility.

That being said, I think it's not only for the public sector to do so. More and more we realize, particularly through participation with the provinces, because it is their constitutional responsibility to provide care, that by collaborating with the provinces we gain not only financial investments—I'd even say that it's not the most important thing—but we also get, by partnering with them, an involvement. We get a true involvement, early on into the research agenda, into why integrating research and care is absolutely critical to the future of the quality of care in this country.

The partnership is more than just money. The partnership is getting involved.

The Chair: Yes, I know that very specifically, though I asked about the private sector and the professionals, because later on in our innovative study we're going to have doctors come in who have done amazing things in terms of collaborating with other doctors in making a one-stop shop and servicing the community.They have patient buy-in as well for healthy living. That's what I was getting at, because we have an aging demographic and there is not enough money in the world to address the health care issues.

I wondered if you had any new ideas.

Mr. O'Rourke.

Dr. Brian O'Rourke: There's one program that has started in Ontario, through MaRS actually, and it's referred to as EXCITE. I can't recall what each of the individual letters mean in that acronym, but it's a different way of looking at technology. It's getting the users of the technology, the clinicians, the patients, to work with industry upstream. Rather than an industry coming forward and saying they have a technology that's very helpful and we should buy it, it's the clinicians saying what things would be very helpful to them, and what the gaps are in the system.

If you developed a technology like that, we'd be very interested in it.

The Chair: It's somewhat like what we heard earlier from another panel on a different day. They were engaging health care professionals and asking how to make our hospitals more efficient, where they should put the supplies, what is needed or not needed to cut down on the waste. That was basically what they were saying.

Dr. Alain Beaudet: It's true of the research agenda. Let's face it. The research agenda to a large extent is one that has been a researcher agenda. I think we have to bring in the decision-makers, the policy-makers, the patients, and involve them in defining the research agenda.

The Chair: Thank you so much for allowing me to ask a question, and thank you for your very insightful comments.

Ms. Davies, you're next.

Ms. Libby Davies: I'd like to follow up again on the health human resources that my colleague, Matt, and I both raised today. Again, my question is, what kind of overview is there in terms of the gaps in the system?

Everybody talks about innovation, cost savings, efficiencies, but a massive transition takes place as these new innovations come into the system. It has an impact on equity across the country, but also on human health resources. In terms of the research that's done, are there any studies that track what happens with health human resources? What happens when we get a sudden surge? You talked about some of the positions that are needed simply in the patient-oriented strategy research. Who's keeping track of that overall so that we have a system that can actually be responsive, one in which we're not always trying madly to catch up two years later, or something like that?

Dr. Alain Beaudet: It's an excellent and also a difficult question because we haven't done enough. One of the reasons we haven't done enough is that it's expensive to do what you're talking about.

There's an excellent report from the Canadian Academy of Health Sciences on measuring impacts of health research at every level, starting with the basic outcomes, the papers that are published, to the more complex impact on longevity, on morbidity, on improvements and outcomes in various diseases.

What we're finding at the CIHR is that we have to do better to track these impacts. We realize there's a limit to the money we can invest in producing metrics, so we have to choose the metrics very carefully. I think that as we are developing our new programs, we're being very careful to ensure that each specific objective of the program is matched with the very specific metric. The researcher knows what he or she will be evaluated on because they are aware of what the metric is. They are then aware that the metric is absolutely linked to the objective of the program. Therefore, if they don't meet the objective, they won't meet the metric.

It is expensive and time-consuming, and is a change in culture. It means that for every metric you need a baseline. When we're talking about health outcomes, the baselines often become a problem, and measuring outcomes across the country is a challenge. Don't forget that we're not talking about one health care system; we're talking about 13 health care systems.

● (1255)

Ms. Libby Davies: In fact, within that, we're talking about many other jurisdictions in terms of local health authorities. There isn't any kind of national baseline, then. It does not exist.

Dr. Alain Beaudet: Not to my knowledge.

Ms. Libby Davies: It seems to me that in the 2004 health accord, this was an area that was identified with respect to improvement in strategies around human health resources.

Do you think that any progress has been made since that agreement was put forward in 2004?

Dr. Alain Beaudet: I think there's definitely been a lot of progress made. Organizations such as CIHI, for instance, have really pushed that to an extent that didn't exist at the time of the accord. Can we do better? Can we go further? I think we could, we can, and we ought to.

Ms. Libby Davies: Do I have more time?

The Chair: You do.

Ms. Libby Davies: Just to follow that up, I know we'll be hearing about electronic health records, but it seems to me that it's one good example where there can be a huge benefit, but where negatives also exist if you have multiple systems that come into play.

Under the Canada Health Act, people are meant to be able to move across the country and access health care, but if there isn't some kind of uniformity, and there are multiple jurisdictions, I'm curious to know whether or not anybody is monitoring that. Is there any work under way on that front?

Dr. Alain Beaudet: Well, that's what Infoway is doing, really, but the complexity of our jurisdiction in health care explains why we're not Denmark.

Ms. Libby Davies: Why we're not what?

Dr. Alain Beaudet: We're not Denmark. Denmark has full implementation of health records.

Ms. Libby Davies: What's preventing us from doing that, then?

Dr. Alain Beaudet: I'll let you answer that one.

Dr. Brian O'Rourke: I wish I had an answer.

I think it speaks a lot to the way we deliver health care in this system, with 13 provinces and 6 federal programs for it. That's my personal opinion.

Dr. Alain Beaudet: I would agree with that.

Ms. Libby Davies: Supposedly we do have these agreements, right? We're told that these agreements exist. I guess we'll explore this more to know what the actual obstructions are that prevent us from doing this, because it's been talked about for a very long time.

Dr. Alain Beaudet: But we've made—

The Chair: We've run out of time now, so—

Dr. Alain Beaudet: —we've made progress, in all fairness. There are some remarkable programs that exist now in more specific domains.

The Chair: Yes.

Thank you very much.

We are very excited to have you here today. This has been a wonderful conversation. Thank you for all your insightful comments.

With that, committee, thank you for all your questions.

The meeting is adjourned.

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