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# Standing Committee on Industry, Science and Technology

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**Tuesday, February 12, 2008**

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**Chair**

**Mr. James Rajotte**

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Tuesday, February 12, 2008

•(1115)

[English]

**The Chair (Mr. James Rajotte (Edmonton—Leduc, CPC)):** We'll call the 19th meeting of the Standing Committee on Industry, Science and Technology to order.

I apologize for the late start, but the previous committee did have some business to finish prior to our meeting.

We have with us today five associations. We are continuing our study of Canada's service sector. Our witnesses are here for up to two hours.

Our first witness is from the Canadian Association of University Teachers, the executive director, Mr. James Turk. We also have, from the Canadian Chiropractic Association, Richard Gehrke, president, as well as the director of government and interprofessional relations, Mr. John Tucker. From the Canadian Dental Association, we have the president, Mr. Darryl Smith, and the director of corporate and government relations, Mr. Andrew Jones. Here today from the Canadian Healthcare Association is the CEO, Ms. Pamela Fralick, as well as Denise Desautels, the director of policy and communications. Lastly, representing the Réseau des ingénieurs du Québec, we have Mr. Etienne Couture, the president.

We will start with the Canadian Association of University Teachers. I will ask you to keep your opening statements to five minutes maximum. We will go across the table, and then we'll start with questions from members.

Mr. Turk, we'll start with you.

**Mr. James Turk (Executive Director, Canadian Association of University Teachers):** Thank you, Chair.

The Canadian Association of University Teachers welcomes this opportunity to present its views to the committee. We represent more than 57,000 academic staff, at more than a hundred universities and colleges in all provinces of the country.

I'm sure you'll all agree that teaching, research, and the community service work that our members perform is critical to the social, cultural, and economic development of Canada. There's virtually no politician in the country—and in this room, I assume—whatever matter their political stripe, who hasn't talked about the importance of post-secondary education for the future of the country. Yet governments all too often ignore the serious challenges faced by post-secondary education.

I want to address three challenges in my presentation today. The first is the crisis in human resources. As you know, many of our

members who were hired during the great expansion of the 1960s and 1970s are retiring. Close to 45% of all full-time university teachers are 50 years of age or over. As academic staff retire, they are increasingly being replaced by part-time and contract faculty. At some universities, close to half of the undergraduate courses are taught by non-tenure-track contract faculty. These positions are poorly paid, have few or no benefits, no job security, no academic freedom, and don't even have access to proper offices or support for doing research and scholarship. This has serious implications, not only for the contract academic staff themselves, but also for their students, their full-time colleagues, their institutions, and their communities.

The human resources crisis is intimately linked to the second challenge that I would like to discuss, the ongoing federal underfunding of post-secondary education. Even with the recent increase in the Canada social transfer, federal cash transfers for post-secondary education are still more than \$1.2 billion short of what would be needed just to restore funding to the 1992-1993 levels, adjusting for inflation and population growth.

If you feel, as we do, that the federal government should be contributing or investing one-half of 1% of gross domestic product—that is, half a penny for every dollar earned in the country—in post-secondary education, as was done in the late-1970s and early-1980s, then the shortfall is closer to \$4 billion.

The impact of underfunding shows up in the human resources crisis, but also in rapidly rising tuition fees and student debt, deteriorating infrastructure, and diminished library holdings, all of which threaten the accessibility and quality of our post-secondary institutions.

The federal government has played the decisive role in funding post-secondary education since the 1950s, when inconsistent and low levels of provincial funding for post-secondary education made it clear there had to be a federal as well as a provincial role. Today, the federal government can and must do more to provide adequate funding to the provinces in an accountable and transparent manner.

The final challenge I want to mention is with regard to research. The federal government has substantially increased research funding in recent years. Much of this, however, has come with an emphasis on applied research that will pay off commercially. The buzzwords have been innovation and commercialization, which, in this lexicon, are synonyms. Basic research, or research whose primary objective is the advancement of knowledge and the understanding of how things work—with no necessary emphasis on practical or commercial gain—is devalued. Yet developments that have proven important and commercially significant typically come from basic research. By devaluing it, we are killing the goose that lays the golden egg.

As Canada's Nobel Laureate, John Polanyi, reminded us several years ago, “When we tie discovery research”—and he was referring to basic research—“too closely to development, we force our university scientists to run while hobbled in a three-legged race, one leg tied too nearly to industry. This is a mistake we are now making.”

One of Canada's foremost business leaders, Mike Lazaridis, the founder, president, and co-CEO of Research in Motion, put it more pointedly:

I keep hearing that there is something fundamentally wrong with the university research system in Canada. Some very influential people believe that we are not getting the proper “bang for the buck” from our investment in university R&D.... A particularly dangerous version of this thinking holds that professors should patent more.... I have some experience with patenting, and I believe that this is wrong-headed....

Lazaridis continued by saying that the priority should be the funding of basic research:

The number one reason to fund basic research well and with vision is to attract the very best researchers from around the world. Once here, they can prepare Canada's next generations of graduates, masters, PhDs and post-doctorates, including the finest foreign students. All else flows from this.

• (1120)

A narrow focus on commercialization ignores that the most innovative and valuable research to date normally began with no anticipated commercial outcome, but rather was guided by what knowledgeable scientists thought would be intellectually important to pursue. We encourage the government to increase the amounts of unrestricted grants available through federal granting agencies. This will help protect the integrity and independence of academic research and ensure that proposals are assessed first and foremost on their scholarly merit, the surest way to protect the public interest.

I look forward to answering your questions.

**The Chair:** Thank you very much, Mr. Turk.

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

**Mr. Richard Gehrke (President, Canadian Chiropractic Association):** I thank you all on behalf of the Canadian Chiropractic Association, which represents our 6,000 members Canada-wide, for this opportunity to offer our rationale and practical application of how we can help decrease cost to the Canadian health sector and reduce patient load on general and family practitioners as well as neuro and orthopedic specialists.

Our distributed document touches on issues challenging our increased utilization and on studies rationalizing our cost-effectiveness and efficiencies at treating neuro-musculoskeletal conditions. Now, that's a bit of a mouthful, but in plain language we speak of

back pain, neck pain, and headache. Further detail on any of the materials referenced is certainly available upon request.

I'd like to elaborate on two or three items mentioned in our document, as this may lay the foundation for further discussion.

I'm an Alberta practitioner; thus, I am more familiar with Alberta models of care. The simplest, most straightforward example of chiropractors' cost-efficiencies and treatment effectiveness comes from our Workers' Compensation Board model. In short, chiropractic care gets workers back on the job more quickly and more cost-efficiently than any other health care provider, period. Couple this with the Health Quality Council of Alberta survey last year, which related patient satisfaction to chiropractic care at 90%, second only to pharmacists' services.

Workers' Compensation Board experiences in other provinces emulate the Alberta experience; thus it's a common example across the country.

An example not so common, again from Alberta, is the national spine care initiative, in conjunction with the University of Calgary, which sees a team of chiropractic, physiotherapy, and psychiatry triaging for neurosurgeons. Simply put, the quicker back pain—and any health care consideration, for that matter—is diagnosed and directed to the most appropriate health care giver, the better the outcome, be that direction to conservative care, namely chiropractic or physiotherapy or strengthening and work hardening processes, or direction to surgery. It's a matter of the right treatment at the right time for the right reason.

This kind of model, using the low-tech, comparatively low-cost diagnostic skills of chiropractors, is of significant cost-benefit to the system. Chiropractors are highly trained health care providers with the ability to diagnose. Thus, not only are we effective at treating, but we're vastly underutilized at directing traffic.

This is slowly changing, in fairness, and just recently—this past month as a matter of fact—one of our chiropractic researchers with a research chair at Mount Sinai Hospital was indeed given treatment privileges at this hospital, but patients pay personally for those services. That stated, we run into barriers. The Canada Health Act sees that all dollars go to the medical model, and it should be no surprise to anyone around this table that the medical model needs help and not just in terms of more doctors or more dollars. Utilization of a host of low-tech highly skilled health care givers such as nurse practitioners, physiotherapists, psychiatrists, psychologists, and chiropractic doctors with diagnostic capabilities could be more fully utilized, to economic and manpower advantage to our health care sector.

Thus, the point we wish to leave with you today, and discuss with you, is that we could decrease cost to Canada's health sector by reducing the physical load on medical colleagues by taking on a sizeable portion of their practices that deal with musculoskeletal conditions, roughly 30% of their workload. Finally, we feel that barriers should be reduced, preferably removed, for those population bases, namely low socio-economic status folks, Department of National Defence members, and first nations people, who find difficulty if not absolute downright impossibility accessing chiropractic care.

I thank you.

• (1125)

**The Chair:** Thank you very much, Mr. Gehrke.

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

**Dr. Darryl Smith (President, Canadian Dental Association):** Good morning. Thank you for inviting me to speak to you today on behalf of Canada's 18,000 dentists.

As president of the Canadian Dental Association, I hope to shed some light on the dental manpower situation in Canada, and inform your discussions of the Canadian service sector.

Dentistry is an important, although distinct, part of our Canadian health care fabric. Some \$11 billion are spent annually on dental services in Canada, which represents 7% of our total health care spending of a little over \$160 billion.

The growth in this sector has occurred fairly steadily, and is well aligned to the growth rate of total health care spending. Over the decades, I can say that the type of care being delivered and the manner in which the care is provided has evolved. Most of us in this room can expect to have our own natural teeth well into our senior years, a relatively new phenomenon, and these advancements can be credited to a number of factors.

We have had the benefit of water fluoridation, better education, and improvements in general health care. In addition, dentistry has moved from the drill-and-fill era of yesterday to a sophisticated and highly effective team-based model of health care delivery led by Canadian dentists. This essentially can be described as a one-stop-shopping model where everything from preventive care to diagnosis to treatment is available under one roof from a team of highly qualified and specialized providers. In many ways it could be used as a model for the evolution of health service delivery throughout Canada.

For the most part, dentistry does not suffer from long waiting lists, provider shortages, or professional burnout. There are many valuable contributors to the dental team, each focused on the area that makes sure of the best use of their training and knowledge—in short, an effective use of limited health care resources.

It's significant to note, I think, that this evolution and successful outcome has occurred in the current context of a partnership system of payment, which exists almost entirely outside the reliance on government dollars. Of the \$11.3 billion spent on dental services annually, \$10.8 billion is accounted for by private sector spending. Employer-sponsored dental plans have proven a cost-effective means to maintain oral health and a valued benefit to employees. In this respect, the federal government has made an important contribution to oral health by maintaining the non-taxable status of dental plan premiums. We applaud the government's continued and appropriate recognition of the value of maintaining the health of our workforce.

I realize I have probably painted a rosy picture for you, and you may be starting to think that not everything is entirely perfect, and of course you would be right. The trend toward increased private spending on dental care has a negative counterpart, as reduction in government spending in many cases means reductions in care for children, seniors, or the poor. The pendulum has perhaps swung too far, and as a profession we have become increasingly aware of access-to-care issues over the last few years.

Unlike the situation in medicine, access issues in dentistry are not primarily due to shortages of skilled providers, although there are some rural regions in which this is the case. For the most part, the absence of dental plan coverage combined with the inability to pay directly for care leads to a portion of the population missing out on needed services. The dental profession has already reached out to these groups in formal and informal ways, and many dentists quietly provide pro bono services through their office when ability to pay is a barrier to care.

Additionally, the ten dental schools across the country provide community dental clinics where senior dental students provide a wide range of dental services at greatly reduced rates. As a result, in many ways dental students are subsidizing the provision of care through their tuition fees. Tuition fees are the highest of any profession in Canada; this in itself is an issue. We are concerned that the sticker shock associated with the high cost of education may further upset the balance of dentists in rural versus urban areas. As a rural practitioner, this is an issue that is near and dear to my heart.

Another recommendation made by the Canadian Dental Association is that special consideration be given to financing our dental schools, which are really hospitals, on the basis of their unique community outreach that attempts to compensate for reduced public spending elsewhere. However, this issue in itself would warrant another presentation, and I believe I'm approaching the end of my time.

Thank you again for inviting the Canadian Dental Association to testify today. I and my colleague Andrew Jones, who is joining me today as a witness, will be happy to respond to any questions you may have.

Thank you.

• (1130)

**The Chair:** Thank you very much, Mr. Smith.

We'll now go to Ms. Fralick, please.

[*Translation*]

**Ms. Pamela Fralick (Chief Executive Officer, Canadian Healthcare Association):** Thank you for inviting me today. I will be speaking in English; however, I can answer questions in French, if you wish.

[*English*]

I would like to start with some numbers regarding the health care system.

In 2006, just over one million people across Canada, or one in ten employed Canadians, worked in the health system. That represents 6% of the total Canadian workforce. Health is one of the major employment industries in Canada.

Of the \$160 billion spent on health care, between 60 and 80 cents of every health care dollar in Canada is spent on health human resources. That equates to \$96 billion to \$128 billion that went towards health human resources.

The health sector is a significant component of the Canadian economy. According to Statistics Canada, the monthly gross domestic product for health services in November 2007 was \$67.9 million. That equates to 5.5% of GDP.

That captures health care as a service industry, but if you also include pharmaceutical and medicine manufacturing as well as medical equipment and supplies manufacturing, the amount contributed to the GDP for health services and health manufacturing would increase by an addition \$5.2 billion. That's a total of just under 6% of GDP.

Finally, over 100 medical world firsts have occurred in Canada's research hospitals, reflecting, if you will, the entrepreneurial spirit of the medical industry.

A number of health human resources issues are addressed in great detail in the brief you've received from us, but I will focus on a couple of highlights of the highlights, if you will. I know a number of these issues are not unique to the health sector, but we believe they are exacerbated within this setting.

First of all, there's a global shortage of health service providers. The World Health Organization estimates that worldwide, there

needs to be a 70% increase in the world's health workforce to address current and projected shortages.

Research suggests that these numbers will only worsen in the coming years, for a variety of reasons, including population aging. I know we've all heard about this in many different contexts.

In terms of aging, in 2005 the average age of individuals in Canadian health occupations was 41.9 years. That's 2.3 years older than the average age of the general Canadian workforce. But to add a little bit of flesh to that particular statement, approximately 38% of the nursing workforce is over 50 years of age and heading towards retirement.

We want to bring a highlight to our aboriginal populations as well. Census data from Statistics Canada have shown that the first nations, Inuit, and Métis populations are growing much faster than the total population. Again, we know this statistic.

We do believe strongly that all levels of government must provide resources to achieve and maintain an appropriate supply mix and distribution of health care providers from these populations as well as to adapt educational curricula for health sector workers to ensure cultural competence of individuals providing health services to this population.

I will briefly mention retention and recruitment issues. In 2006 the unemployment rate for all occupations in Canada was 6.3%. However, the rate for health occupations was 1.2%. In both robust and weak economies, tight labour markets make it difficult, some might say impossible, to recruit the full range of workers required in the health care system.

We also know a lot from the popular press and research about generational and gender issues. I emphasize that health care is a 24/7 industry. I won't repeat here what we all know about the shifts and the needs and expectations between generations, but I can affirm that these differences affect the health system greatly.

Looking at gender as one example, women have constituted 80% of the total health workforce over the last 20 years. So we know that the generations perhaps want to work a little less or a little differently from how some of us have. When you add into this the preponderance of the female population within the health workforce, issues such as maternity leaves, day care needs, and the 24/7 demands of the health system truly do exacerbate the problems of our health system.

I will briefly mention as well research and innovation within our health world. Over 85 spinoff health and medical companies employed more than 2,000 Canadians and generated close to \$1.5 billion in investment capital between 1999 and 2006. It's a clear contribution to Canada's economy. We are trying to convert people to seeing health not as a cost but as an investment.

•(1135)

I have a final point, on internationally educated providers. As I mentioned earlier, there is a global shortage of health professionals, and we in Canada, as do other countries, face ethical issues in actively recruiting these internationally educated providers.

It is utterly critical that Canada work towards greater self-sufficiency in achieving an adequate workforce supply within our health system. The Canadian Healthcare Association does not support the aggressive recruitment of health professionals from lesser developed countries, most of which are also facing severe health provider shortages.

In conclusion, I'd like to leave you with three points from these brief overview comments: the health sector is a benefit, not a cost, to the health of Canadians and thus to the Canadian economy; the health service sector is a substantial component of the economy and the labour force; and recruiting, retaining, and maintaining the full scope of Canada's health workforce is vital to assuring Canada's competitive position in the world.

We do not leave you with just these overview comments. You will find approximately two and a half pages of well-defined recommendations in the brief for your consideration. We look forward to continuing this discussion.

Thank you.

**The Chair:** Thank you very much, Ms. Fralick.

We'll now go to Monsieur Couture.

[*Translation*]

**Mr. Etienne Couture (President, Réseau des ingénieurs du Québec):** Mr. Chairman, committee members, good morning. I am pleased to be here with you to study the service sector in Canada. To this end, I will be speaking to you about the engineering field. Thank you for providing this opportunity to express our point of view.

The Réseau des ingénieurs du Québec is a non-profit organization representing 56,000 Quebec engineers. The mission of our organization is to serve the common interests of all engineers in all sectors of activity. To this end, we publicly promote their interests. We provide engineers and engineering students with career-related services as well as commercial benefits.

As part of its mission, the Réseau des ingénieurs du Québec has taken a keen interest in the effects of globalization on the organization of the labour market, particularly on knowledge-based jobs such as engineering. In recent years, we have carried out two specific studies: one on the phenomenon of job offshoring and the second on the situation in the manufacturing sector, with the underlying theme of the impact on the work of engineers.

To gain a good understanding of engineering in Quebec, it is essential to grasp the place of engineering in our society. First of all, more than 30% of engineers work in the industrial sector of manufacturing and production, 20% work in the consulting sector and another 20% work in the public and para-public sector. The work of one engineer generates almost 80 direct jobs. The work of one engineer in the industrial sector generates almost 100 indirect jobs. A large number of jobs in the services sector are attributable to

the industrial sector, which remains the true engine of an economy that is balanced, diversified and creates value.

Globalization is an inescapable reality and we must make the best of it. We have to focus on the opportunities it provides. That was confirmed by our study on the impact of offshoring on Quebec engineers conducted in November 2006. Knowledge-based jobs such as those in engineering are no longer immune to international competition and the phenomenon of offshoring. These changes have repercussions for the organization of work, employment, the economy and the social fabric. We can tell you that globalization is transforming the work of engineers. Today, the latter work in a network that includes suppliers and partners located throughout the world. This requires many changes in order to accommodate different time zones and a variety of cultures.

There are a number of factors contributing to the type of changes faced by our industries. We see that you had the opportunity to discuss this before preparing the report *Manufacturing: Moving Forward – Rising to the Challenge*. In Quebec, we can count on engineering expertise that enjoys exceptional renown. On the international stage, the reputation, competence and effectiveness of Quebec engineers are well known. In terms of economic development and the services sector, it is in our interest to further promote this calling card in discussions with foreign countries.

As regards the opening of markets for our companies, the Réseau des ingénieurs du Québec recommends that Canada concentrate on negotiating free trade agreements with countries where market conditions—particularly in terms of protection of intellectual property, labour standards, social and environmental considerations—are comparable to those prevailing in Canada. The Réseau des ingénieurs du Québec believes that Canada must make it a priority and actively pursue negotiations for a free trade agreement with the European Union. In the past, our businesses could compete with others playing by the same rules. This applies even more so to the services sector.

Commercial trade in Canada must first and foremost be promoted in order to increase trade and to open markets for companies, for services and industries. We believe that there are still too many interprovincial barriers. The study we conducted last October attempts to provide our industrial sector with the tools to face the challenges of globalization. The first conclusion of our study is the need to implement a strong and coherent industrial policy.

•(1140)

This industrial policy must be founded on innovation, investment and productivity. It must be based on solid developmental projects, such as high-speed trains, aluminum processing or the electric car. The first aim of this policy must be to develop sustainable development technologies for industry and services. The time has come for Quebec and Canada to focus on developing its exportable know-how in the area of developing environmental technologies.

To be competitive and to capitalize on the know-how of our Canadian engineers, we must take action and focus on the development of brain power, the main raw material of leading edge, high value added sectors. We must also increase the productivity of our plants and development of our infrastructures, increase investment in research and development and provide for modernization of production.

The Réseau des ingénieurs du Québec recommends that government focus on the research and development diagnostic. Not only would this allow us to identify improvements most conducive to productivity gains, but it would also focus on the development of innovative and durable goods and services. We also urge the various levels of government to rethink innovation programs and include measuring the return on investment in terms of employment and know-how.

In innovation, the involvement of an engineer with expertise in various areas is essential. University and on-going training of engineers and the workforce in general remains a cornerstone of the success of our companies and a priority for the Réseau des ingénieurs du Québec. We need to remember that training our future engineering graduates is an important lever of economic development.

The good news for future graduates is that there is full employment for engineers in Quebec. The unemployment rate for engineers is hovering at 3% compared to 7% for the general population.

• (1145)

[English]

**The Chair:** Okay, Monsieur Couture....

Sorry, I thought you were done.

[Translation]

**Mr. Etienne Couture:** It is evident that some companies lack the knowledge and expertise to commercialize the results of applied research. The Réseau des ingénieurs du Québec is developing a catalyst to provide this type of support to businesses. To bring these projects to fruition, we need the support of all partners, including the federal government.

As outlined in this short presentation, engineering is much more than a knowledge-based service. It is also an economic engine.

Thank you, Mr. Chair.

[English]

**The Chair:** Merci.

Thank you all for your presentations.

We will go now to questions from members. I just want to remind everyone that we have a great number of witnesses here today. Members will have a limited time in which to give questions and receive answers. So I urge you all to be brief.

Members may choose to direct a question to one person. If someone other than the person to whom the question was directed wishes to respond, let me know and I will ensure that everyone gets a chance.

We will begin with Mr. Brison, for six minutes.

[Translation]

**Hon. Scott Brison (Kings—Hants, Lib.):** I was very interested in Mr. Couture's comments about interprovincial barriers. It is nevertheless very important for us to respect provincial jurisdictions. This is an important issue but we must respect provincial jurisdictions.

[English]

It's not just an issue for engineers. It would be an issue for dentists, other health care providers, and chiropractors. I would appreciate all your advice on what we ought to be doing to deal with the issue of professional mobility between provinces and the issue of foreign-trained professionals.

I know the issues would be different for each profession, so I'd like to hear from each of you. What should we be doing on these two things: the mobility of professionals between provinces, and the recognition of foreign credentials?

[Translation]

**Mr. Etienne Couture:** In fact, an important concern in Quebec is this mobility. Obviously the situation varies a great deal from one province to another. Demand may be very high in Alberta and British Columbia, yet there are many engineers in Toronto and not all are able to find employment. It varies according to the region.

Given that it is a provincial jurisdiction, all professional bodies are working on the issue of mobility in each province. The government of Quebec, specifically, has just given its support to the order in its efforts to facilitate recruitment of engineers with foreign credentials. Given that employment in engineering is high, we are looking for this type of initiative and support.

• (1150)

[English]

**Dr. Darryl Smith:** Thank you for the question. It's very pertinent to dentistry.

In the late 1990s the profession realized that Canadians wanted health care of the same standard to be delivered across this country. So it didn't matter whether you were in Nova Scotia or British Columbia, there were expectations. As a result, it was important that practitioners had the ability to move across the country.

All the licensing bodies in Canada came together with the profession, and now we have total portability—any professional licensed in any province can move between provinces. That's been a very good thing for the profession.

In the area of foreign-trained individuals, we also realized there was a necessity to make sure the profession had access to people from other places. Working with the universities and regulatory authorities, we have a way to bring people into this country to allow them to practise. Recently we tried to make it even easier for foreign-trained people to come, and we're dealing with foreign-trained specialists right now. It's really an educational issue, to make sure people can come from other places to teach in our institutions, and to allow general practitioners to move. So it's an important area for us.

**The Chair:** Thank you.



Next I have Ms. Fralick, Mr. Turk, and Mr. Tucker, very briefly.

**Ms. Pamela Fralick:** I have two points to bring in response to the questions. On the mobility issue and many others, there's no silver bullet. I wish I had one, but there's been quite a bit of work done on developing a mechanism or process to allow those sorts of questions to be answered.

The Canadian Policy Research Network did a paper on just this subject. It has been presented to the advisory committee on health delivery and human resources within Health Canada, and it provides a way forward. So if you have not seen that paper, we'd love to provide you with the link to that or send you the document.

On foreign-trained professionals, congratulations to the federal government for having done considerable work in this area in recent years with physicians and nurses. In the last three years, significant initiatives have been developed with five other professions—occupational therapy, physiotherapy, pharmacy, and medical and lab technology. Right now we need to extend that work to other professions.

**The Chair:** Thank you.

Mr. Turk, please.

**Mr. James Turk:** Generally, within the academic world this is not an issue. There is mobility across the country. As you recognized in your question, there are different issues to be balanced here. As this committee heard from the Canadian Bar Association, there is some rationale for some variation by province. I think the model discussed earlier of having the licensing bodies and professional bodies get together to try to sort this out where necessary is the best way to proceed.

I'd like to conclude by seconding something Ms. Fralick said in her presentation. There is a fundamental ethical issue with regard to Canada thinking we can meet our personnel needs by relying on foreign-trained professionals. Most of the countries we're drawing those professionals from are short of adequate numbers of people themselves. So as a strategy, to rely on bringing others to Canada is, in a way, impoverishing the countries from which they come. The goal should be to develop greater self-sufficiency here.

**The Chair:** Sorry, but we're well over time.

Mr. Tucker, do you want to make the point now or wait until later?

**Mr. John Tucker (Director, Government and Interprofessional Relations, Canadian Chiropractic Association):** It's not a problem for the Canadian chiropractic profession. We've been in a leadership position in assisting other countries to develop accreditation systems. There is no problem with portability, so we're in a capacity position.

Thank you.

**The Chair:** Thank you, Mr. Brison.

We'll move to Monsieur Vincent, please.

[*Translation*]

**Mr. Robert Vincent (Shefford, BQ):** Thank you, Mr. Chair.

I find all the points raised interesting but I was very surprised by Ms. Fralick's comments. She stated that, in her opinion, when recruiting people from abroad, we should not recruit individuals

from underdeveloped or poor countries. Could you please elaborate on this? If your association, in cooperation with the government, carried out testing to choose persons coming from abroad—without it being in addition to what you already have in the way of training —, perhaps we would have access to more health-care workers and we could therefore fill positions?

• (1155)

**Ms. Pamela Fralick:** Could you please clarify your question? I am not sure that I have understood it.

**Mr. Robert Vincent:** I will rephrase the question. In your presentation, you spoke of people from lesser-developed countries or countries with lower education levels. You stated that, in the health field, we should not bring these people to Canada to provide nursing care.

**Ms. Pamela Fralick:** Could you repeat that?

**Mr. Robert Vincent:** That is all right. I will reword my question again. Let us start over. My question is about globalization. How would you go about looking for people abroad who wish to come to Canada to work in the health services area?

**Ms. Pamela Fralick:** We are opposed to recruiting professionals from other countries. That is a problem for me. Perhaps something in my presentation was not written properly or I did not express myself well.

I am sorry. I spent the last nine years in Toronto and I have only been here one week. I need to practice my French.

In Canada, we need to find ways to be self-sufficient. We do not wish to recruit health professionals from other countries. If I understood your question, you thought that we would recommend the opposite of what I wanted to say.

**Mr. Robert Vincent:** What do you think of the doctors and nurses who are already here in Canada, but who cannot practice medicine?

**Ms. Pamela Fralick:** That is another matter. I started to answer Mr. Brison. Programs were established, five to seven years ago, for doctors and nurses, to reduce the obstacles preventing them from practising here in Canada. I do not know if you are aware of all the details of these programs. If you are not, we could send them to you.

**Mr. Robert Vincent:** That would be interesting.

**Ms. Pamela Fralick:** The second step is to add five professions to this initiative: physiotherapists, pharmacists, occupational therapists, lab technicians and radiology technicians.

That is beginning to happen with the seven professions. We believe that the problem lies in providing the same opportunities to other professions in order to improve the process which affects professionals from other countries. That is just beginning but, as usual, it is not enough.

I would like to send you some links from our website so you can learn more about these programs.

I am sorry for having misunderstood the question.

**Mr. Robert Vincent:** Mr. Turk, you testified before the House Standing Committee on Finance in August 2007. You made six recommendations. Of these six recommendations made in 2007, which ones did the government implement?

[English]

**Mr. James Turk:** A principal initiative in the last budget was to increase the funding in the Canada social transfer. They gave the impression that it was dedicated funding for post-secondary education, and in fact it wasn't. It's up to the provinces to spend it or not. There's been no movement toward the kind of Canada post-secondary education act that we had called for.

There has been increased funding for research, although the social sciences and humanities continue to be underfunded relative to the natural sciences and health sciences, which is a concern. More than half of all the faculty in this country teach and more than half of all the students study the humanities and social sciences, yet a much smaller proportion of funding goes into research in those areas. That's partly a result of the emphasis, as I've tried to indicate in my presentation, on a narrow version of innovation and commercialization, without recognizing the broader social and commercial values we get from research in the humanities and social sciences.

In terms of their initiatives, it's primarily been the increase in funding in the Canadian social transfer and more money for research.

• (1200)

[Translation]

**The Chair:** That is fine. You can ask one last question.

**Mr. Robert Vincent:** Mr. Couture, you also made recommendations to the committee. Earlier, you suggested that we should have the same rules. You also spoke about trade with the European Union. Could you elaborate?

**Mr. Etienne Couture:** The idea is to foster... We know that globalization is an inescapable reality and that its consequences are real. Engineers are feeling its effects right now. They are real.

There is fierce competition from developing countries. Wages and environmental standards are often not the same as in Canada. We favour trade with countries such as those in the European Union because we want to deal with countries that have conditions...

**Mr. Robert Vincent:** ...rules of the game...

**Mr. Etienne Couture:** ...that are like ours so that trade and working conditions are similar.

[English]

**The Chair:** Merci, Monsieur Vincent.

We'll go to Mr. Carrie, please.

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

Dr. Gehrke, I want to talk about health care, because it's probably one of the most important issues in Oshawa, where I come from. I think everybody on the committee would recognize the importance of the government policy to ensure equal access and utilization of our health care system and the professionals who are in it.

You talked a little bit about barriers to care. Do you have any specific examples where there have been barriers to care due to federal government red tape, or regulatory issues, or policy issues that you could tell the committee about?

**Mr. Richard Gehrke:** Thank you for your question.

A classic example, just very recently, comes to mind that I can highlight.

We have a chiropractic doctor, Dr. Tondreau, who just got back from a tour of duty in Afghanistan. In Afghanistan, of course, they work under conditions I can't imagine, but certainly Dr. Tondreau recognized that the amount of hardware these folks pack, the cramped conditions in which they live, the travelling arrangements, these kinds of things that facilitate their tour of duty have significant implications on their health, musculoskeletal health particularly. He also indicates that about 80% of the kinds of conditions represented from soldiers in Afghanistan are because of musculoskeletal conditions.

He wanted to volunteer his services, actually, to help out, not to be paid for that and after regular duties, but he wanted to volunteer his services to treat his colleagues. Due to military red tape, he wasn't permitted to do so. He's a recognized health care practitioner in a country where all ten provinces recognize licensure and are regulated, yet he is not permitted to look after his colleagues in the profession in which he was educated to do so. It just doesn't seem right.

**Mr. Colin Carrie:** Are there any other examples of access to care?

Dr. Smith, do you have some, or Mr. Tucker?

**Dr. Darryl Smith:** Essentially, in terms of federal government barriers, there aren't. The issue is more, for example, in plan design of a dental plan, and there are some real dichotomies there. For example, the first nations communities plan would be different from what you as members of Parliament would have. So a first nations individual may not be able to access the same standard of care or the same quality of care.

In terms of dentistry, more of those issues are germane to the argument than actual physical barriers. In fact, the federal government has done a lot to make sure that we have portability across Canada and that we get the provinces together. I think that's a fairer statement.

**The Chair:** Mr. Tucker wanted to comment as well.

**Mr. John Tucker:** Yes, there is one significant area that Ms. Fralick mentioned and Dr. Smith refers to—that is, first nations people. There was a time in Canada when the federal purse was open to support chiropractic care for first nations people, and through various needs for efficiency that has been closed up, pretty well, except for parts of Ontario. So folks in first nations don't have access to this kind of care.

We have an example where the profession itself funds such care in Anishnawbe Health Toronto. It's a clinic that deals with first nations street people in downtown Toronto, where all the professions involved—dentists, medical doctors, naturopaths, spirit healers, and the like—work together in harmony to deliver very important care. We'd love to see that model extended. There, the federal government can become involved in supporting that kind of care across the country, to all first nations peoples.

• (1205)

**Mr. Colin Carrie:** Are there any other comments on that?

**The Chair:** Ms. Fralick.

**Ms. Pamela Fralick:** I always have something to say, but on that specific point I think I would broaden the discussion to mention the wait times. We all hear so much about those. Moving forward, again, the federal-provincial issue is so difficult, but this is an area where the federal government can have some influence.

The wait times program, as conceived a few years ago, was and still is an excellent program. We are seeing results and a great deal of optimism in certain areas. But there are two problems. One is that the focus of those wait times was so specific it neglected other critical areas. The example I will give you is joint replacements. As one of the five conditions, surgery was covered but post-rehabilitation was not included in the package.

So there is this concern that, yes, a Canadian will get their joint replacement surgery, but without, say, proper care in advance or physiotherapy afterwards, they're going to be back in the queue. We need to take a look at the breadth of what is included in those five wait times.

The second issue, of course, is that in those few years when we focused on these five areas, other conditions created their own wait lists. It's time to really step back and evaluate and determine where we go next with the wait times issue.

**Mr. Colin Carrie:** You hear about doctor shortages, but I personally see it more as a service shortage. As I think Dr. Gehrke said, 30% of medical doctors are doing the musculoskeletal work. If chiropractors, physios, or OTs could be doing that, and there are barriers to care due to government policy or regulations, then that's something I'd be very interested in debating to see if we could address that.

On this service shortage or doctor shortage, if we properly utilized the professionals who are out there—psychologists, dietitians—and we kind of levelled that playing field, maybe that is something the federal government could take leadership on.

I would like to hear your comments on that.

**Ms. Pamela Fralick:** If I may, while I'm sure the chair won't allow us to have the full debate that we might enjoy on that—we understand that this is preliminary—we'd love to come back.

**The Chair:** Right now you have 30 seconds.

**Voices:** Oh, oh!

**Ms. Pamela Fralick:** Certainly you do hear a great deal about physician and nursing shortages. These are our largest health provider groups. Who among us would not want to have their physician or their nurse at a time of need? So that's a natural issue to hear about.

From a Healthcare Association perspective, I'd like to support what you said. It really is about the mix, and the need is at all health provider levels.

I also, by the way, chair a group called HEAL, Health Action Lobby, which you might have heard about. It represents 36 national health associations and organizations. When we go around the table, no one says, "Gosh, we have so many health providers, we don't need any more." So it is across the board an issue, and needs to be looked at.

Earlier I mentioned this paper that's describing a mechanism that can get governments, at all levels that are necessary, to have that debate together and make sure we do act appropriately in addressing the issue.

**The Chair:** Thank you.

Thank you, Mr. Carrie.

We'll go now to Ms. Nash, please.

**Ms. Peggy Nash (Parkdale—High Park, NDP):** Thank you, Mr. Chair.

Welcome to all of the witnesses. I was thinking, as you were making your presentations, that you represent the professions that so many parents aspire that their kids will get into. It's great having you all here in one room.

I do have to say, since we have some health care representation, that I just went through quite an intense experience with a family member in the health care system. I tell you, after a long hospital stay, access to some of the best physicians on the continent, and a very successful outcome, I have nothing but singing praises for our health care system—and we didn't have to produce a credit card at the end of it. It was a very successful experience, thank goodness.

A couple of you raised specifically issues around demographic changes or generational changes in your professions. I'm sure all of you are facing that.

Mr. Turk, you raised an issue about perhaps a deteriorating quality in the kinds of jobs that are resulting.

I'd like to ask each of you, what are the challenges you're facing with that generational change, and what are the strategies you have in place in your professions to meet the demands, not just for today but for the future?

•(1210)

**The Chair:** Go ahead, Mr. Turk.

**Mr. James Turk:** Before I begin, I will just point out that I grew up in a family in which my father was an engineer, and he was gravely disappointed that I let down the family by becoming a professor.

In any case, the challenge I described in the presentation is a very serious one. A study done at Carleton University several years ago, for example, showed that more than half of all undergraduate courses at that time were being taught by non-tenured people on contract, with low pay and so forth. That's largely a result not of some desire of university administrations to emulate the model of the Hudson Bay Company or other retail sectors, in which the majority, if not the overwhelming majority, of employees are part-time; rather, it's a response to underfunding.

With university budgets not able to meet the growing need in terms of growing enrolment and the need for more sophisticated lab equipment and larger library collections, the way they're coping is with a human resources policy that relies less and less on full-time faculty. And the consequences are quite grave.

The solution we see to this is to lobby aggressively with all of you for more adequate funding, as I mentioned in the presentation. We think that going to the standard of one-half of one penny for every dollar generated by the Canadian economy as a worthwhile goal for the funding of post-secondary education by the federal government is a key part of the answer to that.

**Ms. Peggy Nash:** Thank you.

**Mr. Richard Gehrke:** If I understand your question correctly, internally we have issues in terms of gender demographics. We have more ladies becoming chiropractors. We don't really, quite frankly, suffer any inequity in not having enough chiropractors right now.

If I can just take that and lead into what you may be referring to as well, we do have an issue or a consideration in terms of the ageing demographic.

**Ms. Peggy Nash:** Yes, that's my question.

**Mr. Richard Gehrke:** As a matter of fact, our profession has just completed a program that's called Best Foot Forward, and it's a falls prevention program that we are about to release nationally, as a matter of fact this very month. It's a wonderful program that deals with the issues of seniors ageing, living in their own homes—the kinds of issues one would—

**Ms. Peggy Nash:** May I just ask you, though, in terms of the ageing demographic within your profession, whether you are finding that there is a baby boom generation about to retire among chiropractors and that you have a new generation of young chiropractors coming in? Is that the reality or not, and if so, are there any challenges your profession faces?

**Mr. Richard Gehrke:** It's a reality, and I don't see any challenges that face our profession.

**Ms. Peggy Nash:** Thank you.

**Dr. Darryl Smith:** There are so many things one could go on about, based on your question, but I want to put it in context in terms of education, because I think it's really a key issue.

In dentistry, there have been no new dental schools in Canada for 30 years, and there are actually fewer dentists graduating now than did in the eighties. So we have a manpower situation that could potentially be critical, probably in the next 10 to 15 years, because of that.

The other issue, though, is the funding of dental education.

**Ms. Peggy Nash:** Can you tell us what the tuition is for a dental student?

**Dr. Darryl Smith:** I can't give you the exact tuition, but at UBC, for example, it is \$50,000 per year, and it's divided into two components. So if you're in a four to five-year program, you have, potentially, a \$200,000 to \$250,000 debt just for your tuition, not for living costs or whatever. So I think that's absolutely critical.

The component I want to talk about, though, is divided into two issues: one is tuition, and one is the cost of the dental hospital within the facility. I mentioned it in my brief. That can represent \$25,000 or more, and the student is actually paying for the facility. If you were a medical student, you would go into a publicly funded hospital. In dentistry, the students and the university pay for a facility to graduate future clinicians. I think that's something we have to look at.

•(1215)

**Ms. Peggy Nash:** Thank you.

**Ms. Pamela Fralick:** I would like to make one comment. I speak not on behalf of any one provider group, as you know, but rather on the health care system as a whole.

We haven't done a good job in this country of doing needs-based planning. We've done supply-based planning. So we have determined the number, the mix, and the distribution of health care providers based on how many we can supply, basically.

We haven't looked enough at exactly the point you're raising: the demographics of the country and what will be needed. How does this ageing population translate into needs for specific types of health providers? You then map that back to our educational programs to make sure we have the right mix.

We have been getting there within the last year or two, but that's an area on which we need to focus.

**The Chair:** Thank you, Ms. Nash.

Mr. Simard, please.

**Hon. Raymond Simard (Saint Boniface, Lib.):** Thank you, Mr. Chair.

Mr. Turk, I've heard from other teachers that research is now focused on projects with commercial possibilities. I'm wondering how this happens. A teacher would apply to CIHR, for instance, for a grant. Is the process biased towards research that could be commercialized? Could you still apply if your research has no commercial possibilities?

**Mr. James Turk:** The answer is a complicated one. There are some programs that require a co-funder, which is usually a private sector partner. In effect, this partner has veto power over whether the project gets public money. In other cases, the granting councils themselves, sensitive to the fact that the federal government is putting great emphasis on commercialization, give their programs more of a commercial orientation, believing this to be the best way to encourage the federal government to provide the kind of funding we desperately need in this country.

So some programs require commercial linkages. More informally, a certain pressure guides people to favour projects that may have a commercial bottom line. The difficulty, however, is that our ability to predict commercial success in research is abysmal.

Paul Berg, who got the Nobel prize at Stanford for his research on the splicing of DNA, which arguably helps underwrite the entire biotech industry today, said that if he had had to pass through a commercialization screen to get this money, he wouldn't have gotten a dime. Yet his work now helps to underwrite a multi-billion-dollar industry. If you talk to most scientists, whether it be in physics or biology or chemistry, they'll point out that the most important commercial developments in their field have by and large come from basic research.

So we shouldn't dismiss commercialization, but we should remember that we can't forecast what's going to be of value. We really need to trust good scientists to identify good science. That's what Mike Lazarides and John Polanyi are both saying.

[*Translation*]

**Hon. Raymond Simard:** Thank you.

Mr. Couture, do you anticipate a shortage of engineers in Quebec in the near future? Are there enough engineers in Quebec?

We have also spoken about interprovincial barriers. I believe that almost all witnesses that appeared before us have mentioned this. All provincial premiers say that they wish to resolve this problem but there always seems to be resistance. I know something about that because I was a member of a federal team working with the provinces. Even though the federal and provincial provinces are willing, there is a certain resistance to the idea.

Is the source of this resistance the protectionist reflex of the provinces or of the associations that issue licences to the various professions?

**Mr. Etienne Couture:** We have been told that there is full employment at present. Obviously there will be a shortage or, at the very least, a very high demand for engineers in several areas. This is already evident in civil engineering, for example. It goes in waves according to the sectors that are most in demand. Thus, it varies but overall there is a shortage.

With regard to differences arising from interprovincial trade, accreditation and the licence to practice differ from one province to the next. To practice across Canada, we must obtain ten provincial accreditations.

In Quebec, there is a type of basic barrier because engineers must have a mastery of the French language. Some Quebecers have mastered English. It may therefore be easier for them to work anywhere in Canada. However, learning French to practice in Quebec can represent an additional barrier for most Canadians.

It is not at all a question of protectionism but rather a matter of practicality: you will not be able to practice engineering in Quebec if you do not master the French language.

● (1220)

[*English*]

**Hon. Raymond Simard:** Mr. Gehrke, you said that chiropractors could take some of the pressure off doctors, as much as 30%. We realize there's a great shortage of doctors. Are you telling us that chiropractors are able to take up that slack? The chiropractors I know are extremely busy.

**Mr. Richard Gehrke:** We could pick up a significant portion of it.

I don't mean to sound like a whiner, but ours is a gatekeeper issue. We're the new kids on the block. We don't have enough champions in industry, hospitals, and in allopathic medicine to allow us the prerogative to do the kinds of things we say we can do. We have numerous studies that suggest that we can do this, but we need the opportunity in hospital-based, more than likely study-group situations to sort of walk our talk, and that's not being made available to us. And it is, among other things, a turf issue.

**Hon. Raymond Simard:** Okay. Thank you.

Thank you, Mr. Chair.

**The Chair:** Thank you, Mr. Simard.

We'll go to Mr. Stanton, please.

**Mr. Bruce Stanton (Simcoe North, CPC):** Thank you, Mr. Chair.

I'd like to take up the topic with Mr. Turk on the question of funding for post-secondary.

You mentioned in your pre-budget consultations as well as today the target of half a point of GDP. Was there a time when Canada did achieve that?

**Mr. James Turk:** Yes, between 1978 and 1983 we did achieve that, and then we fell back away from that.

**Mr. Bruce Stanton:** Okay.

In terms of the recent change, we went from \$2.6 billion to \$3.2 billion, and that represents about a 40% increase. Could you say again what that did in terms of closing the gap?

**Mr. James Turk:** What I said in my opening remarks was that to get back to the level of funding on a constant dollar population basis that we were at in the early 1990s, over and above what was in the last budget, would require an additional \$1.2 billion per year.

**Mr. Bruce Stanton:** Okay.

Assuming a government were to hypothetically close that gap with the \$1.2 billion, what would you advance in terms of trying to maintain that?

**Mr. James Turk:** Our approach generally has been to favour as a long run tying what the federal government puts in as a percentage of GDP—that is, when the economy constricts, the amount would go down, and when the economy expands, it would increase—because we do view the funding for post-secondary education as a necessary investment in the future of the country.

**Mr. Bruce Stanton:** The 3% accelerator that I think was tied to budget 2007's announcement would probably be a start to doing that, and I'm trying to recall whether that accelerator rate was in place on the previous allocations. I don't think it was.

**Mr. James Turk:** No, it was not, as far as I know.

The difficulty again is that these are block transfers that may or may not be spent on post-secondary education. Even though they are designated for it, there is no obligation to spend them, which is why we've advocated a different approach in our submission to the finance committee, and we've been talking about that for some period of years, a model in which the—

**Mr. Bruce Stanton:** Kind of like the Canada Health Act.

• (1225)

**Mr. James Turk:** Yes, that's right.

**Mr. Bruce Stanton:** Okay.

Just to go back, touching briefly on the research points that you raised, we've heard through the course of our discussions at this committee that in fact Canada spends a proportionately higher amount on research that is actually managed at the academic level. That seems to be somewhat inconsistent with what I'm hearing from you today. Could you speak to that?

**Mr. James Turk:** Compared internationally we do, but that's largely a function of the underdevelopment of the industrial sector in this country, and the amount of research financed by the corporate sectors is proportionately less in Canada than in other countries. Historically that's been due to the large percentage of foreign ownership: major transnational corporations tend to do the bulk of their research and development in their home country, so the big American corporations do the bulk of their R and D in the U.S. Canada, because it has been relatively underdeveloped in that regard, has had to rely more than other major developed countries on academic-based research.

**Mr. Bruce Stanton:** Regarding this imbalance, you suggest that there is too much emphasis on commercialization. Is there a ratio you can point to that we should achieve in that regard? For example, I think you used the term “basic research”, as opposed to that for commercialization.

**Mr. James Turk:** Our view is that the money should be provided to the granting councils, and the scientists should decide in a peer review process what research proposals seem most meritorious. Our

ability to forecast what is going to lead to a certain end is so low that we do better by trying to identify what looks like the most promising research, whether or not it appears to have a commercial outcome, because in fact most of what has a commercial outcome in fact did come from basic research. Whether you look at MRIs or lasers, a whole variety of things all came out of basic research.

**Mr. Bruce Stanton:** Whether or not it's by design, it would appear from some of the previous witnesses we've listened to that Canada hasn't been as good as it could have been in taking some of the research work and achieving commercialization of that. I don't know whether we're not getting the efforts where we need to or we're not getting the post-research steps as solid as they might be, but certainly the outcomes suggest that what you're suggesting may not in fact be true.

**The Chair:** Just a brief response.

**Mr. Bruce Stanton:** Thanks, Mr. Chair.

**Mr. James Turk:** I think you've identified it correctly. The problem is the post-research; that is, there's been a relatively smaller proportion of venture capital to invest in these risky outcomes. Somebody develops something that has promise, and it may be a decade before that promise is realized. Is there the capital in the country to invest in that? There's been more of that in the United States, for example, than in Canada.

**The Chair:** Thank you, Mr. Stanton.

Madame Brunelle.

[*Translation*]

**Ms. Paule Brunelle (Trois-Rivières, BQ):** Good afternoon, ladies and gentlemen. It is a pleasure to see you. I missed the beginning of the meeting as I was meeting with the Canadian Manufacturers and Exporters. I realize that the issues I wish to address overlap and that the comments are the same.

Mr. Couture, you spoke about the manufacturing sector being the heart of our economy. We are definitely in the grips of an unprecedented crisis and that certainly affects the engineering profession. At the very least, it is about know-how. And when we meet with people from the academic community, we gain a better understanding.

We have already discussed, Mr. Couture, the need to provide tax support for research and development and innovation in the form of refundable tax credits, loans and loan guarantees to encourage investment. As Mr. Turk said earlier, one thing is certain: the results of research are not necessarily immediate. We have to promote investment, at least in research.

Mr. Couture, tell us a little about how the Réseau des ingénieurs du Québec intends to weather the crisis in the manufacturing sector, particularly with respect to research, development and innovation.

**Mr. Etienne Couture:** We are asking the government for a policy on this. We have proposed several solutions. The first consists of subsidies to establish guidelines for corporate research and development diagnostics. Basically, it is not just a question of corporate productivity. That is definitely important, but manufacturing products for which there will be no demand... Engineers believe in efficiency but, above all, we have to produce products that can be sold, can be exported and for which there will be a demand.

We believe that research and development are essential. Innovation will give us an advantage. Demand is high in all countries, both in terms of infrastructure and within industry itself. In Quebec, we particularly need to gain an advantage through innovation of our products. We want our government to support and help us so that businesses are given a clear message. We spoke of developmental projects. We want to hear the messages about which markets and sectors Canada and Quebec will invest in, giving us the advantage, in the long term, over global competition.

• (1230)

**Ms. Paule Brunelle:** Mr. Turk, you spoke about establishing a specific diagnostic. That presupposes that we have a vision, that we can look into the future a little and envisage what industry will be like and how we can develop niches where we will be in the forefront.

Is that research being done by our universities? Are our governments investing enough in university research? We know that investment in universities is very low in this country. We have been told that we should increase investment to 1994 levels for universities. Thus, there is much less investment. Should we not be using the potential of university researchers to attempt to establish the right diagnostics and to result in development, and change our businesses, so as to ensure a better future?

That is a lot of questions.

[*English*]

**Mr. James Turk:** Many questions, and not simple ones.

I regret to say that my own view is that our ability to forecast accurately is much less than any of us would like. The U.S. Bureau of Labour Statistics is probably the best in the world at trying to forecast what kinds of jobs there will be in five years and in ten years. If you go back and look at their forecast from five years ago, they're woefully wrong, despite their best efforts. I think the Canadian occupational projection service stopped making projections some years ago for the same reason. We have to make those efforts, but I think we have to recognize that we have to take those forecasts with a grain of salt and try to make our best guesses, which means having research as good as we can.

I wouldn't say there's not significant investment in research in Canadian universities, nor that there isn't significant funding for Canadian universities, but it's certainly less than we need in order to meet the objectives that all of you as politicians hold for our sector. We have a lot of people retiring, as I mentioned. Our problem is not a shortage of young people coming up to assume those positions, but that the kinds of positions they are being offered do not allow them to pursue a proper academic career, and hence will mean that we'll have fewer researchers and fewer people grappling with these questions in future than we do now. Those are the challenges, and at

the heart of them is financial investment. We don't invest sufficiently in post-secondary education and in research.

**The Chair:** Merci, Madame Brunelle.

We'll go now to Monsieur Arthur.

**Mr. André Arthur (Portneuf—Jacques-Cartier, Ind.):** Mr. Turk, after two years in Parliament, I'm still waiting to meet the first witness who will come and say that he doesn't need more money from the government and that the government shouldn't do anything about it.

Considering the fact that the vast majority of Canadian taxpayers have never been to university and that their children won't go to university either, and that those who go to university will end up making vastly more interesting revenue for the rest of their lives because of the time they spent in university and the education they got there and the qualifications they were able to maintain after that, do you think that government funding of post-secondary education should be across the board, or is it time we look for those areas of human activity where our dollar will be better invested in a graduate education?

Isn't it time we realized that an engineer will probably provoke the creation of 100 jobs, and an archaeologist might not, and a sociologist might not? Do you think government money should be across the board in university, or is it time to concentrate on those fields of endeavour and learning that are more useful to the practical life of the taxpayer who does not have the means to send his or her own children to university and has never been to university?

• (1235)

**Mr. James Turk:** Well, I would like to be the first witness to come and say that I'm from a sector that doesn't need more money, but I can't do that. It would be a way of getting your attention, were I able to make that claim.

Secondly, when we're talking about post-secondary education, we're not talking just about university, but also universities and colleges, apprenticeship training, and a whole range of adult education that's necessary after high school. In that regard, the majority of Canadians do participate in some form of post-secondary education. In fact, the participation rate in Canada is one of the highest in the world.

The fact that they earn more is a reason we should not try to fund post-secondary education increasingly by tuition increases, because insofar as they earn more, they pay more in taxes. In fact, if you look at analyses that have been done, university graduates pay back far more than the total cost of their education as a result of the increased taxes they pay because of their higher income. So it is an investment, in that sense.

**Mr. André Arthur:** It's the same thing for those who win the lottery, sir.

**Mr. James Turk:** I know, but lottery is the luck of the draw, and 99% of us don't win. With post-secondary education, not only do the participants who go through that, the students, win over the course of their lives, but the rest of the Canadian population does, because the advancements that are made, whether they're by engineers or people in the cultural field, benefit all Canadians. The fact that we have safer roads, that we have a better understanding of our culture, and better health care is something that benefits everyone.

To try to target, are we prepared to say culture is of no concern, knowing our history is of no concern, having political scientists study is not of concern because it's not churning out more jobs in the way of training? Any society needs a broad range of expertise, some of which brings back benefits economically, some socially, and some culturally. So I think it would be a serious mistake to try to target. We'd pay an enormous price as a society were we to do that.

[Translation]

**Mr. André Arthur:** Mr. Couture—

[English]

**The Chair:** Monsieur Arthur, Mr. Gehrke did want to comment on that as well.

Be brief, Mr. Gehrke.

**Mr. Richard Gehrke:** Pardon me, sir.

Considering how well you articulated the question, it possibly makes me a little jumpy to butt in, but we're not asking for money. We're simply asking for an opportunity to prove our worth.

**Mr. André Arthur:** That's why my question was directed to Mr. Turk.

[Translation]

Mr. Couture, there are two ways of producing engineers in Quebec. Some faculties offer academic teaching and others, for example the Université de Sherbrooke, have developed a co-op model, with time spent in industry and the offices of engineers who will hire them in future. They offer training sessions that are directly related to their academic education.

Can you tell me that both these methods of producing engineers are equivalent or is it time to shake up the universities that have not yet adopted this method?

**Mr. Etienne Couture:** I would say that very few universities are not doing this or are not in the process of doing this.

**Mr. André Arthur:** That has been in place at Sherbrooke for 40 years.

**Mr. Etienne Couture:** The Université de Sherbrooke, with its cooperative program, has been leading the way. I would say that the others are catching up. We believe that practical experience is almost indispensable, at least in engineering. That is the direction being taken by engineering.

**Mr. André Arthur:** That is probably the best way to ensure that engineering graduates will not just turn to teaching engineering.

**Mr. Etienne Couture:** If you say so. It is difficult to comment on this, but you do need experience to practice engineering.

**Mr. André Arthur:** How do you explain that it took so long for Quebec universities to understand that this is the best formula and

continued to turn out less qualified engineers than did Université de Sherbrooke? Why was there this delay.

• (1240)

**The Chair:** That is the last question.

**Mr. Etienne Couture:** I do not know why there was a delay. However, I can say that every engineer qualified to practice the profession will have the necessary qualifications...

**Mr. André Arthur:** Will they be the same?

**Mr. Etienne Couture:** They will suffice.

[English]

**The Chair:** Merci, Monsieur Arthur.

We'll go to Ms. Nash, please.

**Ms. Peggy Nash:** I'd like to pursue the idea of our tax dollars paying for post-secondary education.

One of my grandmothers lived until she was 99. She regretted all her life that she couldn't get past high school, because our family didn't have the money to send anybody to university and my parents never had the opportunity to go to university. I think it's fair to say that for many people in Canada, the post-war generation was the first to be able to go to university. To me, it was a great democratization of our learning, which unleashed a lot of creativity and a lot of value to us, not only as an economy but also as a society.

I know that even though tuition fees have risen dramatically, so has registration at universities and colleges. It is higher today, I understand, than ever. I do have a concern about the squeeze on affordability. And Dr. Smith raised the issue of dental fees. Yes, I guess a student will earn all of those back once they are in the workforce, but boy, oh boy, together they're like a house mortgage when you start off your career.

At what point do you lose that balance between affordability and the democratization or accessibility of post-secondary education, so that the average family can aspire to have their kids go to post-secondary education?

**Mr. James Turk:** I think most families in this country aspire to have their children go on to some form of post-secondary education, whether it be university, college, or another kind of training.

As the proportion of government funding has decreased, the principal replacement has been increased tuition fees. That's having two kinds of consequences. Remember that in Canada the principal source of assisting students is through loans. We're one of only two major industrialized countries that does not have a national needs-based grant system for funding post-secondary education students. So one of the consequences is substantial student debt. But the willingness to take on debt is also something that's socially and culturally variable.



In families that have historically been poor, are risk-averse, and don't have some experience that there's life beyond debt, the children don't even go on because of the formidable financial barrier that seems to be in front of them. We see that most strongly in the professions. You heard from the Canadian Dental Association about dentistry. In medicine there was a study at the University of Western Ontario where before tuition fees started going up dramatically, the average income of a family of a medical student was \$80,000 a year in the mid-1990s. By 2002, the average income of a family of a medical student at the University of Western Ontario was reported to be \$140,000 a year.

We simply can't have a situation in which family wealth rather than the individual's ability is the determinant of who goes on to get an education. We're at that stage in various ways. We need to find other ways to fund it, and we've proposed some in our finance brief. I won't go into them here for time reasons.

**Ms. Peggy Nash:** Thank you.

**Dr. Darryl Smith:** It's a very good question, and I totally agree with my colleague here.

Who we attract to the professions is really important. One of the great things about this country—I know I'm an example—was my ability to access the system...from my parents. I probably would not have been able to go. I would not have been able to afford it.

The real issue for us too is that it really affects what the graduate does after university. I'm an example of a dentist who graduated with minimal debt, and I was able to establish a practice in a very small rural community of 2,000 people in northern Alberta. There was no dentist there. Our problem now is that most of our graduates are forced to go where there are already dentists and work for other dentists as associates.

When you're dealing with access to care, it is critical that our graduates have the ability after graduation to not only have the technical and clinical training necessary to provide services, but as importantly the financial resources to be able to establish or participate in communities that need them. It's not just rural places and inner-city areas. Quite frankly, you graduate with \$200,000 worth of debt—I think Andrew will say that's about the average number. The cost of a dental practice is about \$500,000, and you need a home. A new graduate is looking at \$1 million if he wants to establish a practice. What do they do? They go to Calgary or Toronto.

• (1245)

**Ms. Peggy Nash:** Mr. Chair, can I ask a quick question?

**The Chair:** Ms. Nash.

**Ms. Peggy Nash:** I represent a riding that has both wealth and poverty. In the poor area, in Parkdale, we have a real problem with accessibility to dental services. I know you talked about the dental schools, but what else can we as parliamentarians push for that will help ensure that people who need dental care and can't get it today will get it?

**Dr. Darryl Smith:** I think it's an interesting time; it's an interesting debate. We have to look at the social safety net in Canada and make sure those people who are disadvantaged have access to care. It's almost like the interprovincial mobility issue. It

really varies across the country. I think we need to sit down with the provinces and make sure that those people who are in need are covered in the Canadian social net. It is a provincial thing. Alberta is probably a leader in care. Newfoundland just announced a children's dental plan for all children under 18.

**The Chair:** Okay. Thank you.

Thank you, Ms. Nash.

We'll go to Mr. Eyking, please.

**Hon. Mark Eyking (Sydney—Victoria, Lib.):** Thank you, Mr. Chairman.

I thank the guests for coming here today.

Most of you today had presentations representing professions that have a lot of similar challenges. You talked about tuition, availability of your professions in the future, and the challenges you have in the systems you're in, whether it's government, the private sector, or the public sector.

My question is to all of you, or to anybody who can answer it.

Are there European models out there, mostly in the Common Market, that Canada could look at and that would definitely help your profession? Most importantly, are there any that would get Canadians a better bang for their buck, whether it's out of their pocket or through their tax dollars? In your professions, does the European market have systems in place that are a little more advanced or that would have ideas we could use?

**Mr. Etienne Couture:** I can give you a quick answer.

What we ask for is a mobilization project. In that sense, what we hear from countries such as Norway is that they're going forward with green technologies. This is a statement that we need to hear in Canada. It is something that would mobilize people in a specific direction.

**Mr. James Turk:** One of the interesting things among many European countries is the issue of accessibility. A good number of European countries have no tuition fees. Some, in fact, not only have no tuition fees, but actually provide grants to help students with the non-tuition costs of going to university or college.

What's often pointed out when I observe this is that in Canada a smaller proportion go on to post-secondary education. The most interesting example is Finland, where there is no tuition fee, where there is a substantial grant to each student in post-secondary education to help underwrite it—whether it's college or university—and where their participation rate is higher than Canada's. They're simply a society that has decided that their future, economically and socially, is best advanced by a much more significant investment in post-secondary education.

We would be happy to share information with the committee on some of these European approaches to providing greater accessibility.

• (1250)

**Dr. Darryl Smith:** I don't think it's a European issue. Health care, particularly dentistry, is really a worldwide industry now. Canada has a lot to offer.

I was recently in Dubai. Many of the American universities are partnering with universities, basically taking our expertise and transporting it to another part of the world. In so doing, they are creating economic growth and wealth within our system. I think that's one thing. I know that a number of Canadian universities are also involved, particularly in health care. I think that's a huge area in which we can invest within our university systems. Those university systems will be able to sell not that basic research, but actually the knowledge that other places in this country or throughout this world need.

**Ms. Pamela Fralick:** I'm contemplating what I can say that would be useful in response to that question. My best response is yes and no. It segues a bit on the comments just made. I should be a politician—sorry.

It's not just the European countries; it is around the world. The “yes” part is that we absolutely have to constantly be looking at the other models of health care, whether it's the educational aspect, treatment, insurance, or any of those pieces, but not just in Europe. There are other countries as well; Australia and New Zealand are the obvious candidates that come forward. The U.S., frankly, we can learn from, but a contextual piece needs to be added to that. What Canadians need and what our context is may not work.

What we see in the U.K., for example, is that the U.K. has had tremendous success with its national health system. Many Canadians and professionals look at it and wonder why we don't have that federal national control, as opposed to the provincial-federal-territorial breakdown, yet they're experiencing difficulties now of various types.

There's no time to go into detail, I know, but we have to constantly stay on top to see what is being offered and what we could perhaps borrow to help address some of our issues within this Canadian context. That's the “no” part of it.

**The Chair:** You have time for a very brief question, Mr. Eyking, unless someone wants to comment.

**Hon. Mark Eyking:** My question comes back to Mr. Turk. The idea of free education and tuition has been floated around here. Whether or not you're a mine worker in Sudbury and say “Okay, my tax dollars are going to pay for somebody to have free education or

tuition to be various professions”, shouldn't there be an onus on the individual to pay Canadian society back, whether or not it is by staying in an area and giving services instead of taking off to Oregon, Tennessee, or someplace? Would that be something you would entertain?

**Mr. James Turk:** Before doing this job I spent 15 years working for the trade union movement, with 10 as education director for the Ontario Federation of Labour, so we had a lot of discussions of this, and that point was raised. Interestingly, the trade union movement is one of the strongest in pushing for a significant reduction in tuition, because they see tuition fees as one of the principal barriers that keep working-class kids from going on to post-secondary education.

That said, the overwhelming majority of university and college graduates stay in this country, and the overwhelming majority pay back more than the cost of their education through the higher taxes, as I mentioned earlier, that they pay as a result of the increased earnings they have as a result of their education. In fact, we do have a system for paying for the cost of education. It's called a progressive tax system.

**The Chair:** Thank you.

Thank you, Mr. Eyking.

I'm going to take the final Conservative spot.

**Ms. Fralick:** in your presentation you talked about the worldwide shortage with respect to health care professionals. I certainly concur with that.

Can you give us a brief overview of the shortage? For instance, I hear in the Edmonton and the Alberta region that the shortage is certainly far and away in nurses for all types of care. We hear the second-greatest shortage is in family physicians, and then we hear more into the specialities after that.

Can you give us an overview from a Canadian perspective of where the shortages are?

**Ms. Pamela Fralick:** I would prefer to send you the information and have that at your disposal as you do your deliberations.

At this point, I can reiterate the comment I made earlier that in my experience it is every health profession that is experiencing shortages. It does differ across the country, profession by profession, and there are some charts and tables we can send over.

You hear about physicians and nurses more. They are larger, they are more vocal, and we experience them more frequently.

• (1255)

**The Chair:** Any information you have on that would be very helpful.

**Ms. Pamela Fralick:** We'd be pleased to send that along.

**The Chair:** The second thing, and you may want to send this as well, is in terms of addressing the shortages. The simple-answer solution you hear, which seems to make a lot of sense, is that you need to open more spaces in both nursing and medical schools, so you allow more Canadians to enter. The number I was given anecdotally—I don't know whether it's correct—is that the University of Alberta admitted 150 to their RN program. They had about 2,000 applicants. Is that the solution you're proposing to these shortages?

**Ms. Pamela Fralick:** There are a couple of solutions we need to look at, three that I'll put on the table now, and there may be some other information I can send forward.

One is that we do need to look at maximizing scopes of all health professions. That's been touched on here but not in that language, so we need to make sure all health professionals are doing what they should be doing within their scopes and the full use of that scope. This was touched on a little bit by our chiropractic colleagues. It will lessen the load, whether it's nurses or physicians.

Another point would be advanced practice, which is a growing trend in a number of health professions over the last couple of years. It's quite new. The nurse practitioner is a version of that. There are many health professionals who are able to take on additional duties that would then allow others—to use physicians as the example—to focus on their specialty areas and not have to do the things that others can do.

The third item I'd bring forward is primary health care. The federal government invested a great deal of money, \$780 million, into establishing a new way of delivering primary health care through an inter-professional modality. We're dropping that a little bit. The funding ended. There was an expectation that it would simply continue. I think it needs more investment, so I would urge this committee to take a look at that as well.

**The Chair:** Thank you very much for that; I'm mindful of my own time now.

Mr. Turk, I want to return to the issue of research. You told us that basic research is being devalued in the current political system or the current government.

I've been on this committee for seven years. Perhaps I can review how the federal government actually funds research.

The NSERC budget in 2006 was \$914 million. All basic research grants and scholarships do not require matching funds. There is a small program in commercialization. The CIHR budget of \$900 million...very famous research by Dr. Ray Rajotte out in Alberta.

Most of the SSHRC budget is geared toward basic research. If you look at CFI, \$4 billion is for infrastructure funding; 40% requires 60% matching, usually matched by the provincial government and an institution. If you look at indirect costs of research, that is geared

almost explicitly toward basic research. If you look at big science projects, like the synchrotron or the SNO lab, that's geared toward basic research. You have some smaller programs, new networks of centres of excellence and centres of excellence and the commercialization of research.

The criticism of federal government funding research, it seems to me, would be that we don't fund applied research enough. The facts that I have, or that are certainly available, show that the federal government funds basic research a lot more, as a proportion, than it funds applied research.

So I don't understand why you're making the statement you make in your presentation.

**Mr. James Turk:** I think I began my presentation on research by indicating that the federal government had significantly increased the funding for research. What I was talking about was the kind of pressure there is to focus research in more applied or more commercially viable areas.

If you look at the presentations of the granting councils to you; if you look at the discussion in the research community; if you go back to four or five years ago, when the Prime Minister's advisory council on science and technology created the expert panel on the commercialization of university research; if you look at the discussions, which I'm sure all of you have been part of, around the concept of innovation, which does not mean innovation as the dictionary would define it but means commercialization, all of that will demonstrate that the climate is very much one of trying to skew things toward what will pay off. And that's understandable, because people want benefits from the research they fund. But the way to skew things is to encourage, informally and formally, more "commercialize-able" ventures.

I guess all I'm saying is that we're not opposed to commercialization. In fact, we benefit from commercialization. It's just that we can't forecast what's going to be done. We're trying to dampen down the pressure to have a commercialization screen applied, whether by the federal government or by granting councils or by universities, which are spending enormous amounts of moneys in technology transfer offices and various other initiatives.

So very much the climate in which we work is where the commercialization side of things is touted. We want to keep reminding...and I'm very happy to hear your words and your view that there is a great value attached to basic research. We certainly think that's justified.

• (1300)

**The Chair:** But isn't the problem here with the word "commercialization"? Again, if you look at the diabetes example, the Edmonton Protocol, this was a 30-year research undertaking that still continues today. So it's not whether you commercialize the project, it's whether after a 30-year period of research you actually have something where you can take diabetic patients off insulin. That's the goal.

I think the pressure, whether from the federal government, from other agencies, or from Canadians, is that they want to see research that either lengthens or improves their lives, particularly in the medical research area. It's not whether a bunch of money is made, it's whether a patient like Bob can get an islet transplant and walk around and no longer take insulin.

I mean, that's the pressure, and that's a noble goal.

**Mr. James Turk:** Yes, and I think there's no disagreement. The question is simply what's the best way to realize that goal?

I would just cite, in concluding, a comment made by Noam Chomsky. He may be known to many of you as a left-wing critic of American foreign policy and also as one of the most respected linguists in the world. He was giving a talk to our counterpart

organization in New Zealand a year or two ago. Chomsky said to them: You know, I've spent my entire life at the Massachusetts Institute of Technology, and for most of the 35 years I've been there, the principal source of funding was the U.S. military, through the Pentagon. More recently it's been corporate funding. What I would say is that things have gotten worse as it's gone from the military. My whole life I've been a critic of the military, but the military, the Pentagon, understood that when it undertook funding, it funded basic research and had faith that ideas of use to it would come by trusting scientists to do what they thought was useful. Increasingly nowadays we're getting more demands that the researcher be able to identify realizable goals as a result of the research as a condition of getting funding.

So that's what Chomsky said, and I found it ironic in a certain sense. But I think large sections do understand the value of basic research.

**The Chair:** I'd love to continue the discussion, but I'm over my own time.

I want to thank all of you for coming today. If you have any further information, please submit it to the clerk, and we will ensure all members get it.

Thank you very much for the discussion.

Thank you, members.

The meeting is adjourned.

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