

The Magazine of the Rotman School of Management

Rotman

Winter 2006

The Health Issue

Solving Canada's
Health Care Mystery

Also, Andrew Grove,
Health Care Design,
and An Investor's Guide
to the Avian Flu



Joseph L. Rotman School of Management
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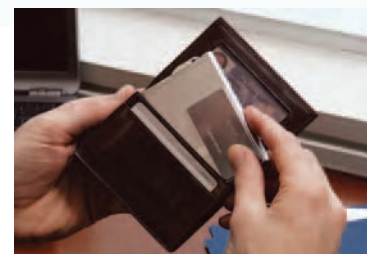
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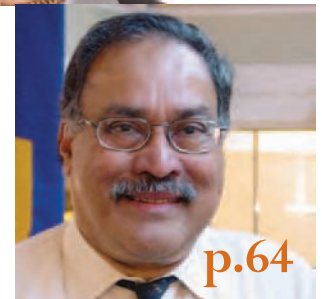
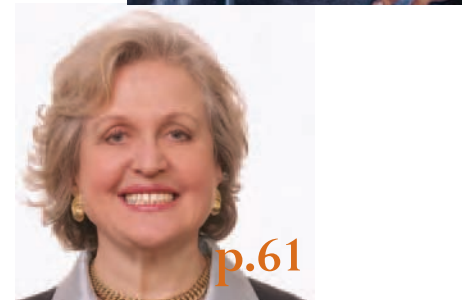
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From the Dean: **Roger Martin**

The Health Issue

It's been said that the greatest opportunities for innovation often lie in industries that aren't working properly. If this is true, then possibilities abound to make the health care sector more efficient.

The patient-physician relationship has always been the cornerstone of the health care experience. But the system that has emerged to support that relationship has become exceedingly complex, creating gaps in the care process that produce both sub-optimal and costly results. Today's patients are forced to navigate a system characterized by numerous unaligned programs and services, as well as conflicting and overlapping boundaries.

The numbers are staggering: each day, Canadians rack up a \$332-million medical bill; in 2003, we spent \$53 million daily on drugs alone – up 45 per cent from 1999; and although we think of our system as publicly-owned, only 70 per cent of health care costs are covered by public funding.

Not all the news is bad: from 1994 to 2004 – a period that includes both boom and bust – the health care sector produced an annual return of almost 15 per cent, beating the 12 per cent return for the S&P 500 Index. And some 2,500 companies – from medical-device producers to private MRI clinics – help keep our system running, employing 1.73 million Canadians. In this issue of *Rotman Magazine*, we put health care under the microscope in an effort to better understand the challenges and opportunities it presents.

Canada boasts a sophisticated network of world-class health care providers. We spend aggressively in global terms on research, and our universal coverage of the population is considered a model by many nations. Why, then, do so few Canadian health care firms sell their products globally? I attempt to uncover the reason in **The Canadian Health Care Mystery: Where are the Exports?**, on page 4.

Canadian physician and economist Dr. **Timothy Evans** is at the forefront of the global health care battle. In our **Interview with a Health Guru** on page 10, he talks about his role with the **World Health Organization's** Evidence and Information for Policy Cluster, the importance of global surveillance systems for disease outbreaks, and how business leaders can help move the global health care agenda forward.

Organizations of all types are increasingly looking to the field of design to get in touch with their customers' unarticulated needs and desires. In **Managing Change, By Design** on page 20, IDEO's **Peter Coughlin** and Ilya Prokopoff discuss three design tools for creating 'futures' based on the one thing that seems to remain relatively stable, even in times of great change: human behaviour.

We live in a world where the spread of disease in birds or pigs in Cambodia or Indonesia could profoundly impact major cities around the world. **BMO Nesbitt Burns** and **Harris Bank** Chief Economist **Sherry Cooper** looks at the possible economic effects of a global flu pandemic in **An Investor's Guide to the Avian Flu**, on page 30.

The truly healthy company is sound not only financially, but also in the physical and mental well-being of those who make up the organization, according to **Institute for Healthcare Improvement** CEO **Donald Berwick** and Texas A&M University's **Leonard Berry** and **Ann Mirabito**. They show how business can set the agenda for a healthier future, in **A Health Care Agenda for Business**, on page 36.

Managers in professional organizations such as hospitals are influenced by a multi-

tude of organizational goals. Sandra Rotman Chair in Health Sector Strategy **Brian Golden** looks at how the competing pressures they face results in cognitively-complex views of their organizational responsibilities, in **Culture Clash: The Professional-Manager Dichotomy**, on page 40.

Elsewhere in this issue, Medical and Related Sciences (MaRS) CEO Dr. **Ilse Treurnicht** discusses the commercialization agenda on page 24; Associate Professor of Business Economics **Mark Stabile** takes an in-depth look at the Supreme Court of Canada's ruling that Quebec's health care system must be 'two-tier' in order to be constitutional, on page 48; Harvard's **Regina Herzlinger** discusses the entrepreneurial benefits of consumer-driven health care on page 61; Koffler Chair in Pharmacy Management **Joseph D'Cruz** discusses some important design principles for Ontario's Local Health Integration Networks on page 64; and NYU's **Marion Nestle** talks about the war on obesity on page 72.

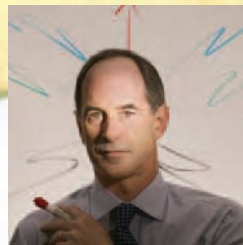
Unless we can arrive at an integrated view of how to finance and run our system, the extraordinary collective achievement that is the Canadian health care system won't be sustained. What's needed is realistic cooperation between all the players – hospitals, drug makers, insurers, consumers, doctors and employers. All parties have to find a way to address spiraling costs and patient access, while preserving financial incentives for innovation and quality care.

The business community can help set the agenda for a healthier future; and as **Andy Grove** asks on page 60, "If not now, when?"



The Canadian Health Care Mystery:

Where are the Exports?



by Roger Martin

At first blush, it is a mystery that Canada does not produce many globally-competitive health care firms. But closer scrutiny unveils the problem; and without significant changes to our demand conditions, the situation will be quite stable.

Health care represents the biggest application by far of the resources that Canadians collectively create: each year, we spend over \$100 billion on it – 12 per cent of GDP, and the percentage is rising. Canada boasts a sophisticated network of providers, many globally-recognized hospitals, and a number of major centres for health research. We spend aggressively in global terms on health research, which is supported nationally by the **Canadian Institutes of Health Research (CIHR)**. Our single-payer system, with universal coverage of the population, is considered a model by many. Indeed, more so than any other feature, Canadians believe that our health care system is what makes us unique.

But against this backdrop lies a mystery: why do so few Canadian health care firms sell their products and services in the international market? Only nine sell as much as \$100 million of any product or service to customers outside the country, with total sector sales outside Canada of less than \$5 billion. This sector total compares unfavourably with the foreign sales of individual firms such as **Bombardier** at \$22 billion, and **Magna International** at \$14 billion; overseas health-care sales are even dominated by the export of sawn logs, at \$9 billion.

One would think that this sophisticated sector would have bred numerous globally-competitive export powerhouses. To better understand why it hasn't, it is necessary to step back and look at the conditions that tend to cause internationally-competitive enterprise to flourish.

The Drivers of Global Competitiveness

Michael Porter's groundbreaking work on competitiveness suggests that four inter-related factors work together to produce globally-competitive firms from a given environment, as depicted in **Figure One**.

Porter's model is fundamentally a model of pressure and upgrading: a favourable context is one that creates con-

prices down without regard for quality or innovation, they will contribute to producing a non-competitive industry. However, when consumers are demanding and sophisticated – as the Japanese are with consumer electronics and the French with wine – they will make serving foreign markets seem a breeze in comparison to the tough home market.

Pressure for upgrading is supplied by sophisticated and demanding customers, whose demands spur local firms to innovate in order to upgrade their offerings.

tinuous pressure for firms to upgrade the source and sophistication of their advantage, while at the same time providing support for the upgrading process.

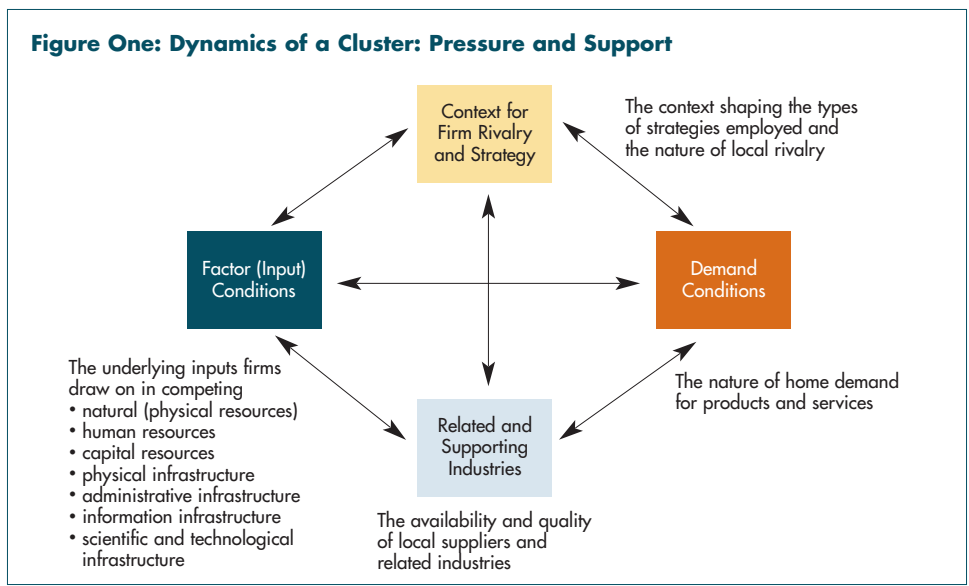
Pressure for upgrading is supplied by sophisticated and demanding customers, whose demands spur local firms to innovate in order to upgrade their offerings. It is vital that customers not be easy to satisfy, and thereby relentlessly push firms to improve their offerings. However, they also need to be sophisticated in their understanding of the nuances of product improvements, and willing to pay more for a better product.

If customers are simply aggressively demanding – like North American automobile OEMs have been over the last decade – and simply drive their providers'

It is also helpful if the pressure from customers anticipates the nature of demand elsewhere in the world. For example, American demand for ever-bigger automobiles in the 1960s and 70s did not help the U.S. 'Big Three' in most international markets, where consumers wanted smaller, more fuel-efficient automobiles. **MTV**, on the other hand, spread quickly around the world because American tastes for music videos anticipated similar tastes emerging around the world. And of course, it is always helpful to have many customers, as this enables providers to learn, from their individual needs, how to upgrade a particular product or service.

If many firms compete vigorously for the same customers, they will have a powerful incentive to innovate and upgrade, and this is particularly the case when all of the providers hail from the same geographic area, where they all face the same labour costs, tax rates, transportation logistics, etc. Given the lack of advantages in these areas, they have little choice but to win customers by out-investing and out-innovating their rivals.

Support for upgrading is provided by an abundant supply of 'factor inputs', including basic factors such as natural resources and capital resources, as well as advanced and specialized factors such as scientific infrastructure and pools of specialized labour. As countries become more advanced, the quality of support is increasingly influenced by advanced (e.g. graduate-educated labour)



and specialized factors (e.g. research universities) rather than basic factors (e.g. raw material supply, abundant unskilled labour), because basic factors can be readily purchased from abroad.

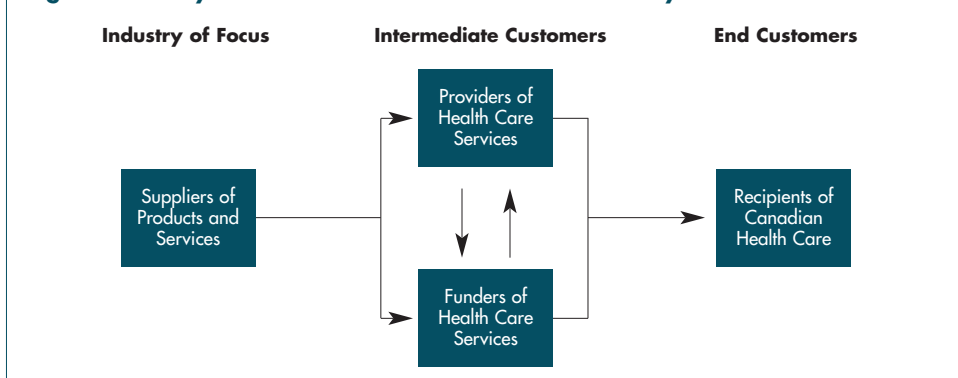
Finally, support for upgrading is enhanced by the presence of high quality related and supporting industries. This includes suppliers of inputs such as raw materials or capital, like venture capitalists, or producers of products or services that are sold in conjunction with the firms' products. For example, for computer hardware firms, the presence of specialized software producers (e.g. Value Added Resellers or 'VARs') who sell in conjunction with them can help them meet customer needs without needing to make all the investments themselves.

The key to competitiveness does not lie within one or another of the four drivers, but rather in their combination: each reinforces the others. For example, the presence of numerous competitors draws skilled human capital, educational institutions and related and supporting industries, thus improving factor conditions. This in turn enables firms to innovate more quickly and effectively, which in turn makes customers value the product or service more highly, and at the same time, become ever-more sophisticated in their demands. And this, in turn, encourages yet more innovation and upgrading, which is aided by related and supplying industries that are drawn to the location by the vibrant cluster of rivals. Industries that rely on one driver – and often it is a factor condition advantage like low-cost raw materials or labour – will likely find any advantage they generate to be fleeting.

The Canadian Conundrum

In this context, it is not difficult to understand the source of Canada's problem: simply put, we have a decidedly-unbalanced 'diamond' in our health sector. To understand the weakness of the Canadian diamond, it must be analyzed from the perspective of the suppliers of products and services to health care providers. As shown in **Figure Two**, the immediate customers for potential products and services are health care providers (hospitals, clinics, doctors, nurses) or those who fund them (governments or insurance companies), while the eventual customers are the patients of the health care system.

Figure Two: Key Elements of the Canadian Health Care System



The fundamental question is, to what extent do the suppliers to health care providers benefit from the kind of pressure and support for upgrading and innovation that is associated with globally-competitive firms? Let's look at each point of the diamond in turn.

Arguably, the factor conditions represent a strength for Canada in this sector: there is significant funding of medically-related research and high production of medically-trained professionals; there is a broad and deep medical infrastructure, including many world-class teaching hospitals; and as mentioned earlier, this is a huge sector with massive resources applied against it. So arguably, any would-be supplier of products and services to the health provision sector should face attractive factor conditions in Canada.

Demand conditions are another story. Suppliers face a very powerful 'monopsonist' intermediate buyer – the single payer – in each jurisdiction. This is a situation less conducive to firms entering a business, because the monopsonist buyer tends to operate as a demanding but unsophisticated buyer. Governments are so concerned about cost containment that their overwhelming concern is price. In addition, their budgets are so segmented that it is hard for suppliers to create complex value propositions, which may involve increasing one budget item (e.g. drug costs) to produce a still greater reduction in another budget item (e.g. hospital costs).

Compounding the situation is the fact that the monopsonist buyer is also a monopoly supplier. Canadian patients typically face a monopoly supplier for medical services, and monopolists don't really need

to be highly responsive to customer demands. And by and large, they aren't: the monopoly health provider dictates what drugs are on the formulary, what medical devices can and cannot be purchased, and how long waiting periods need to be to minimize costs to the system. Fabulous new ideas from their suppliers aren't exactly at the top of their wish list.

The Outsourcing Factor

Outsourcing activities to more effective suppliers tends to be a result of a competitive environment that creates relentless pressure to improve a firm's value equation. In the case of Canadian health care, there is little pressure from rivals or customers for improving effectiveness through outsourcing. In fact, the only potential source of pressure is the government, but this source is blunted by the framing of the outsourcing issue as a question of 'privatization' of health care – widely considered a dangerous thing.

The decision by a monopoly supplier to outsource can be a powerful driver of new business creation. No situation demonstrates this better than the contrast between **Ontario Hydro** and **Hydro Quebec**. Faced with exactly the same circumstances – the need to electrify their large and physically-challenging jurisdictions – they chose opposite tracks: Ontario Hydro assembled a huge internal engineering and construction operation, which built its facilities; while Hydro Quebec created considerably more modest internal operations and outsourced much of the construction to local engineering consulting firms.

The contrast in results is dramatic. Hydro Quebec was instrumental in build-

ing two firms that would first go on to global prominence separately, then later merge into **SNC-Lavalin**, one of the most globally-competitive firms in the engineering and construction industry. On the other hand, Ontario Hydro did not contribute to the creation of any notable globally-competitive firms, and had to lay-off the bulk of its construction and engineering workers once the electrification had been substantially completed.

Returning to the health sector, the net result is that the demand conditions facing Canadian would-be suppliers of new products and services to health providers are weak and do not contribute to innovation and upgrading by suppliers. Health care providers are overly demanding, but less sophisticated, and not as open to innovation as they would be if they faced more competition and more demand from patients.

This is in stark contrast to American suppliers of new products or services to the U.S. health care providers. By and large, they face a wider variety of intermediate customers – both providers and funders thereof, all of whom face demanding end customers that have multiple choices of providers. It is no surprise that this environment has produced powerhouse exporters in pharmaceuticals, medical devices, medical technologies, and medical software and services.

The demand characteristics in Canada render would-be suppliers less-inclined to undertake such initiatives, and if they do, they are less inclined to invest in the kind of upgrading and innovation that is required for global competitiveness. The lower the level of entry, the less productive the firm rivalry among the small number of competitors. This further diminishes the inclination to innovate and upgrade among those who choose to compete. In turn, this has a negative impact on related and supporting industries, which only spring up in response to the presence of a robust cluster of rivals in a business, because they benefit from having a number of customers to supply. This is particularly true for a key related and supporting industry: venture capital.

The Role of Venture Capital

Specialized venture capital firms spring up in response to the availability of entrepre-

neurial firms with attractive prospects to finance: if there are few firms, there will be even fewer venture capitalists, which in turn makes it harder for firms to establish operations, and so on. In addition, venture capitalists tend to be nervous about financing firms that face monopsonist customers; they would rather have a firm serve a multitude of customers, so that an adverse decision by one customer can't destroy a firm they have financed. One major contagion effect of this is on factor conditions – in particular, the availability of business entrepreneurs in health-related fields. The Canadian health system produces a wealth of medical scientists, doctors and nurses, but it won't produce entrepreneurs in the health-related fields if there are few health-related startups and venture capitalists.

Typical of Canada's predicament is Toronto's biopharmaceutical cluster. Despite having excellent human and capital resources available to it and being the eight-largest in North America, it represents untapped potential for Ontario's competitiveness and prosperity. In spite of impressive factor conditions, the cluster has not produced many world-leading companies; wages are well below levels achieved in comparable U.S. clusters; patent output is lower than its fair share, and per capita research and development is well below levels achieved in many other developed countries.

As is so often the case, the cluster suffers from a poor environment with respect to demand conditions. Pharma companies are not benefiting from the pressure created by sophisticated customers; the dominant buyer is so concerned about cost containment that its overwhelming motive is to keep the pressure on low prices. With fundamental weaknesses at the level of demand, the support from related and supporting industries has not developed to the level observed in other regions. This is in contrast to U.S. suppliers of new products and services to their health care providers and payers: that environment has produced a powerhouse of innovative providers of pharmaceuticals and technologies.

Towards a Solution

Given the constraints of the single-payer system to which we are apparently committed, what can be done about the dearth of glob-

ally-competitive Canadian health firms? Following are five steps that can be taken to improve demand drivers in the sector.

1) Encourage Competition Among Providers

Health care providers will become more demanding and sophisticated customers to the extent that they are driven to compete by their customers. If health care providers have a monopoly, their customers can't be demanding, and as a consequence, the providers won't be demanding and sophisticated either. Alternatively, if there were many more specialized clinics and hospitals that competed to outdo one another, they would be more inclined to demand innovative products and services from firms who could supply them.

Within the current system, it is not easy to conceive of a dramatic positive change in the level of competition among health care providers. However, any movement towards more competition will enhance the demand quality of health care providers. For example, the system would benefit from having a greater number of specialized clinics like Toronto's **Shouldice Clinic**, which specializes in hernia operations and has made dramatic innovations with that procedure.

2) Enforce More Outsourcing

It is essential that health care providers act more like Hydro Quebec than Ontario Hydro with respect to outsourcing to entrepreneurial firms. In essence, Canada needs to have more of its health care spending end up in the hands of entrepreneurial firms that are given the incentive to innovate and upgrade for the global market, rather than remaining in the bowels of large health care providers.

The default assumption needs to change from, "this procedure must be performed within the health care provider organization unless a compelling case can be made to outsource," to "this procedure must be outsourced, unless a compelling case can be made to perform it internally". This is critically important, because with a greater revenue stream available to entrepreneurial firms, venture capitalists will be more inclined to finance these firms. This will be doubly reinforced if there is more competition among health care providers, because

the venture capitalists will no longer have to fear the power of the monopsonist. With more firms serving health care providers, there will be more rivalry, greater likelihood of related and supporting industries taking shape, and greater development of health sector entrepreneurs.

3) Enforce More Sophisticated Purchasing by Providers

Regardless of how unfavourable the demand conditions, rivalry, and related and supporting industries are, the government can attempt to enforce more sophisticated consumption on its own part and on the part of health care providers. In its decisions on drug formularies, it needs to get beyond the funding silos to look at overall benefits of innovative new medications or procedures. If individual ministries or budget managers can't look beyond their narrow interests, then new mechanisms will have to be created that do so.

Similarly, hospitals and clinics must become more sophisticated in their demands. If they can't do so because of budget constraints, or a lack of competitive pressures, it may be necessary to create an 'overlay structure' of some sort, to ensure that as many activities as possible are outsourced and that, where possible, entrepreneurial ventures are utilized to provide new products and services.

4) Provide Targeted Support for Venture Capitalists

While it is tricky to find an effective way to support venture capital in the health sector, it warrants an attempt. The Accounts Receivable Insurance program of the **Export Development Corporation** (EDC) provides a model. EDC recognized that new potential exporters can be dissuaded from exporting due to legitimate fears that they might experience receivables problems with foreign buyers, and that those problems would be difficult to solve due to foreign laws in legal systems that favour the home-country debtor. EDC helps Canadian exporters overcome these concerns by providing insurance for their foreign accounts receivables. This highly-targeted service is designed to help potential exporters overcome obstacles that might prevent them from getting started.

The greatest early danger for a venture capitalist in funding a start-up is the first 'reference sale' – getting the first trial or sale with a sufficiently prestigious client that, if successful, provides a powerful reference for other would-be clients. Without that first reference client, a start-up is almost certain to fail. Perhaps a program could be created that enables venture capitalists to apply to a federal agency for 'reference sale' insurance; a panel of medical experts could decide whether to insure a venture-funded start-up against the possibility of failure to secure a reference client (within a certain period of time and further investment), thereby encouraging the venture capitalist to fund or continue to fund the start-up in question. As with the EDC program, one would hope that in the majority of cases, the insurance would not cost the agency a penny, and that the agency investment would be restricted to those situations in which a reference client cannot be acquired.

Hopefully, the award of reference-client insurance would have the beneficial side-effect of enhancing the credibility of the start-up with potential reference-clients, in the same way receiving a SSHRC or CIHR grant confers added credibility on a grant recipient. This service could provide a 'pump-priming' effect that would cause more venture capital money to support start-ups in the medical sector.

5) Support for Health Sector Entrepreneurs

It is similarly tricky to find an effective way to support and encourage would-be entrepreneurs. One approach would be to further strengthen the commercialization efforts of Canada's research-intensive universities, by giving researching professors more support to take their ideas from lab to market. However, it is somewhat questionable just how much more entrepreneurship can be generated by pushing scientists harder and further.

Alternatively, an initiative could be developed to foster entrepreneurial demand for commercialization of health-related innovations. Business schools could create a program that brings together research scientists and professors interested in commercializing their health-related ideas with like-minded entrepreneurs.

The notional design of such a program could be as follows: a class would consist of 15 scientists and 15 entrepreneurs; the program would have three modules of three-to-five days each, with significant gaps between each. The content would be focused on issues related to commercialization of health-related innovations – i.e. product/service development; marketing and sales in the health sector, etc. The first module would provide an introduction to the content, after which the scientists and entrepreneurs would pair off to create a health-related business plan. The second module would examine the draft business plans, providing critique for their improvement. The pairs would refine their business plans between the second and third modules, in order to come to the third ready to present to a board of venture capitalists. The desired output would be several projects that would gain immediate venture capital support, plus a number of research scientists and would-be entrepreneurs that have a much better understanding of innovation and entrepreneurship in the health sector.

Concluding Thoughts

While at first blush, it is a mystery that Canada doesn't produce many globally-competitive health care firms, closer scrutiny shows that we get exactly what we should expect, and without significant changes, the situation will be quite stable.

Currently, health care competition in Canada is a zero-sum game where the participants divide value instead of creating it, because competition is focused primarily on containing costs. This restricts choice and access to services instead of making health care better and more efficient. We can dramatically improve the production of globally-competitive health care product and services firms, but only if we work to significantly improve the demand side of our innovation equation. **R**

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Roger Martin is dean and professor of Strategic Management at the Rotman School and director of the School's AIC Institute for Corporate Citizenship. He is also chair of Ontario's Task Force for Competitiveness, Productivity and Economic Progress. Recently named an 'Innovation Guru' by *BusinessWeek*, he is the author of *The Responsibility Virus: How Control Freaks, Shrinking Violets – And the Rest of Us – Can Harness the Power of True Partnership* (Basic Books, 2002.)

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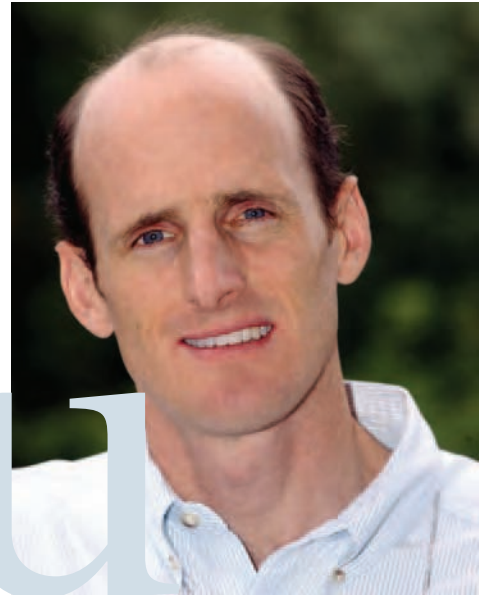


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Interview with a Health Guru



Dr. Timothy Evans

by Karen Christensen

Canadian physician and economist Dr. Timothy Evans talks about his role with the World Health Organization's Evidence and Information for Policy Cluster; the vital importance of global surveillance of contagious diseases; and why charity alone cannot solve the world's health problems.

Karen Christensen: What aspects of the global health agenda does the WHO's Evidence and Information for Policy Cluster focus on?

Timothy Evans: We focus on three critical resources that the world's health systems need to meet performance objectives. The first is knowledge resources. By knowledge, we mean vital information on health status or evidence-based health care interventions that may be generated by formal research or derived through experience. In addition, we believe that knowledge must be managed so that it reaches the people who need it to make appropriate decisions. The second is financial resources. Our main focus is on how health systems can be financed in a fair and equitable way. Third, we look at the human resources side – how

to generate sufficient numbers of workers with appropriate skills and how to manage the workforce to get the right types of people to the right place at the right time.

KC: In your view, what is the single greatest global health challenge at the moment?

TE: I think it's the challenge of equity, and by that I mean, the provision of equal opportunities for health and health care as well as protection from adverse consequences of accessing health care, including financial consequences. Worldwide, over 100 million individuals are impoverished annually through out-of-pocket payments for health care. This failure of health financing to protect the ill from impoverishing health-care expenditure violates Hippocrates' 'do no

harm' principle. Addressing the financing challenge in poor countries entails mobilizing more resources and also building the institutions that can effectively pool resources and purchase services.

KC: What are some key challenges the WHO faces in strengthening the world's health systems?

TE: At the moment, health systems in poor countries are faced with tremendous opportunities and challenges. Encouragingly, multibillion-dollar global funds can be drawn upon today to address the overwhelming burden of infectious diseases. However, this concentration of resources is accompanied by a 'perfect storm' of external agents recommending all sorts of plans – for implementing services and monitoring

and evaluating outcomes. This maelstrom of activity only magnifies the frailty of underlying systems. In a country with a severe shortage of health workers, for example, workers can be drawn disproportionately towards externally-funded programs and leave critical services unattended. It is clear that the human resources crisis is a major constraint to the provision of essential services. We estimate the world is short of four million needed health workers. Africa alone faces a shortage of one million. So even when effective, low-cost interventions are available, countries often lack the personnel to deliver them.

KC: Many believe that the current global health system is failing people in developing countries. What is your view?

TE: Perhaps I'm too much of an optimist, but I think we're doing much better on a number of fronts than we were a decade ago. If you had asked someone ten years ago whether there would be three multi-billion dollar funds for specific problems like childhood immunization, HIV, or tuberculosis, people would have thought you were delusional; but we've actually got that at the moment. There is also significant progress in developing new medicines and other technologies vital to the health of people in poor countries. I think the world has rallied in a significant way, but there's a long way to go, and it will require a commitment to stay the course for 20 to 30 years if we are to see significant changes. My message to doctors in Canada would be, 'You're relatively well off and lucky from a global perspective; you should consider devoting some of your talent and energy to global health challenges'.

KC: You have pointed out that something as simple as mosquito nets could dramatically reduce childhood deaths from malaria. If it's that easy, why haven't these been provided?

TE: One of the greatest challenges we face is figuring out how to speed up delivery of things that we know work well, and the mosquito nets, or 'bed nets', are a perfect example. We learned over a decade ago that their use significantly reduces deaths among

young children living in Africa south of the Sahara, primarily by protecting them against malaria. The challenge then became an operational one: how do you transform a system where bed nets are not available into one in which they are? One immediate problem is that there are not enough bed nets to go around – but that is not the only problem. Let's say a corporation donated a million mosquito nets to a needy country. That would be a great thing, but the outcome might not be what you think. The nets might sit in a warehouse somewhere, or they might get distributed once, but the need for upkeep and repair of the nets wouldn't be addressed. These dual needs – reaching people in the first place, and also providing a sustainable and affordable mechanism for continued access – require a lot of thoughtful planning. You have to address delivery, supply chain, affordability and incentives to encourage the distributors to work hard at improving distribution, and that is just a partial list. The good news is, I believe the world is waking up to the notion that charitable donations are not enough in themselves; countries need help with putting needed strategies into place and sustaining them.

KC: Is there a role for global business leaders to play in moving this agenda forward?

TE: Absolutely. Business leaders have been dealing with problem-solving around complex systems issues for quite some time. The primary challenges of health systems related to more equitable access to services or improving quality and safety of care are ones where the expertise of business leaders could be usefully tapped. If you look at the mosquito nets issue, there's considerable evidence suggesting that private-sector distribution mechanisms may be more effective than public-sector mechanisms; so tapping into the experience of the business sector in distribution of similar sorts of products would be a fantastic contribution for them to make.

KC: You have said that global disease outbreaks like SARS and avian flu underscore the need for "an efficient global system of outbreak surveillance

and response." What might this look like, and how far off is it?

TE: This is another area where we've made a lot of progress in recent years, in part because of SARS, which took everyone by surprise and underscored the importance of effective global intelligence and reporting of outbreak diseases. We must start thinking about 'one-world health,' and recognize that if our focus is on the globe, rather than on individual countries, we will think more rationally about how to organize efficient surveillance systems. Outbreak surveillance, by tradition, has been performed by individual nation states; but the problem with that approach is that global surveillance is only as strong as the weakest link: you could have fantastic, state-of-the-art surveillance in Canada, for example, but if the U.S. has miserable capability, then the Canadian investment isn't worth much. Microbes recognize no borders – we know diseases have travelled the globe since the time of the Black Plague, and probably even earlier. In today's world, they travel faster. In an era where information and communication technologies are incredibly powerful, the ability to report outbreaks virtually instantaneously is both possible and imperative. The WHO has recently created a **Strategic Health Operation Centre** – a state-of-the-art communications centre in a fully-secure environment, which will be critical in the context of pandemics such as human influenza. We have to get to the point where, if an outbreak occurs in a remote area of the world, we can mobilize a team of experts to be on site to respond effectively within hours.

KC: You have said that a number of health issues benefit enormously from more effective global cooperation rather than independent, uncoordinated efforts. Can you give us an example?

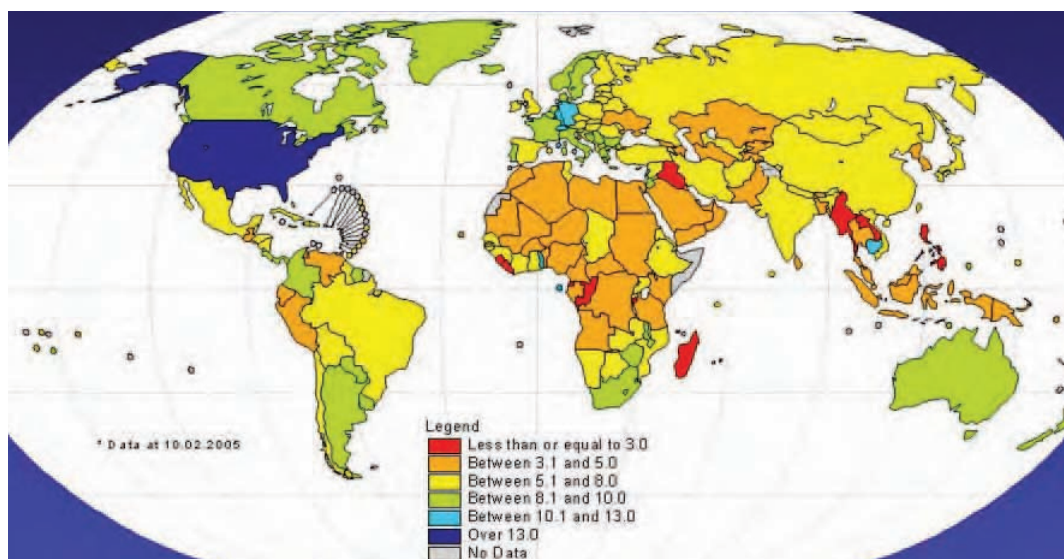
TE: One good example is the need for research on innovative approaches to infectious diseases that strike mainly poor people. A malaria vaccine or a new drug for tuberculosis could save millions of lives, but it's hard to interest the private sector in investing in research and development in these areas, because resulting products

would not represent a sufficiently lucrative market. The world's leaders could endorse transnational, virtual drug or vaccine development efforts by pooling funding and investing in innovative public-private partnerships. Such partnerships would allow countries to share the risks in such ventures and permit more efficient use of available resources.

KC: If you could have one country's health system transferred to all nations, which would it be? Does an exemplary system exist yet?

TE: Being a Canadian, I'd patriotically suggest that it should be the Canadian system. Since I'm not living there at the moment, I can think about it romantically, without a real understanding of all the trials and tribulations it's facing. At present, all health systems are obliged to manage some very tricky things. We've got rapidly-changing demographics, shifts in populations, transitions in the diseases and risk factors we're dealing with, higher consumer expectations, new technologies – all sorts of challenges that give headaches to every minister of health and head of state in the

Figure One: Health Spending Around the World (share of gross domestic product, %)



world. The health sector has increasingly become a key focus of political discourse. It's a tough sector to manage, and nobody has got it right. However, having said that, there are some systems that seem to perform particularly well, and those are systems where there's a commitment to universal coverage and ensuring that basic packages are accessible to all. These systems seem to perform better on both equity and efficiency criteria in contrast to systems

where there has been more of a 'piecemeal' approach. As far as developing countries are concerned, there are a number of places that have achieved a great deal with minimal resources. Costa Rica, for example, has done particularly well, as has Sri Lanka. I think it's important to appreciate their successes, given the relatively modest investments they've made. But overall, I'd hesitate to call any model 'exportable,' given the importance of context.

United Nations Millennium Development Goals

The United Nations Millennium Development Goals are an ambitious agenda for reducing poverty and improving lives that world leaders agreed on at the Millennium Summit in September 2000. For each goal, one or more targets have been set, most for 2015:

1. Eradicate extreme poverty and hunger

Target for 2015: Halve the proportion of people living on less than a dollar a day and those who suffer from hunger.

More than a billion people still live on less than US\$1 a day: sub-Saharan Africa, Latin America and the Caribbean, and parts of Europe and Central Asia are falling short of the poverty target.

2. Achieve universal primary education

Target for 2015: Ensure that all boys and girls complete primary school.

As many as 113 million children do not attend school, but the target is within reach. India, for example, was projected to have 95 per cent of its children in school by the end of 2005.

3. Promote gender equality and empower women

Targets for 2005 and 2015: Eliminate gender disparities in primary and secondary education preferably by 2005, and at all levels by 2015.

Two-thirds of illiterates are women, and the rate of employment among women is two-thirds that of men. The proportion of seats in parliaments held by women is

increasing, reaching about one third in Argentina, Mozambique and South Africa.

4. Reduce child mortality

Target for 2015: Reduce by two thirds the mortality rate among children under five.

Every year nearly 11 million young children die before their fifth birthday, mainly from preventable illnesses, but that number is down from 15 million in 1980.

5. Improve maternal health

Target for 2015: Reduce by three-quarters the ratio of women dying in childbirth.

In the developing world, the risk of dying in childbirth is one in 48, but virtually all countries now have safe motherhood programmes.

KC: While at the Rockefeller Foundation [where Dr. Evans was director of health equity for six years], you worked on an initiative to ensure that everyone with HIV/AIDS in Africa has access to good treatment. What is the status of that initiative?

TE: In 2001, the Rockefeller Foundation held a meeting to prepare for access to treatment for HIV/AIDS, and out of it came an initiative known as MTCT-Plus. It was aimed at preventing maternal-to-child transmission of HIV, but also at ensuring that mothers infected with HIV/AIDS would have access to treatment, so they could continue to raise their children. This initiative got a nice boost from the U.S. foundation community, which put in about \$50 million, and very quickly, we were able to set up about a dozen treatment sites in Africa. Serendipitously, in subsequent years, the Global Fund to Fight AIDS, Malaria and Tuberculosis and the Presidential Initiative in the U.S. came along, and in many cases, they piggy-backed on these initial projects and further supported them. MTCT-Plus was an early entry into the treatment field. Just three or

four years ago, the treatment sites were quite modest. But because the program has been followed up with much larger resources, those sites are now handling large numbers of people. I've had a chance to visit some of them, and it's nice to see district hospitals and village clinics buzzing with activity, and people really getting good treatment – not just for HIV, but for a whole range of common illnesses.

KC: Your family has been instrumental in shaping the national and global health care sector for many years. Where does your motivation come from?

TE: I've always lived by the adage, 'choose your parents wisely', but I can probably claim more credibly to have wisely chosen my spouse, with whom I share many common values and interests. I have also been afforded exceptional opportunities to cultivate my interests. Having finished high school at a relatively young age with no strong sense of direction, I spent a year working in Africa with **Canada World Youth**, which helped tremendously in guiding my choices in post-secondary education. Later, working

in West Africa in villages where close to half of the adult population suffered from river blindness, I was inspired by the resilience of these supposedly deprived people, and the richness of their lives, as well as with the potential for public health to make a meaningful difference.

KC: Are you hopeful that the United Nation's Millennium Development Goals will be met by 2015?

TE: I am confident that in many countries, progress towards achieving the MDGs will be very encouraging. I also expect that in some countries, progress will be far from satisfactory. The global community needs to focus its efforts on those countries that are falling behind and understand that achievement of the MDGs is likely to require an extended time-frame for which political, financial and technical support from the international community will be critical. ■

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 Dr. Timothy Evans is assistant director general of the World Health Organization's Evidence and Information for Policy Cluster, based in Geneva. His father, Dr. John Evans, was the first Canadian chair of the Rockefeller Foundation, and the first dean of McMaster University's Faculty of Health Sciences, where he pioneered the McMaster model of medical education.

6. Combat HIV/AIDS, malaria and other diseases

Target for 2015: Halt and begin to reverse the spread of HIV/AIDS and the incidence of malaria and other major diseases.

Forty million people are living with HIV, including five million newly infected in 2001. Countries like Brazil, Senegal, Thailand and Uganda have shown that the spread of HIV can be stemmed.

7. Ensure environmental sustainability

Targets:

- Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.
- By 2015, reduce by half the proportion

of people without access to safe drinking water.

- By 2020, achieve significant improvement in the lives of at least 100 million slum dwellers.

More than one billion people lack access to safe drinking water and more than two billion lack sanitation. During the 1990s, however, nearly one billion people gained access to safe water and the same number to sanitation.

8. Develop a global partnership for development

Targets:

- Develop further an open trading and financial system that includes a commitment to good governance, development

and poverty reduction – nationally and internationally.

- Address the least developed countries' special needs, and the special needs of landlocked and small island developing States.
- Deal comprehensively with developing countries' debt problems.
- Develop decent and productive work for youth.
- In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.
- In cooperation with the private sector, make available the benefits of new technologies – especially information and communications technologies.



THE STATE OF CANADIAN HEALTH CARE

Compiled by Karen Christensen

Thought leaders from the Canadian health sector talk about the country's biggest health care challenges, and what they would do to fix them.



“The current model of the Canadian health care system has money as the input and improved health as the sole expected output. If I could change one thing, as an imperative of responsible stewardship I would insist on two outputs from our massive \$130 billion per year investment: improved health of Canadians *and* increased wealth for Canada. This would transform the health system into a dual-purpose asset, aligning the social and economic agendas as a powerful force for change. Innovation, in all its expressions, would become the system’s driving force – applied to people, products, processes and institutions. Currently, a chorus of voices would have us believe that the highest aspiration we can hold for our system is that it be ‘sustainable’, with more money as the only means to achieving that goal. My vision would see our system transformed into a robust, dynamic global pacesetter of health innovation, where:

- talent, innovation and opportunity are embraced;
- every health sector employee would be expected (and supported) to offer two innovative ideas each year, and the best of those two million-plus ideas would be implemented to make the good better, the better superior and the superior best in class;
- publicly-funded health care institutions would be linked in strategic alliances and networks as a national laboratory system to conduct the research that provides the evidence to make informed policy, practice and product choices;
- new products and services developed here would be evaluated and adapted until they are best in class, and then, sold around the world, generating wealth for our country; and
- Canada would create up to 10 regional and linked ‘health innovation zones’/ clusters that would spearhead the implementation of the strategies outlined above, and create a **Canadian Health Industries Partnership Council** (CHIP) to advise on a policy environment that encourages economic development.

By harnessing our health care assets in this manner, over time Canada could create a health sector that captures its appropriate share of the trillion-dollar global health

market. By failing to exercise a holistic stewardship role of this deeply-cherished national asset, we have already paid a huge price, both in missed opportunities and in fragmented and inferior health care. What will it take to effect the change in culture proposed? Leadership at all levels; incentives and accountability, with measures of effectiveness implemented for delivering both improved health and economic outputs and reported to Canadians by the **Health Council of Canada** and the **Canadian Institute of Health Information**. This cultural shift would see waiting times become an aberration, assured and timely access the norm, and the current (and growing) health products/services deficit (which approaches \$7 billion/year) shrinking, eventually becoming a surplus; in so doing, we could create at least 100,000 new jobs. As true innovators, we would also be true stewards, passing on a far superior and more robust Medicare to future generations. Only then will Canada be rightfully recognized as a global pace-setter of health innovation.”

– **Dr. Henry Friesen, Distinguished Professor Emeritus, University of Manitoba; Founding Chair, Genome Canada; Past President, Medical Research Council of Canada**



“A 2002 Senate Social Affairs Committee report concluded that there were two key challenges facing governments and patients in the Canadian health care system: waiting times and the rapidly rising cost of drugs. The objective of our publicly-funded health care system must be to

ensure that Canadians get timely access to the quality care they need; and those responsible for funding and delivering that care must be held accountable for meeting that goal. Currently, the system allows governments and providers to shift the consequences of excessive waiting times onto the backs of patients; and sadly, at present, doing so costs them nothing. The Health Care Guarantee proposed by the Committee would oblige governments to provide care within evidence-based, maximum waiting times, established by scientific bodies using evidence-based criteria. When an individual reaches the maximum waiting time, the funder of the system (government) would be required to pay the cost of having that patient get immediate service in another province or

in the U.S. This would place the consequences of lengthy waiting times where they belong – on the shoulders of governments for not funding the system adequately, and on service providers for not organizing service delivery efficiently. Governments, in particular, must incur a penalty for their excessively-tight rationing of the supply of health care services. In addition, the cost of prescription drugs has escalated much faster than any other element of the health care system, and forecasts indicate that this will continue as more effective but costly drugs enter the market. Canada’s publicly-funded health care system is not required to pay for prescription drugs used outside of the hospital setting; some additional publicly-funded drug coverage exists, but

it varies from province to province, and private health insurance coverage provided through employer-sponsored plans varies significantly in terms of eligibility and out-of-pocket costs to plan members. Over 600,000 Canadians have no prescription drug coverage, and financial hardship due to drug expenses is increasingly a reality for many. The Committee proposed that a

national Catastrophic Drug Coverage program be initiated, under which the federal government would take responsibility for 90 per cent of prescription drug expenses that exceed a certain limit qualified as ‘catastrophic’. This limit would be set as a percentage of family income (the Committee proposed three per cent.) The principle of insurance is to spread risk among as large a

population as possible. This is why the Committee recommended such a major role for the federal government; the proposal reflects the same principle that leads the federal government to help provinces pay the catastrophic costs of a major natural disaster.”

– **The Honourable Michael Kirby, The Senate of Canada**



“Our biggest challenge right now is ensuring that all Canadians have access to timely, quality health care, when and where they need it. And I don’t think we’re going to get there in a sustainable way until we engage the business community. Business people are accustomed to strategic and long-range planning – which is not typical in the health care system; it has been run primarily through political planning, based on very short political timelines. Any CEO will tell you that you can’t plan a

huge system on such short timelines. This represents an opportunity to engage the business community, who, after all, are also citizens – people with families and extended families (employees) with health issues. There are multiple areas where they can become involved. The tough part is that the health care system is quite unlike any normal market community: there is unequal information between the typical consumer and the provider, so you can’t use normal market forces as a guide. Applying some of the financial and planning norms used in business is challenging, but I think we need that kind of iterative discussion to take place. When business people get involved, they often say, ‘this is way more complex than I ever imagined.’ Personally, I don’t think the issue is ‘public vs. private’; it’s more about figuring out how to deal effectively with patients and the Canadian public. The truth is that we don’t have enough health personnel for the public system alone, never mind staffing a private

system. One thing the CMA is trying to do is push for a long-range, arms-length body that would involve the federal and provincial governments, the health care professions, and the business community in planning for our health resource needs for the next 10-20 years, so that we become more forward-looking. We also have to look ahead by doing more to prevent diseases, so we don’t end up with people on wait lists down the road. We have one of the highest pre-school obesity rates in the world: if we’re producing fat children, we can guarantee increasing rates of heart disease, diabetes, joint problems, and some types of cancer. If we want a healthy future for Canada, we have to begin putting public policies into place that help create a healthy population. If the business community would get behind this, it would make a huge difference.”

– **Dr. Ruth Collins-Nakai, President, Canadian Medical Association**



“Imagine an airline pilot reaching the cockpit 20 minutes late, and complaining loudly about the colour of his seat; he ignores the organizational checklist in favour of his own, because he doesn’t like being dictated to by his company. Although he agrees on the final

destination, he will fly his own route to get there. The pilot is flying new equipment, but hasn’t had his skills retested since qualifying 20 years ago. When the takeoff slot is missed and hence, arrival time delayed, he proclaims the incompetence of his organization and the government – oblivious to the domino effect of delays on the remaining scheduled flights. Welcome to the surgeon’s world! Now, imagine running a big company in which most of your costs are generated by staff who don’t work for you (physicians are ‘accredited’ to you); annual performance reviews of an individual physician’s quality, safety and outcomes scores are extremely difficult, because such measurement systems are rudimentary or non-existent – but it really doesn’t matter, because it is very difficult to

modify behaviour or fire a poor performer – and the board tiptoes around physicians’ wishes. Welcome to the world of a major hospital! Finally, imagine an Ontario service industry that spends \$33 billion annually, in which the providers guide the major strategies, not the purchasers; provider associations and trade unions are very powerful, due to carefully-guarded monopoly rights; and those generating the costs (physicians) frequently look down their noses at ‘bean counters’ or ‘IT geeks’, conveniently proclaiming their sole responsibility to be caring for patients in the best possible way. Welcome to the health care industry! It is imperative that the century-old pattern of physician function be reviewed in light of 21st century realities. To the statement, ‘I will

do my utmost for my patient' must be added, 'within available resources'. As a neurosurgeon, I ordered hundreds of CT and MRI scans, but never knew the costs of these tests. Medical services should be provided by the least-costly qualified individual – and frequently, this will not be a physician. The modern era is characterized by system design and performance measurement, coupled with sound business principles; doctors must be accountable for their personal, quality,

safety and outcomes performance. Physicians have been eloquent in their criticisms of government's role in health care: it is time for them to turn the spotlight on themselves, and debate to what extent they constitute a major barrier to reform. All physicians believe in the sanctity of the patient/doctor relationship and the use of their professional judgment in caring for their patients. These central tenants will only be preserved if physicians lead the redesign of their role

within a coherent system of health and illness care. Ontario cancer surgeons are leading the way. This reorganization may involve swallowing some strong medicine, but if physicians don't lead the change, someone else will – and the prescribed medicine may well be both inappropriate and unpalatable."

– **Dr. Alan Hudson, OC, Lead, Access to Services and Wait Time Strategy Health Results Team, Ontario Ministry of Health and Long-Term Care; Former CEO, Cancer Care Ontario**



"Canada's greatest health care challenge is the fact that we have not been able to adequately resource our public health system. What we saw as a result of SARS, and the National Advisory Committee on SARS and Public Health headed up by Dr. **David Naylor**, highlights what happens when you do not invest in what should be the foundation of the health system. The public health system looks at things such as protection, health promotion, and chronic disease and

injury prevention. All of these things together help us create a healthier population that is not going to utilize (to the same extent) the health care system at the other end. There's been a lot of talk about the sustainability of our system, and many countries are facing the same issues. What has become apparent is that unless we are able to do something about the front end of the system – the maintenance of health, and the prevention of disease – no system that is publicly funded will ever be sustainable. Basically, there are three actions we need to take. The first is national leadership, and we have a good start on that with the establishment of a public health agency in Canada and the appointment of the first-ever Chief Public Health Officer, Dr. **David Butler-Jones** and a Minister of State for Public Health, the Honourable **Carolyn Bennett**. These things not only need to be maintained, but more money needs to go to the **Public Health Agency of Canada**

for issues such as immunization and chronic disease prevention. The second thing is sustainable funding for public health. Because public health is funded through provincial governments, regional health authorities, and in Ontario, by municipal governments, we need a better mechanism for funding it at the front line. We need to ensure the money that will be transferred to provinces as part of the federal transfer payments negotiated in 2004 (\$41 billion over the next ten years) includes more funding to public health; currently, approximately three per cent of the health budget is allocated to it. The third thing we need to take action on is public health human resources – not just more people, but more highly-skilled people who are able to upgrade their skills, because public health in 2006 is very different from public health in 1982."

– **Dr. Elinor Wilson, President, Canadian Public Health Association**



"In order to sustain our publicly funded, not-for-profit system, we need to build and create new approaches and alternatives to the health system. This includes transform-

ing our system to one based on primary health care that prevents illness and injury, better-manages disease, and promotes health and ensures that every health professional – including nurses, nurse practitioners and pharmacists – is being used to his or her full potential. We need a strategic vision that takes into account the changes in demographics of the population as well as those of the health professionals who will deliver the care. This long-term plan must be equally prepared to deal with acute and preventative care as it is with new and emerging diseases or emergencies. Leadership positions at all levels of the system, from front-line health providers, to administrative positions, to faculty at universities, must be created and

adequately funded. Research shows, for example, that novice nurses are more inclined to stay in the profession if there are experienced nurses in leadership positions to mentor and guide them. With one-third of the registered nurse population eligible to retire in the next five years or less, who will mentor these new nurses? The health workforce must be seen as a national resource, requiring ongoing and sufficient investment, nurturing, support and development. Canadians can no longer afford to continue on our current course: the financial and emotional burdens are far too great."

– **Dr. Deborah Tamlyn, President, Canadian Nurses Association**



“In the story of Dr. Doolittle, there is an imaginary character called a ‘Pushmepullyou’, a two-headed llama with the heads going in different directions. This is a good mascot for Canadian health care: one head represents our health policy, and the other our industrial policy. If I could change one thing about our system, it would be to align these two ‘heads’. Health ministries spend their time clamping down on the price of drugs, while industry ministries spend their time designing incentives to promote biotechnology companies that discover those drugs. That’s not exactly the picture of ‘policy coherence.’ There is no better way to incentivize innovation than to

create a market (or remove barriers to a functional market). Dean **Roger Martin** has put this in a much more elegant way by arguing that a key weakness in Canadian innovation is the absence of a sophisticated consumer (in this case government) that is sensitive to more than just price. The real market here is not the (small) Canadian one; biotechnology executives have complained to me that they are hampered in trying to access international markets by the fact that they are a Canadian company, but their product is not used in the Canadian health system. The problem goes beyond direct purchase of drugs. I heard a story about a new health information technology created by a Canadian company. They wanted to test it in a Canadian hospital, but the incentives of the health care workers were so unaligned with the ability to test the device that the company ended up developing its technology in the U.S. And one can be pretty confident that there are similar examples in diagnostics and medical devices. Thanks in part to \$13 billion of incremental investment in research and development by the federal government over the past five years, Canada has a world-class science base in

health. But we don’t exactly have a \$120 billion enabling environment for health innovation. Hopefully, the Commercialization Commission established by Industry Minister **David Emerson** and chaired by **Joseph L. Rotman** will begin to change this. Going forward, my first suggestion would be to use public procurement – including provincial drug benefit formularies – to give preference to drugs, diagnostics, medical devices, and technologies developed by Canadian companies and laboratories. Second, we should adopt an informal guideline that Ministers should not serve in Health unless they have first served in Industry, and that the bureaucracies of these two ministries must be more closely aligned. In the long term, Canada will be better served by creating wealth in knowledge-based industries than by restricting government spending. What we really need is a few RIMs [**Research in Motion Ltd.**’s] in the health sector.”

– **Dr. Peter Singer, Professor of Medicine, Sun Life Financial Chair and Director of the University of Toronto Joint Centre for Bioethics and Distinguished Investigator of the Canadian Institutes of Health Research**



“In the wake of the Supreme Court’s decision on Chaoulli [see story, page 48], Canadians are debating the future of our health care system. This requires an evidence-based analysis: would a ‘second tier’ of health insurance actually decrease wait times? On the available evidence, the answer is no. In fact, the evidence from various countries unequivocally establishes that, while private payment might lead to shorter wait times for a few wealthy individuals, waits would lengthen for most as our health care professionals moved

to the private system. The British government recently had to massively reinvest in its public system in order to rectify long waiting lists that had accumulated with increasing privatization. The evidence also shows that our publicly-funded model provides Canada with what the **Canadian Council of Chief Executives** has described as ‘a significant advantage in attracting the people and investment that companies need to stay competitive’. Former CEO of **TD Bank Charles Baillie** called Medicare ‘an economic asset, not a burden’ because in ‘an era of globalization, we need every competitive and comparative advantage we have’. This reality is underscored by health insurance costs in the U.S., where 80 million Americans have no health insurance at all, and almost half of personal bankruptcies are due to medical bills. Instead of moving to a parallel private system, we need to capitalize on the built-in efficiencies of our publicly-funded system. These include moving beyond acute care, and into a system based on illness prevention and management of chronic dis-

eases in the community. Canadians should have access to primary care in delivery and funding models that focus on multi-disciplinary teams. We need to track waits appropriately, get our information systems synchronized, and demand accountability from health care providers, hospitals, and governments about where money is being spent. A modern version of Medicare would keep Canadians healthy, out of hospital, and link their care providers to ensure a seamless transition into and out of the acute care system. We are making good progress – but the necessary changes take time. Private insurance would only introduce a barrier to access for most Canadians, and another layer of bureaucracy, while threatening access to timely care for most, as well as our economic competitiveness.”

– **Dr. Danielle Martin, Associate Staff, Sunnybrook and Women’s College Health Sciences Centre; Lecturer, Department of Family and Community Medicine, UofT; Past-President, Professional Association of Interns and Residents of Ontario**



“Patient safety is one of the most important health care issues of our time. McGill Professor **Robyn Tamblyn** has shown that 30 per cent of seniors’ hospitalizations are due to medication toxicity, and half of all seniors were given a potentially-dangerous medication in one calendar year. A recent landmark study of Canadian hospitals showed that an estimated 9,000 to 24,000 people die each year as a result of errors in the health care system – ‘preventable

adverse events’. Among the most common are those related to inappropriate dispensing of drugs and fluids. You can bet that if this many people were dying in airline crashes each year, there would be a huge public outcry; but until recently, the issue of patient safety has remained in the dark. Fortunately, the public, the government, and the health care industry are taking a closer look. For example, in 2000, Saskatchewan called an inquest into the death of **Darcy Dean Ironchild**, a Saskatoon man who died from an overdose of prescription medications. Testimony indicated he received over 300 prescriptions in the year before his death. With the support of **Canada Health Infoway** – a non-profit organization that invests with public sector partners in health information technology – Saskatchewan is developing a safer system. Announced this past September, the program will give authorized health care professionals confidential

access to the medication records of their patients. Infoway is now working with every province and territory to implement Drug Information Systems; by providing a quick, accurate picture of what drugs a patient is taking, these systems can eliminate the sometimes deadly effects of drug interactions and overuse. Bottom line: these systems save lives. They are even more effective as part of an Electronic Health Record – a complete and accurate record of a patient’s medical history, including medication profile, lab results, and diagnostic imaging results. Information is the lifeblood of health care, and we must ensure that health professionals have the right information to make the best decisions about diagnosis and treatment. We must seize this opportunity to bring our health care system into the 21st century.”

– **Richard Alvarez, President and CEO, Canada Health Info Way**



“Put patients first. The debate about health care has become so focused on structures and systems that we forget it is ultimately about us, as individual Canadians and patients. To preserve our health, six things need to happen, each driven by a simple question: ‘How does this affect the patient?’


- Individuals become full participants in their health; they know their options, what insurance can provide and what not, and they exert the freedom and responsibility to seek care where they wish, taking with them the money to pay for the service – in the form of insurance payments or otherwise;
- Health care institutions are evaluated and compensated based on effectiveness of care, measured from the individual level. Supply-driven global funding gives way

to performance-based reward: do a better job, get more money;

- The professions re-assert collective leadership of the quality agenda. The issue is not only how much you get paid; consummate professionalism earns its reward. Professional obligation to patients does not permit professionals to be gatekeepers;
- Governments disentangle the immoral conundrum of being both standard-setter and insurer. Standards are transparent and based on outcome, not process. The provision of insurance is a fully separate matter;
- Innovation becomes an incentive for everyone. Experiment, assess, learn and move on. The powerful structural impediments to anything new inherent in a centralized supply-driven system are replaced by response to demand and tolerance for risk;
- We create a health economy where our innovators have a fair chance to grow new products in a home market first, thereby converting a perceived 12 per cent health care drain on our resources into a 20 per cent of GDP return in the most dynamic sector of the 21st century economy.

These adjustments are a necessary response to the most powerful convergence of transformational forces to affect medicine since

the invention of the microscope, 250 years ago, for which there are four drivers: our understanding of biology is shifting from the static study of organs to the interplay of molecules, changing every disease, test and treatment, along with the very definition of a ‘patient’; the race of technology brings huge power to intervene and relentless pressure to update; medicine is now truly globalized – disease can come from anywhere, as can solutions; and finally, consumerism and the global increase in wealth are driving demand and expectations as never before. We must create an environment where each of us, as a user, represents demand and rewards performance. It has nothing to do with public vs. private payment for services: that rhetoric is, in my view, a red herring that shuts off discussion, eschews change, and denies Canadians the quality of care we have every reason to expect. If we hold to the view that access to health care is a defining Canadian value, then there is no alternative but to put patients first. Given political will, we can restore our system...one patient at a time.”

– **Dr. Harvey Schipper, Professor of Medicine, University of Toronto and Partner, Minden Schipper & Associates Inc.** 

MANAGING CHANGE, BY DESIGN

Coupling design-process experts with business-content experts creates a capacity to envision and realize futures that are both desirable for stakeholders and viable for organizations.

by Peter Coughlan and Ilya Prokopoff



We read everywhere about rapid and constant change and, therefore, the increasing unpredictability of the future. And yet, we have seen little in the way of tools and methods to manage that change effectively and proactively. The tools of traditional business planning start with the assumptions that maintaining the current state is the best strategy, and that incremental growth is a satisfactory outcome. But what if we can no longer base our future business on what has happened in the past? We believe that organizations might look to tools from the field of design to help business managers both to get in touch with

their customers' (and other stakeholders') unarticulated needs and desires, and to intentionally imagine and create futures based on the one thing that seems to remain relatively stable, even in times of great change: human behaviour. When made a part of an organization's work processes and competencies, design tools enable an organization to embrace change as a normal part of managing its business.

A story to illustrate our point

A recent health care client of ours was engaged in long-range planning activities that included the introduction of a multi-story patient care tower, to be completed in seven years. Shortly after initializing plans for the building, one of the hospital's core specialty groups severed ties to the hospital in order to open up an integrated-service facility literally across the street from where this new tower was to be erected. This move, coupled with a drop in the cost of core medical technology, procedural changes that dramatically reduced the required length of stay in a hospital, and shifts in consumer demand and expectations about how care could be delivered, suddenly rendered obsolete any plans based on the hospital's past.

Looking at alternative data from what managers are typically exposed to, hospital leadership might have seen that the drivers behind this change were evolving requirements for patient care – for example, competitive pressures, technology, and human resource issues. However, the data that management had at its disposal – customer survey and employee satisfaction data – indicated general satisfaction with the services provided by the hospital; it did not reveal what problems, if any, customers had with the current services, or what they might have preferred if given a choice. No amount of examining the past could have prepared hospital leadership for this dramatic turn of events.

What could management have looked at to make a better guess about their future? And once it understood its present condition, how could the hospital have come up with an appropriate plan for getting to the future? Below, we describe three tools in the designer's toolbox that we have found effective in helping businesses manage change.

1. Contextual Observation

Effective design (whether incremental or radical) begins with a clear understanding of the problem to be solved. In order to help formulate problem statements, designers look to people's behaviour for the data they need. Specifically, designers use observational research methodologies to reveal latent needs that can form the basis of change initiatives. They do this by going out and looking at people engaged in everyday activity. Designers observe, take pictures, ask questions about the here and now. They discover what people specifically like and dislike about their work or play, what pictures they have in their heads about how a process works, how they have invented ways to work around a particular problem, and what ritualistic behaviour they engage in during a given activity. In short, they look at what is commonplace and familiar, and they reveal the ways in which it is unique, allowing them to break through existing assumptions and acceptance of things as "the way it's always been done," so that new opportunities for change can be explored.

Some common methods we use to help our clients 'see the familiar in unfamiliar ways' include:

- mock journeys, in which we simulate the experience of a customer, or someone else for whom we are designing;
- shadowing those involved in a process to note their everyday behaviours, use of tools, communication patterns, and so forth;
- expert walk-throughs to quickly understand complex processes;
- spatial observations, to absorb the atmosphere of a location, observe behavioural patterns, and look for evidence of 'everyday workarounds' or innovations that may indicate unmet needs; and
- day-in-the-life surveys, to get stakeholders to take note of their own surroundings and behaviour.

We are always surprised by how difficult it is for managers, who typically have extensive quantitative and qualitative data at their disposal, to 'see' their reality, because the data have been stripped of the emotional content that forms the basis for the most compelling change initiatives. Giving people a different way of seeing that reality helps them to articulate their unmet needs or desires. For

our health care client, getting them to shadow a day-in-the-life of a doctor, or to walk in the gown of a patient, gave them a much clearer sense of what was and wasn't working in the system. Seeing data captured from everyday reality (as opposed to data captured from a satisfaction survey) helped them to understand the vast number of opportunities to create new services or to improve existing ones, to retain customers and doctors alike.

2. Human-Centred Frameworks

System-level problems are hard to solve. In organizations of any size, people often complain that the organization has "a life of its own," or that "change is impossible," in spite of the fact that people can usually identify what is not working. The reason for this is simple: although most systems have evolved over time from something small and simple to something larger and more complex, their growth has not typically been managed in a holistic way. The design of the system is no longer contained in the head of a single individual or group – rather, it is emergent across multiple individuals or groups. Incompatibilities or even conflicts are no

We see continuous improvement and continuous innovation as completely complementary. But innovation is about stepping back and asking, 'what are the assumptions going into the system? Can we reframe the problem in a new way?'

one person's or department's responsibility. It is simply that different parts of the same system have been optimized for their own local goals, resulting in silos that are hard or impossible to stitch together seamlessly.

Designers create frameworks so that they can simplify and unify design opportunities in order to conceive of possible futures and make sure that all the parts and pieces that compose these futures are coordinated with one another. Frameworks are powerful because they can be used to generate a coordinated set of ideas or opportunities, and later, to evaluate the

degree to which a current set of offerings satisfies user needs and reflects an organization's intentional view of the future.

Frameworks reintroduce a holistic viewpoint to an organization and allow it to refocus on its reason for being: to provide value to customers, employees, and other stakeholders. For our health care client, we developed a framework that consisted of a 'patient journey' that helped them to understand that the patient views their experience as a contiguous process, unaware of how the organization is structured to deliver care. For example, patients do not understand why, each time they move to a new location in the hospital, they are asked the same set of questions. From a hospital perspective, redundancy of information collection ensures accuracy and safety (and reflects the reality of non-integrated IT systems). However, from a patient's perspective, it creates an experience laden with frustration and lack of trust.

3. Rapid Prototyping

Rapid prototyping helps people to experience a possible future in tangible ways. These include rough physical prototypes of prod-

ucts or environments, or enactments of processes and service experiences, as well as the internal infrastructure and business plans that will be required to deliver them. It allows a very low-risk way of quickly exploring multiple directions before committing resources to the best one. Prototyping is commonly used in design development to explore details of how a product, service, or experience will be manifest. It externalizes the project team's thinking, allowing for quicker convergence and more useful feedback from stakeholders. This feedback is based in the reality of an experience, rather

than in an interpretation of a description of that same experience.

When organizations go about developing their strategies, they typically define both the problem statement and a proposed solution at the same time, as a means for getting approval and resources to move forward. Rapid prototyping gives an organization license to explore hunches or directions that may in turn give more clarity to the problem statement. It also helps them continue to be mindful of the possibilities of creating systemic solutions.

Faced with the challenge of improving the hospital's dining experience, our health care client used rapid prototyping to quickly

explore ideas that allowed patients and family members to eat whenever they wanted to. One of the ideas that came out of this exploration was a concept for a mobile 'minibar' that could be ordered and stocked appropriately. In the process of testing this idea, the team discovered and resolved issues around ordering, fulfilling, and maintaining the minibar. They discovered that this particular solution affected multiple parts of the system, from patient room design to admissions processes to food service design. A simple prototype allowed the hospital to surface these issues and solve them all at the same time, resulting in a more unified experience for patients.

Integrating design and business thinking

Increasingly, our client organizations come to us expressing a wish to be "more innovative." We interpret this as a request to be better able to face change. While design continues to be seen as a specialized expertise, we have found that the tools of design are learnable and applicable to challenges that business managers face every day. When we couple design process experts (with no vested interest in perpetuating the current way of doing things) with business content experts (who are looking for ways to think differently about their area of expertise), we create a capacity to envision and realize futures

Project: Patient-Care Delivery Model

Client: SSM Health Care's DePaul Health Center, Bridgeton, Missouri

SSM Health Care approached IDEO with a vision to develop a new patient care model at the **DePaul Health Center** that will ultimately provide the foundation for improved services. Realizing that hospital services influence the well-being and care of people, DePaul aspired to provide innovation for a comfortable patient experience. To achieve this, IDEO explored the hospital's space usage, technology, services, and staffing and then developed design concepts for a new patient care delivery system.

The IDEO team worked onsite at DePaul's facility to fully research the opportunities for innovation. By brainstorming, observing, interviewing, and actually living as a DePaul patient, they visually 'mapped' the patient-journey process, documented DePaul's procedures from patient check-in to recuperation. Visualizing the journey helped IDEO identify current challenges, such as moments of confusion, and helped the Center recognize that these 'moments' were actually 'translation points' where new designs could have significant impact.

IDEO provided DePaul with a framework to create its new patient care delivery model and developed concepts to support the new model. In addition, the designers

worked closely with a cross-functional team from DePaul to prototype and begin testing some of the design solutions. By learning the basic steps of process innovation and receiving a rough implementation plan, DePaul can now further refine and actualize the design concepts.

Amongst the changes proposed by IDEO: valet parking; frequent flyer cards that detail regular returnees' needs and preferences; self-registration; a patient hotline for instant connection to staff who can act as a system translator; pod-like staff

work spaces that keep caregivers closer to patients; a 'family healing area'; and vending machines in waiting areas that dispense bandages, over the counter analgesics and other temporary discomfort relievers. By employing multiple, small-scale innovations, DePaul can deliver improved patient-care delivery services. "We saw that the patient travels a journey," says **Robert Porter**, then-CEO of DePaul, "in which clinical states and events happen to them, often without their understanding or realization of the relationships between events."

Place of Practice

Places of practice, like the radiology suite below, are dedicated to facilitating the staff's most efficient and best work for the patient. While primarily serving system goals, there are numerous simple opportunities for important translation to occur which can greatly impact the patient experience.

Patient Journey Punch Card
Carried with the patient and updated by staff allows for a simple graphic way for the patient to know where they've been and what is coming next.

Patient Garment with Information Badges
Additive badges allows the staff to get a brief history of the patient visually.

Modal Diversion
Patient has automatic control over simple things in their environment, everything from important information to personal soundtrack accompanies the patient on their journey.

Information Transfer Doorway
A place for a simple log of patient interactions, patient photos and useful tools facilitate the doorway as a translation zone. Eventually information transfer can happen wirelessly.

Patient Hotline
Patient Hotline allows for instant connection to staff who can act as a systems translator. All mediated staff interactions happen through the phone because it is a familiar interface.

Patient Manuals
Customized patient manuals which track the patient journey based on their specific illness can allow for the possibility of in depth information at any point.

Staff Cross-Training
Anyone coming in contact with the patient has the minimum knowledge necessary to answer simple questions and help in basic matters.

that are both desirable for people and viable for organizations.

The challenge remains for business schools to find ways of integrating design thinking into their curricula, and for

design schools to expand the purview of design to include not only products, services, and experiences, but the organizational means by which they are created and supported. **R**

From *Managing as Designing* (eds. Richard Boland Jr. and Fred Collopy). Reprinted with the permission of Stanford University Press. Peter Coughlin and Ilya Prokopoff are co-leaders of IDEO's design group, based in Palo Alto, California.

Project: Improved Patient-Provider Service

Client: Mayo Clinic

The **Mayo Clinic** has developed a worldwide reputation for practicing cooperative, patient-focused medical care for people with some of the most severe forms of illness. At Mayo's three primary outpatient facilities in the U.S., physicians and health-care practitioners combine their skills and experience in team fashion to help solve people's medical problems in a way that puts the patient first. To enhance service provision, Mayo invited IDEO to help turn an internal medicine wing into a laboratory for improving the patient-provider experience. The new venture is known throughout Mayo as the SPARC Innovation Program, which stands for See, Plan, Act, Refine, and Communicate.

IDEO began by observing how patients interacted in waiting areas and exam rooms, and how they worked with doctors, nurses, and staff to navigate the health care process. They provided the Mayo team with a basic template for creating service delivery innovation — a systematic process that includes how to brainstorm new ideas for using the space, rapidly prototype novel service delivery designs, and use customer observation and direct feedback to refine solutions.

Supporting patient-physician communications is one way in which Mayo and IDEO worked together to put the process into action. The team devised a simple and flexible design for the internal medicine corridor that allows for more informative, comfortable, and guided interactions among staff and patients. Physically, the team turned the wing into a four-zone 'moving journey' through which patients proceed.

The first stop is the Service Home Base, an inviting locale that provides visitors with resources for planning their trip

through Mayo. This area can be used in various ways, and Mayo plans to develop it into a highly visible information hub that displays literature about the clinic. Sectioned waiting spaces can be used as a tool to explore new designs in better accommodating individuals who want privacy, or families who need to spread out.

The Visitor-Facing Hub is the second destination, allowing patients to choose the type of service they need — be it drop-in and pick-up, check-in, or in-depth information. The flexible set-up enables the eventual use of clear graphics that will give visitors easy and quick access to precisely the information they require — without long waits or hassles. A frosted glass wall allows translucent views into behind-the-scenes areas, enhancing the sense of friendliness and accessibility and making innovation processes and practices as visible as possible to Mayo customers.

In the Preparation Service Area, providers take patients' vital statistics and offer educational consultation in advance of

their meeting with the physician. Half-rooms provide flexible modules that can be easily outfitted for a variety of purposes. Architectural features such as special lighting and translucent barriers enhance the sense of service and intimacy.

Finally, patients enter Innovation Central, where exam rooms feature outside walls that are used as storytelling boards to convey patient information and movable interior panels that can modulate between privacy and open space. Furniture and space are configured for collaboration and can accommodate large-group communication.

The wing will remain a section of the clinic where staff and physicians can continually develop new processes for improving service delivery. Over the long term, Mayo anticipates that the SPARC program will generate innovations to enhance patient satisfaction, make more efficient use of physician time, and add a new dimension to the Mayo Clinic mission of putting the needs of the patient first.



Life on MaRS

An interview with **Dr. Ilse Treurnicht**



Dr. Ilse Treurnicht talks about Canada's commercialization challenges, and how MaRS plans to tackle them with its uniquely-designed innovation community.

by Karen Christensen

Karen Christensen: Canada is racing to participate in the global knowledge-based economy, and the competition is fierce. How are we doing so far?

Ilse Treurnicht: Canada has a worldwide reputation in research and innovation, particularly in the life sciences, but also in materials chemistry, communications and information technologies, energy and new media. Research institutions in other parts of the world recognize this strength. Nonetheless, we are in a tough global competition where size matters, and we're a country with only 30 million people. Accordingly, the challenge for Canada is to focus our efforts and play to our strengths. We must convert our collective investment in the research front-end of the innovation 'funnel' into substantial economic results.

This means building innovative, successful global businesses from this foundation of science excellence. At present, we underperform in this area. We will need to do things differently going forward.

KC: You have worked on virtually all sides of the commercialization equation. With your in-depth knowledge of the overall system, what do you see as its greatest challenge?

IT: It's a complex ecosystem, so there is no one solution or magic bullet. Culture is an important factor; our academic and research enterprises function largely in isolation from the culture of entrepreneurship. Working with industry or commercializing the results of research shouldn't compromise academic values or scientific excellence,

but we haven't bridged the gap. More generally, as a society we do not value entrepreneurship as it is valued in the United States – except of course in the resource sector. If I had to identify two specific bottlenecks, the first would be the limited availability of smart, networked risk capital – capital that is prepared to place a bet at the pre-commercial stage, to support the work of building a company with financing through the full life-cycle of that company's growth. The second bottleneck is that we are still short on serial entrepreneurs and seasoned business managers who can grow and scale emerging technology companies from a base in Canada. More mature environments in the U.S. have an important edge here. They have easy access to experienced product development and sales executives – the

people with the right networks, who know how to take a product into Asia, for example. The reality is that most of our tech companies are still led by first-time CEOs, while communities like San Francisco or Boston have the luxury of a large concentration of seasoned entrepreneurs. Canada's first-time CEOs should be supported, so that they become the catalysts of further success stories. Serial entrepreneurs are particularly thin on the life sciences and biotech sides. We need to continue to build skills and leadership, and provide mentorship in these areas.

KC: Canada's failure to produce many globally-competitive health care firms should be no surprise, according to Dean Roger Martin, given that the Canadian health sector suffers from "a very poor environment with respect to demand conditions." Do you agree?

IT: It's true that Canada has failed to produce many world-class health care companies. Only a handful of countries have done so; this is a very concentrated industry. I think Roger is right to highlight the impact of cost containment under our single-payer system. That said, the drive for cost containment is always countered somewhat by the professional ethic of health care providers who will push a quality and innovation agenda. In this context, our system is often contrasted with that of the U.S. – the latter providing a healthier 'demand universe'. However, it's not clear to me that it's a healthier system or that all segments of the population get better care. So this is a situation where there is no simple market-based solution.

As well, I'm not sure that the conditions for building a health care company in Canada are that different from conditions in any other technology-based sector. An innovative telecom or semi-conductor startup company is similarly unlikely to have its early-adopter customers in Canada, or to achieve substantial growth through a Canadian customer base. To become global players, companies in all of these high technology areas have to achieve penetration into the U.S. and increasingly other parts of the world, because the Canadian market is just too small. For our companies to suc-

ceed, they have to think and be global *from the day they are born*. This is where we have to focus our energies. Even if Canada could suddenly convert its health care system into a more dynamic marketplace, it would still

Although we tend to think of startups as high-risk ventures, startup stage venture capital in the U.S. has financially outperformed all other asset classes through boom and bust cycles.

be undersized. So overall, I do agree with Roger, but I don't think our weak demand environment is a good-enough excuse. RIM [Research in Motion Ltd.] certainly didn't make its global mark by selling to Canadian customers.

KC: Canada's venture capital climate is not exactly thriving; early-stage financing has been referred to as 'a valley of death'. What can be done to turn this around?

IT: Again, some of it is a question of economic maturity, particularly with respect to the startup sector. Our first generation of true institutional seed funds was launched in the late 1990s, with relatively small pools of capital. These funds sailed directly into the 'perfect storm' of the technology sector's implosion. We do not yet have the history of experienced startup stage fund managers that bring entrepreneurial and operational experience to their companies, and have managed funds through multiple business cycles. Our venture capital industry has largely emerged from the financial services sector, and that brings with it a lower risk appetite. As a result, we under-fund our companies from launch, which makes it difficult for them to attract strong management and compete with their counterparts south of the border. Because our fund pools are not big enough, we are also unable to build the investor syndicates that can support expansion-stage company growth. This is a significant disadvantage to comparable

communities in the U.S., where sizeable start up funds have existed for 20-25 years.

It is interesting that, although we tend to think of startups as high-risk ventures, startup stage venture capital in the U.S. has

financially outperformed all other asset classes through boom and bust cycles. It should be our goal to build a healthy and sustainable startup-stage funding climate in Canada. This will take time and some vision on the part of institutional players who must invest in emerging fund managers, but it can be done. And we cannot withdraw from the space just because the last few years have been tough.

KC: How does MaRS [Medical and Related Sciences] fit into this scenario?

IT: In short, MaRS is an innovation centre designed to accelerate commercialization in the emerging fields of bio-, physical and information sciences and related technology fields. The MaRS Centre is located adjacent to the University and Toronto's main hospital row, at 101 College Street, in a facility which includes two new buildings and a renovated wing of the former **Toronto General Hospital**. When fully completed [Phase One opened this summer; Phase Two is under development], we will provide over 1.5 million square feet of state-of-the-art wet/dry lab facilities and office space, an incubator facility for young companies and a collaboration centre for meetings and events. The MaRS Centre is home to over 50 tenants from the communities of science, business and capital, with private sector tenants outnumbering public sector tenants 3:1. The official opening of the MaRS Centre last September also launched the **MaRS Business Resource Centre**, and a range of programs and serv-

ices to provide commercialization support to entrepreneurs, scientists and companies in the MaRS Centre and in the wider community. Phase I of the MaRS Portal (www.marsdd.com) is now live, and extends the reach of the MaRS community, its resources and networks.

KC: How does MaRS intend to address all of the overlapping issues facing commercialization?

IT: There are many challenges in the area of commercialization in Canada. A major cultural gap exists between the world of academe and the private sector; we largely use ‘research push’ strategies, rooted in the academic culture, to launch new companies from the research environment; and we often fail to bring realistic market validation and feedback, as well as management, to our early-stage companies. We rely on a wobbly linear process – where great science with commercial potential is an afterthought to a busy academic life. We can’t be successful in the company-creation business with this approach. At MaRS, we are creating a community where the diverse people from the communities of science, business and capital connect on a daily basis – because they work in the same place or come to participate in forums of mutual interest. MaRS is a welcoming venue where they can have new conversations, learn from each other and begin new collaborations.

The tenants in the MaRS Centre are all active in the commercialization marketplace, representing the entire food chain, with key researchers from the **University Health Network** and **The Hospital for Sick Children**, tech-transfer groups, companies ranging from startups to global players, investors, service providers and networking organizations. Our tenanting strategy carefully balanced these elements, and the result is very different from the classic incubator model housing only startup companies. Nonetheless, the MaRS Incubator (representing 35,000 square feet of the 700,000 square feet of the Phase I development) houses 24 young companies in the life sciences, ICT and materials sectors, and brings terrific creative energy to the Centre. The presence of capital, expert services and more mature companies as

neighbours provides a unique market-facing environment and support culture for these fledgling businesses.

KC: Has this model been attempted elsewhere?


IT: There are many named biotech and technology ‘clusters’ around the world; the larger players have both similarities and key differences when compared to the MaRS model. Many have grown more organically, with established examples such as **Kendall Square** in Boston. Others reside in research parks, such as **Research Triangle Park**, or are connected more virtually than physically, as in San Diego. A number of the younger initiatives have more structure, and have received significant investment. **Biopolis** in Singapore is a good example: the government there has invested US\$4 billion to build an ‘innovation city’. MaRS has the advantage of substantive scale, being located right in the heart of the Discovery District, and building on 175 years of discoveries at UofT. Our proximity and connectivity to this unique blend and concentration of research excellence, and the thriving global research network that underpins the community, is a very important anchor for MaRS. From this unique location, we are building a network of people and partner communities across Ontario and beyond. We are also next door to Canada’s largest [and North America’s third-largest] financial centre and in a region of diverse technology companies. And perhaps most importantly, we’re on the subway line, in this vibrant urban, multicultural, creative environment. In sum, this represents a powerful opportunity for MaRS.

We believe, as **Richard Florida** wrote in the October 2005 issue of *Atlantic Monthly*, that the world is not flat, but ‘spiky’: that is, in terms of both sheer economic horsepower and cutting-edge innovation, surprisingly few regions truly matter in today’s global economy. The tallest peaks – the cities and regions that drive the world economy – are growing ever higher, while the valleys mostly languish. Place matters – and will, even more, in the future – because the global race is really a talent race. We want to bring addi-



tional energy to this community – to extend our ‘spike’ on the global stage.

KC: Name two things that you hope MaRS will accomplish over the next five years.

IT: We have a long ‘must-do’ list, but fundamentally, MaRS is focused on enabling entrepreneurs to be successful. An important element of this is getting talented students and creative young people intrigued by this world, and to foster and celebrate entrepreneurship. We also want to help, in a hands-on way, with business leadership development, and implementation of the strategies, connections and tools that will help position emerging technology companies to take on the world. In each case, it’s about attracting talent, bridging cultures, building skills and networks. At places like MIT, Cornell’s **Biosphere**, and Stanford, students expect to learn about starting a company, and entrepreneurs walk the halls looking for ‘the next big thing’; we must foster a similar environment, and get students thinking, “When I graduate, I want to start a company, or join a young company”. With the abundance of talent around here, good things will happen. We are delighted to have the Rotman School as a partner in this journey. 

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Dr. Ilse Treurnicht joined MaRS as CEO in January 2005. Previously, she was president and CEO of Primaxis Technology Ventures, a seed stage venture capital fund; and prior to that she was an entrepreneur with senior roles in a number of startup companies. She holds a doctorate in chemistry from Oxford University, which she attended as a Rhodes Scholar. For more on MaRS, visit www.marsdd.com

President's Corner: Kevin Lobo (MBA '95)

A month into his new role as president of Johnson & Johnson Medical Products, Rotman alumnus Kevin Lobo talks about the challenges of running a key branch of the world's most broadly-based manufacturer of health care products.



Karen Christensen: Globally, Johnson & Johnson has more than 200 operating companies employing 115,000 people in 57 countries, with an overall portfolio of 42 per cent pharmaceuticals, 41 per cent medical devices, and 17 per cent consumer products. How does J&J operate in Canada?

Kevin Lobo: Johnson & Johnson is represented in Canada by seven decentralized companies, each with its own objectives, and each of which is targeting double-digit growth: **Johnson & Johnson Inc.** is the consumer and baby products arm, located in Montreal; **Lifescan Canada Ltd.** develops glucose monitoring products in Burnaby, BC; **Janssen Ortho** is responsible for prescription pharmaceuticals out of Don Mills, ON; **McNeil Consumer Healthcare & Johnson & Johnson-Merck Consumer Pharmaceuticals** make non-prescription pharmaceutical products in Guelph, ON; **Ortho-Clinical Diagnostics** covers diagnostic products and reagents in Mississauga, ON; **Johnson & Johnson Vision Care** manages our disposable contact lens business from Markham, ON and I'm heading up **Johnson & Johnson Medical Products**, also based in Markham.

KC: Describe your role as president of Johnson & Johnson Medical Products.

KL: Our company markets and sells the products manufactured by J&J's 15 U.S.-based medical device companies. Basically, I'm responsible for overseeing marketplace development and sales for all of these products in Canada. The four biggest J&J companies we represent are

ETHICON (the market leader in wound management, surgical sutures and women's health); **Ethicon Endo-Surgery** (which manufactures surgical instruments for minimally-invasive and regular surgery); **Cordis Corporation** (cardiovascular innovations including cardiac stents), and **DePuy Orthopaedics** (which manufactures orthopaedic devices and supplies). We also distribute products sold by our sister companies. In Canada, our shared service model additionally provides support in human resources, finance and supply chain.

KC: What are your goals for J&J Medical Products over the next two years, and what challenges do you foresee?

KL: The goals for the company are to strive for double-digit capital efficient growth, while developing a robust pipeline of leaders for the future. Our biggest challenge will be

need to consider before they launch any new product. Our biggest challenge is to demonstrate the overall value of these innovations to all the regional health care institutions across the country.

KC: CEO William Weldon has said that at J&J, "breadth becomes strength" – that having such a broad portfolio of businesses provides enormous advantages for an organization. What kind of advantages do you see?

KL: Unlike many health care companies, J&J does not derive a large percentage of its profits from any one or two products, and there are three key advantages to this breadth, in my view. First, there is a marketplace advantage, because the lines between devices, pharmaceuticals and consumer products are increasingly blurring. I'll give you two examples. The first is

Our biggest challenge is supporting our customers in integrating new technologies into their operations as quickly as possible, to improve patient health and support surgeons in their work.

supporting our customers in integrating new technologies into their operations as quickly as possible, to improve patient health and support surgeons in their work. Canadian health care providers are faced with complex budgetary issues, lengthy wait lists, and varied consumer needs that they

the CYPHER Sirolimus-Eluting Coronary Stent, produced by Florida-based Cordis. This is both a medical device and a pharmaceutical product; the stent actually delivers a drug to the arterial walls, which inhibits scar tissue regrowth and keeps the arteries clear. This product represents the

greatest promise for eliminating coronary artery reblockage since the introduction of stents in the early 1990's. J&J was first to launch it and it was the result of a collaboration between our device team and our pharmaceutical team. Another example is **TYLENOL**, a consumer product that everyone is familiar with, but it's also a

cluded two full decades of consecutive double-digit earnings increases.

The third advantage we enjoy is major opportunities for employee development. The decentralized nature of our company encourages people to move from one sector to another; for me personally, this is my first experience in medical devices, although I've

Being so broadly based allows us to 'straddle the lines' between devices, pharmaceuticals and consumer products.

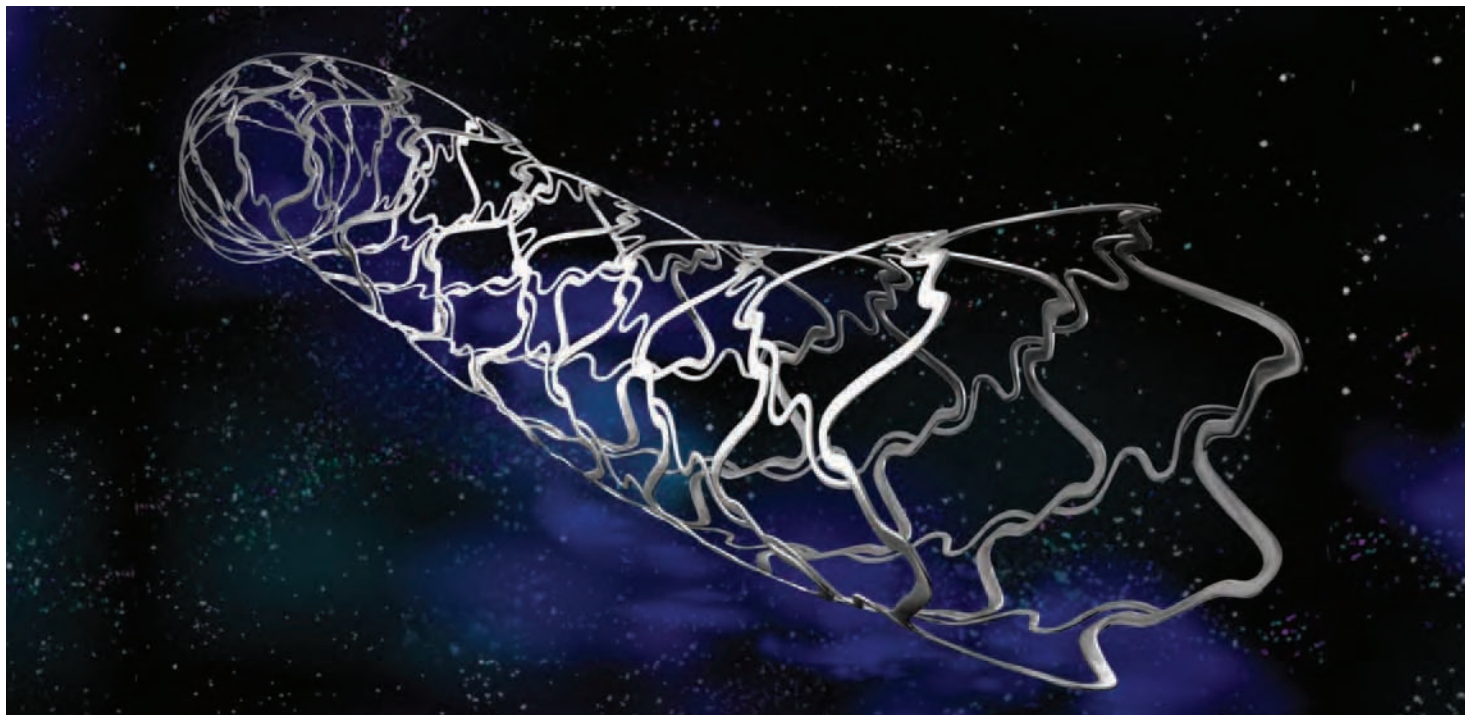
pharmaceutical, subject to similar regulatory and clinical filings that prescription drugs have to go through. Being so broadly based allows us to 'straddle the lines' between devices, pharmaceuticals and consumer products, to look closely at what exactly consumers need, and then match those needs with a product – whether it's a device, a pharmaceutical, or a crossover.

The second advantage we enjoy is a financial one, and it lies in the fact that if we have temporary financial difficulties in any one division, we are able to weather those and still deliver consistent, steady results. We've been a steady performer over many years because of this; in 2004, we con-

worked on the consumer and pharmaceutical sides for years. Opportunities to learn different sides of the business keep our people challenged and motivated. We're mostly talking about the medical products side of J&J here, but the company does so much more: there are pharmaceutical drugs being developed for cancer and AIDS; we have **Tibotec Therapeutics**, a fascinating company that provides innovative oncology, virology and other specialty therapeutics that improve patients survival and quality of life, and is looking to cure tuberculosis and AIDS; and at the same time other J&J companies are busy developing the next skin care products to protect us from UV rays. It's incredibly diversified.

KC: Don Berwick, co-founder of the Institute for Health Care Improvement in the U.S., has said that no firm integrates employee health into its culture better than Johnson & Johnson. Talk a bit about how your focus on employee health manifests itself.

KL: It's a long-held value for J&J to provide healthy options for our associates, which fully aligns to our Credo's commitment to employees. Since 1978, we've had an integrated health model called 'Live for Life', which brings together multiple health dimensions such as employee and family assistance counseling and employee benefits that are progressive and allow for flexibility as our people move through the life cycle. There are significant health promotion events, such as healthy-eating education and blood-pressure testing, on site; we partner with community groups on many wellness topics, from skin protection to positive parenting, and many J&J locations around the world – including the office I work in – have on-site fitness facilities. Some even have daycare facilities. And we provide cost-effective, nutritious meals at all locations. In addition to health, we focus equally on safety – for us, they go together. We provide educational resource support for work, home and travel safety. J&J is exploring a worldwide initiative to



A computer rendering of the CYPHER[®] Sirolimus-Eluting Coronary Stent.

Healthy employees are more productive and more likely to stay and grow with us, so we support them and their families in making healthy and safe choices.

provide a smoke-free environment; a number of our sites have already started this. We approach it in a very positive and supportive way, providing all kinds of tools and facilities to help people with smoking cessation, and we even help their family members quit smoking. We truly believe that healthy and safety-conscious employees are more productive and more likely to stay and grow with us, so we support them and their families in making healthy and safe choices. We invest heavily in prevention, versus reactive spending afterwards.

KC: Do you believe a firm should involve itself in employees' habits regarding nutrition, weight management, exercise, and smoking cessation?

KL: Absolutely. J&J's Credo was written in 1943, but it's still very much alive today. It talks about our responsibilities vis-à-vis four key stakeholder groups: first, our customers, which includes patients and doctors; second, our employees; third, our communities; and fourth, our shareholders. We feel directly responsible for helping our employees be healthy and safe, and we do so in a nurturing environment that encourages better habits.

KC: Since joining J&J's McNeil Consumer Healthcare in 2003, you have taken on increasing responsibilities in areas as diverse as finance, information management, strategic marketing, and purchasing. How do you approach thinking and working 'across functions' like this?

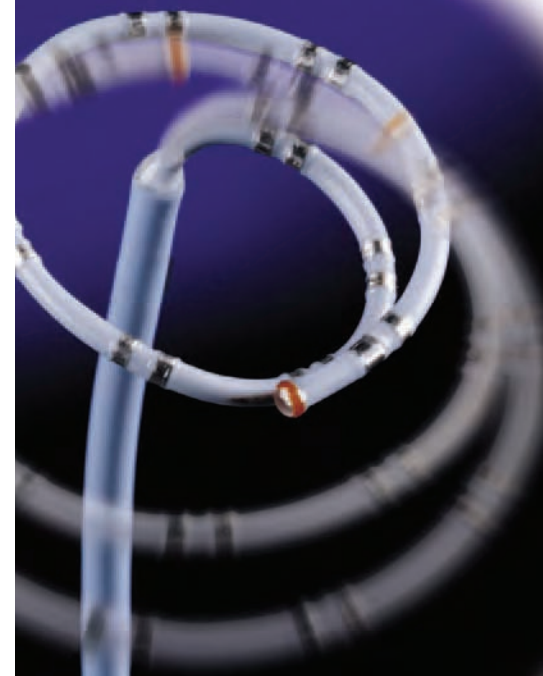
KL: I've used the same approach throughout my career [prior to J&J], Kevin worked for **KPMG, Unilever, Kraft, and Rhodia**. Basically, there are three steps. First, I get very engrossed and passionate about any new area I'm responsible for,

learning everything I can about how it works; second, I spend a significant amount of time with customers and employees; and third, I lead with the needs of these customers and employees squarely in my mind. In every role I've taken on, I spend a huge chunk of time listening in the beginning. I have one-on-one meetings during the first 30 days with every member of the management team, usually two levels deep; and I also meet with groups, and with customers. I've been on the job here for three weeks now, and I'm about to take my fifth trip, to meet some of our customers in Ottawa. There's a lot less difference than you might think between leading a sales and marketing organization and leading support organizations like finance or IT. Once you understand what the specific issues are for your customers and employees, the leadership imperatives are easy to identify.

Once you understand what the specific issues are for your customers and employees, the leadership imperatives are easy to identify.

KC: Other companies increasingly see J&J as a 'partner of choice'. Talk a bit about some of the exciting collaborations underway.

KL: One of our business units, **Biosense Webster**, which focuses on heart mapping, has an alliance with **Stereotaxis** and **Siemens**, and is working with them on something called the **CARTO™ XP EP Navigation and Ablation System**. This product will provide highly sophisticated views into the electrical activity of the heart through real-time data on three-dimen-



The LASSO™ Circular Mapping Catheter, produced by Biosense Webster.

sional, color-coded cardiac maps, helping physicians to navigate the heart. Another exciting initiative is happening at our DePuy Orthopaedics unit, which is working with **BrainLAB** to enable orthopedic surgeons to use computer-assisted techniques to better place hip and knee implants in the body. I can't tell you how impressed I am with all the new products that are in development and being launched; the degree to which they will improve lives and support physicians is just

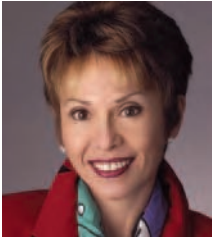
amazing to me, and it is incredibly motivating. Our vision at Johnson & Johnson Medical Products is to be Canada's most trusted and valued health care innovator. We are passionate that through collaborative partnerships, we can bring health technologies and innovative solutions to the market that will allow Canadians to live longer and healthier lives. **☑**

An Investor's Guide to the

AVIAN *flu*

by Sherry Cooper





Sherry Cooper

Most experts agree that when it comes to a global flu pandemic, it's not a matter of 'if', but 'when'. One thing is certain: the effects on the global economy will be severe and widespread.

At press time, new cases of human H5N1 virus, better known as the 'avian' or 'bird' flu, were surfacing regularly in Indonesia and Thailand, and possibly through much of the rest of Asia. The virus is now endemic in the bird population of some Asian countries, and most experts believe it can no longer be extinguished; carried by migratory birds, it has already infected and killed poultry and birds in Russia, Mongolia and some parts of Europe, and further spread to new areas is expected. No one knows if H5N1 will become as virulent and contagious in people as it is in birds; what we do know is that this virus is mutating and has a remarkable ability to evolve and jump species, and this has led to a sense of inevitability: most experts are convinced that, even if this particular virus does not explode into a pandemic, another one will.

At least 10 pandemics have been recorded in the past 300 years. The last one, in 1968, killed an estimated one-to-four million people worldwide, but the real killer-flu pandemic was in 1918 – the so-called 'Spanish flu', whereby an H1N1 strain infected 200 million to 1 billion people. According to the *Bulletin of Medical History*, an estimated 50 to 100 million people died globally, and between 1918 and 1920, roughly half the global population was infected in three separate waves. The fatality rate was about three per cent of those infected, killing about 500,000 people in the U.S. and nearly 60,000 in Canada

– which makes the Canadian death toll from SARS, at 44, seem almost trivial.

The death rate was highest among young healthy adults, aged 20 to 40, and among pregnant women. The disproportionate death of young adults resulted from a 'cytokine storm', an event in which cytokine production causes enormous lung and other organ damage. Cytokines are regulatory proteins that are released by cells of the immune system and act as 'intercellular mediators' in the generation of an immune response; people with the strongest immune systems produce the most cytokine, and hence have the highest

fatality between H5N1 and the Spanish flu: both originated from birds and mutated, thus far, in a similar pattern. Following is a brief look at some of the possible business-related effects of a global pandemic.

Economic Impact

In the case of a global pandemic, the disruption would be magnified by its pervasiveness. Supply chains would be broken; people everywhere would be frightened, and every business would be in emergency mode. Financial markets would be destabilized, and some might not even function for a short period. Gold prices

Supply chains would be broken; people everywhere would be frightened, and every business would be in emergency mode.

fatality rates. Experts warn that we cannot handle this condition much more effectively today than we could in 1918, even in intensive care units.

Worse yet, current studies of H5N1 cases in Southeast Asia, as well as the clinical picture and epidemiology of the virus, indicate a similar cytokine-storm phenomenon, which would disproportionately kill the most economically-productive age group. Recent analysis shows an eerie simi-

would jump as investors seek a financial haven, and central banks would add liquidity – but that only helps if bond markets are functioning, banks are making loans, and people are there to apply for those loans. Gold and Treasury bonds are traditional safe havens, and both rose in the wake of the September 11th terrorist attack. While gold prices might rise, other commodity prices would fall as global growth slowed, particularly in Asia. Clearly, the overall

functioning of the global economy would be attenuated for some period of time, depending on the severity of the pandemic.

At the first hint of a pandemic, governments, central banks and global public health organizations would attempt to calm fears and put plans in place. Even if they refrain from closing borders or limiting air travel, people would likely choose not to travel. Many would hunker down in their homes – and some might attempt to get to less-populated places; New Yorkers might head for the

A growing number of companies have realized the need to launch their own contingency plans to cover their staff and customers.

Hamptons, Torontonians for their cottages and farms, but to no avail: once a pandemic flu strain is unleashed, there is no way to prevent the spread of the disease. And remaining near a hospital or auxiliary medical facility might well be prudent.

It is likely that the first to be given antivirals or to be vaccinated would be health-care workers, paramedics, ambulance drivers and other employees who provide key services such as police, fire and rescue teams, and the armed services. In the draft preparedness plan for the United States, the first in line for essential medicines, according to a *New York Times* article (October 8th, 2005), would be “workers in plants making the vaccines and drugs, as well as medical personnel working directly with those sickened by the disease. Next are the elderly and severely ill. Then come pregnant women, transplant and AIDS patients, and parents of infants. Finally, the police, firefighters and government leaders.” This suggests that the **U.S. Department of Health and Human Services** and **National Institutes of Health** don’t yet buy the story of a cytokine storm.

Businesses Must Plan for Themselves

In the case of a global pandemic, many businesses would be confronted with, say, 25 per cent absenteeism, perhaps more, as

workers take ill, stay home to take care of family members, or refuse to go to work, especially in heavily-populated office towers. Business-continuity planning is therefore essential – companies must help to protect employees’ health, and they will need to work with health officials to minimize disruption.

But leaning on government will not be enough. Many businesses are multinational, under the auspices of numerous national, state/provincial, and local governmental

authorities. Already, many corporations are developing pandemic-specific emergency plans, focusing first on their Asian employees and businesses, and then on the rest of the world.

Medical directors at many large corporations have been urging pandemic continuity planning for some time. A growing number of companies have realized the need to launch their own contingency plans to cover their staff and customers. **Corning** in upstate New York, for example, is close to deciding whether it should buy (or at least order) stockpiles of antiviral drugs as part of a broader plan. **Deutsche Bank** has already drawn up plans, and **HSBC**, with its large Asian presence, said flu plans would be ready by the end of 2005. An HSBC spokesperson has reportedly said that this includes staff repatriation, and more call centres and shift-working in different parts of the world to cope with the changing workload as customers seek more online services.

Overall, the Internet would be an invaluable source of commerce, information and news – but while we could pay bills online, the purchase of goods would be limited by delivery problems. People will need to be informed about the latest pandemic developments, providing new and huge markets for Internet news along with print and broadcast media. All of these communication

businesses must protect their employees and assure that they have adequate sources of food, water and other essentials. Unfortunately, that will not be easy.

Shortages Everywhere

At the first sign of a pandemic, there would be a run on indispensable items such as food, water, and power. People would also attempt to stock up on essential medications and products such as insulin, heart drugs, and other prescription drugs, home-use dialysis machines, respirators, ventilators, gloves, masks, anti-bacterial hand soap and many more. Face masks would fly off the shelves and restocking would be impossible: only two American companies produce health-care particulate respirator and surgical face masks; **3M** is one of them, but it does not produce masks in the U.S., and it uses Chinese rayon in their production. Black markets in face masks (as an example) would develop, and crime would become a serious problem. The military and **National Guard**, as well as police and fire fighters, would be needed to maintain the peace, and yet their ranks would be depleted by illness.

Corpse management would be a huge issue – a glimpse of which we saw in New Orleans last fall. The casket manufacturing industry has virtually no spare capacity, and some inputs come from Asia. Refrigerated trucks would be seconded for the dead, but that would only exacerbate the delivery and storage of food products like milk, meat, fish and eggs.

There is no surge capacity in most hospitals around the world. Other facilities, from gymnasiums to warehouses to hotels to sports stadiums, would have to be quickly refitted and provided with staffing – but, there would be no excess health-care workers from other regions to come to the rescue, and no available hospital beds. Indeed, recovered victims, who would then have immunity, might be enlisted to help the sick or perform other essential work. There would be nowhere to send donations, as the money would be needed everywhere.

Non-essential medical services and surgery would be cancelled. Medical testing for non-influenza conditions would cease. So where will the cancer testing,

biopsies and chemotherapies and radiation occur? What about heart surgery, maternity wards, prenatal care, and infant ICUs? What about visitations and hospices for terminally ill patients? The medical questions are endless.

We estimate that ordinary influenza costs the U.S. economy roughly \$10 to \$12 billion annually in direct medical costs and loss of productivity. As bad as that is, a pandemic flu could kill over half a million in the U.S., hospitalize more than two million, and cost the U.S. economy a staggering \$70 to \$167 billion, according to early U.S. **Centers for Disease Control** studies. The cost to Canada would be around \$8 to \$18 billion, but those figures could be much larger.

With the U.S. as the engine of global growth, slowing trade and U.S. activity would slow economic activity worldwide. The repercussions on global trade would be devastating. Given that virtually all major economies have a trade surplus with the U.S., trade disruptions would shutter manufacturing plants and curtail global demand for most commodities. To the extent that business could create its own internal stockpiles, similar to **Wal-Mart** and **Home Depot** during Hurricane Katrina, business could go on, and demand for essentials could be satisfied, but these possibilities will be limited and must be carefully planned in advance.

Ironically, despite the slowdown in economic activity, unemployment, as we measure it, would be very low. Indeed, there would be labour shortages and involuntary

In the case of a pandemic, tourism and hospitality industries would suffer an enormous blow, which would mean reduced demand for oil and gasoline.

unemployment. The currently unemployed, self-employed and uninsured will look to government for assistance, taxing the resources of already-stretched governments at all levels, and global agencies will be called on for help. But those bodies are already underfunded and understaffed; the **World**



Health Organization, for example, had only 12 employees in Geneva working on the H5N1 pandemic at press time.

Investors Beware

In the case of a pandemic, tourism and hospitality industries would suffer an enormous blow, as would airlines and most

and trips to shopping centres would be dramatically curtailed. Other front-line casualties would include the leisure sector, gaming, racetracks and theme parks. Life insurers and re-insurers could throw their actuarial tables out the window.

To the extent that a disproportionate share of 20-to-40 year-olds would die, housing markets would weaken in response to excess supply, and all related building, real estate, decorating, and furnishing companies would suffer. Property values would fall, and some would be had later at bargain-basement prices. Banks and other lenders would see a marked decline in mortgage and consumer lending.

Commercial and corporate lending activity would likely slow at first as well. Loan losses could well increase sharply, as households lose income earners and businesses in many sectors are hit badly. Banks would continue their essential business and trading operations, increasing the demand for remote access and online banking. Investment banks, financial planners,

mutual fund companies and other institutional, corporate or private-client money managers would be under enormous pressure to minimize risk and wait out the pandemic as best as possible. Clearly, at the end of the crisis, there would be many bargains to be had, but only those in a strong financial position going into the disaster would be in a position to invest in underpriced real and financial assets.

Given that household debt-to-income levels are at record highs in the U.S. and Canada, active savings out of income are the lowest in history, and exposure to real estate

profitability, due to changing patterns of consumer and business behaviour. Telecommunications and tech businesses that cater to telecommuting could see enhanced demand for their products and services. Large and small businesses would likely boost their virtual private networks and increase use of videoconferencing to conduct business. Increased telecommuting would benefit Internet Protocol service providers, perhaps along with Internet telephony providers such as **Skype Communications**, which has agreed to be bought by **eBay**, and traditional wire-

Some sectors could actually benefit from a pandemic in terms of revenue growth and profitability, due to changing patterns of consumer and business behaviour.

has never been higher, many families are already in a financially-precarious position. As **Alan Greenspan** says, given all of the risk out there, reducing debt and spending relative to income is prudent. Investing in blue-chip income-producing companies is judicious as well. Adding to precautionary savings and avoiding, as much as possible, the forced sale of assets at markedly depressed prices should be a goal.

The poultry industry would be another victim of a pandemic. Already hit hard in Asia as hundreds of millions of birds have been culled, in the event of a full-fledged crisis, consumption of poultry and eggs would plummet. That hurts companies such as **YUM Brands**, owner of **KFC**, a wildly popular fast-food business in Asia, not to mention businesses such as **Perdue Farms**, **Tyson Foods**, **Maple Leaf Foods**, and related agribusinesses and feed-and-grain businesses. The soy beans market has already been negatively impacted. The farm equipment and machinery market could also be affected.

The Beneficiaries

Some sectors could benefit from a pandemic in terms of revenue growth and

line and wireless carriers. Cable-TV companies offering home connections via broadband could also benefit. Equipment suppliers that may gain additional revenue from increased networking include **Huwei Technologies** and giant gearmaker **Cisco Systems**. The same is true for **Alcatel**, the leader in broadband access equipment, which has a strong presence in Asia and has been in China for many years. With relationships throughout Asia, **Lucent Technologies** may also see business increase.

The full effect of a pandemic on inflation (for goods and services in short supply) and deflation (as demand for some goods and services plunge), and commensurate movements in interest rates, gold prices, currencies and stock prices would depend on the length and severity of the pandemic.

Having said all that, these businesses and sectors should be approached with caution and reliable investment research. Predicting the precise impact of a potential pandemic on the global stock markets is fraught with risk and uncertainty, and this discussion is simply meant to be illustrative of what could happen. Given that it is uncertain if a pandemic will occur, as

10 Steps Your Business Can Take

Here's what you can do now to maintain business continuity. Keep in mind that many of these strategies take time to implement:

1. Check that existing contingency plans are applicable to a pandemic.
2. In particular, check to see that core business activities can be sustained over several months.
3. Plan accordingly for interruptions of essential governmental services like sanitation, water, power, and disruptions to the food supply.
4. Identify your company's essential functions and the individuals who perform them. The absence of these individuals could seriously impair business continuity. Build in the training redundancy necessary to ensure that their work can be done in the event of an absentee rate of at least 25 per cent.
5. Maintain a healthy work environment by ensuring adequate air circulation and posting tips on how to stop the spread of germs at work. Promote hand and respiratory hygiene. Ensure the availability of alcohol-based hand sanitizer products.
6. Determine which outside activities are critical to maintaining operations, and develop alternatives in case they cannot function normally. For example, what transportation systems are needed to provide essential materials?
7. Establish or expand policies and tools that enable employees to work from home with appropriate security and network access to applications.
8. Expand online and self-service options for customers and business partners.
9. Tell the workforce about the threat of pandemic flu and the steps the company is taking to prepare for it. In emergencies, employees demonstrate an increased tendency to listen to their employer, so clear and frequent communication is essential.
10. Update sick leave and family and medical leave policies, and communicate with employees about the importance of staying away from the workplace if they become ill.

well as when and where, investors must assess the fundamentals of these sectors and companies rather than just the pandemic effects.

Despite the gloomy picture painted here, a global pandemic would not mean the end of the world: most likely, 95 to 99 per cent of the population would survive. Depending on the hardest hit age range, though, demographics could shift sharply.

Planning and Communication

Just as residents of New Orleans had lived through lesser hurricanes, and therefore ignored or denied the risk of a monster hurricane, many react similarly to the threat of a flu pandemic. Scientists cannot pinpoint the probability of it happening, or its timing and mortality rate. Estimates of potential loss of life vary widely, and although we are closer to a pandemic now

than any time since 1968, absolute uncertainty, coupled with the profound potential of danger, seems to cause inertia and paralysis. This makes it especially difficult for those public health officials and leaders who are charged with assuring public safety. It is difficult to get the attention of a weary and preoccupied public, particularly following the natural and terrorist disasters of the past four years.

Surveillance, planning and preparation are essential to effective response and containment. Once the disease is easily transmissible among humans, the stockpiles of efficacious antivirals and vaccines will be crucial. But this requires more research, enlarged productive capacity and money – lots of it. The emerging economies can't afford it – this is especially true in Asia – and the rich countries have been slow to respond; most avoid

proactive initiative beyond their own borders.

But this is a global issue, where the spread of disease in birds or pigs in Cambodia or Indonesia could profoundly impact major cities around the world. It is also a local issue, requiring the authority to close schools, distribute medications and provide surge capacity in hospitals and elsewhere. Businesses, as well, must plan for their own continuity of service and the safety of their workers. The need for coordination of these efforts locally, nationally, and globally in both the private and public sectors is unprecedented, extremely demanding, and above all, necessary. ■

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Dr. Sherry Cooper is executive vice president and global economic strategist at BMO Financial Group, and chief economist of BMO Nesbitt Burns and Harris Bank. This is an excerpt from her special report, "Don't Fear Fear or Panic Panic: An Economist's View of Pandemic Flu". To read the full report, visit www.bmonesbitburns.com/economics/reports/20051011/dont_fear_fear.pdf

Fighting the Virus

Most experts suggest potential vaccines and other preventative and curative measures will have little effectiveness in the early stages of a pandemic and cannot be manufactured quickly enough to make a large difference. Despite this, a host of companies around the world are busily at work developing a vaccine: **GlaxoSmithKline** (GSK) is gearing up to apply for preliminary European regulatory approval for a vaccine; and **Chiron** of the U.S. and **Sanoff Pasteur** of France are also having some success.

ID Biomedical, a Vancouver-based firm recently purchased by GSK, and Sanoff Pasteur produce flu vaccines for Canada. ID Biomedical entered into a 10-year contract in 2001 with the Government of Canada, requiring the development of sufficient infrastructure to produce up to eight million doses per month, in the event of a pandemic. The contract also states that IDB must ensure a secure Canadian supply of all raw materials necessary for vaccine production, including a regular supply of fertilized hens' eggs – the medium in which the influenza vaccine is grown. IDB currently has the

capacity to produce six million doses of pandemic vaccine per month, if necessary.

The U.S. has little domestic vaccine-production capability. **MedImmune** of Maryland has produced an inhaled vaccine for healthy people between five and 49 years old, and, in August, **Novavax** of Pennsylvania reported positive results on an H5N1 pandemic influenza vaccine. **The National Institute of Allergy and Infectious Diseases** has contracted with Sanoff Pasteur to supply two million doses of vaccine. Chiron has also received a U.S. contract to develop an H5N1 vaccine for testing.

The current annual capacity for influenza vaccine production using egg culture is enough to cover approximately five per cent of the global population. Almost all of the world's influenza vaccine is produced in only nine countries, representing 12 per cent of the world's population. This would require producing countries to share supply with others, which many believe would be very uneven given the short supply in most places.

Another palliative measure for pandemic flu could be antiviral drugs. Two such medications are capable of attacking enzymes in flu viruses to limit their ability to multiply. These medicines, known in the marketplace as Tamiflu (manufactured by **Roche**) and Relenza (by GSK) were created more than five years ago for the treatment of seasonal flu, and have shown some effectiveness in reducing symptoms.

Tamiflu has received the most publicity, and Roche has orders from more than 30 governments building stockpiles. Roche has also committed to opening a production facility for Tamiflu in the U.S., but production will not begin until 2006. The company is under intense pressure from governments to allow production of generic versions of Tamiflu; but Roche and outside experts state that the production process is so complex that it could take at least two years for other firms to start manufacturing the drug.

– **Sherry Cooper**

A Health Care Agenda for BUSINESS



Donald Berwick



Leonard Berry



Ann Mirabito

The truly healthy company is sound not only financially, but also in the physical and mental well-being of those who make up the organization.

by Donald Berwick, Leonard Berry and Ann Mirabito

The health care system is in crisis, and it has become a business crisis. Costs are spiraling upward, and the implications for firms and their employees are profound. Meanwhile, the quality of the health care being paid for remains highly uneven, despite the ever-increasing amounts of money devoted to improving it.

Underlying such problems is a broken market. Unlike companies in other markets, health care providers and organizations lack sufficient incentives to innovate broadly or improve quality. Consumers are unable to make health care decisions in the same way they make decisions about purchasing education or housing. And businesses that are rigorous and demanding purchasers of other goods and services are meek and ill-prepared when it comes to purchasing health care. In no other area of supply would such cost increases and uneven quality be tolerated.

On its own, business cannot solve the health care crisis; but that doesn't mean it can't do a great deal to improve the system. Following are four steps companies can take to partner with their employees on health care.

1. Integrate Health Into the Culture

The phrase 'healthy company' almost always denotes a firm's financial health. Using the phrase more literally to denote employee health underscores the connection between it and a company's financial performance.

What does it mean to integrate health into the corporate culture? It means that senior managers lead the charge through the personal examples they offer, the vision they establish, the goals they set and measures they use, and the resource allocation decisions they make. Progressive companies encourage healthier lifestyles and

discourage wasteful health-related spending by freely sharing information with employees; they also use financial incentives to encourage desired behaviours.

No firm in our study has integrated employee health into its culture better than health care giant **Johnson & Johnson**. As far back as 1978, then-company chairman **James Burke** established two overarching goals for an initiative called 'Live for Life': encourage Johnson & Johnson employees to become the healthiest in the world, and lower the cost of health care for the company. Johnson & Johnson sponsored programs in nutrition education, weight management, exercise, smoking cessation, stress management, and blood pressure control, and began documenting progress toward both goals. In 1995, the company integrated occupational medicine, disability management, employee assistance, well-

ness and health promotion, and employee work-life services (such as child care and elder care) into a single organization.

A cornerstone of the company's efforts is employee completion of a biennial health-risk appraisal. When the results of an appraisal indicate that an employee is at risk because of high blood pressure, high cholesterol, smoking or other factors, he or she is given a referral for intervention services. The confidential appraisal is done online, and employees may use their own doctor or a company occupational-testing service for the laboratory tests that are part of the appraisal. A \$500 medical benefit-plan credit to employees who complete the appraisal raised participation rates from 26 per cent in 1985 to more than 90 per cent in 1995.

Johnson & Johnson and its employees have clearly benefited from these efforts. In assessing changes in the risk profile of 4,586 employees who participated in two appraisals over several years, the company found improvement in eight of 13 risk categories, including tobacco use, aerobic exercise, blood pressure, cholesterol levels and dietary fibre consumption. One study found that annual savings averaged \$225 per employee between 1995 and 1999, with savings in the form of reduced hospital, mental health and outpatient visits.

2. Encourage and Enable Thoughtful Use

Health care is often used inefficiently, partly because health plans insulate consumers from information about cost, quality and effectiveness – information that consumers routinely seek when making other important purchases. **Ben Cutler**, chairman of **Fortis Health**, tells the story of trying to price a magnetic resonance imaging (MRI) exam that he needed for a rotator-cuff injury. Because of his high-deductible health plan, he would be paying the full cost, and so he phoned a dozen hospitals for prices. "Only two could or would tell me the cost. The response nearly across the board was, 'Well, you have insurance, don't you? Why do you care about cost?'"

Stronger employer-employee partnerships can be built with health plans that promote the involvement of employees, align the interests of both parties, encourage efficiency and equitability, and offer informational tools that enable employees

to make good choices. Consumer-driven health plans (CDHPs) have the potential to meet these criteria. One early supplier of a CDHP is **Definity Health Corp.**, based in St. Louis Park, Minnesota. Companies working with Definity fund personal-care accounts (PCAs) for their employees on a pretax basis, say, \$2,000 for a family. Employees tap their PCAs to buy health-related services. Preventive care is fully covered, and is not deducted from the PCA.

If the plan member uses all the account's funds during the year, he or she is responsible for additional expenses (say, \$1,500) before comprehensive coverage kicks in. PCA funds not used during the year are added to the member's allotment the following year. The rollover feature is critical, because it encourages employees to spend the funds wisely. Presently, 60 per cent of Definity plan members roll over dollars each year. An array of online and phone-based resources is available to assist members in their purchasing decisions. Members can track their account activity online and get comparative pricing information for medical services and drugs. They also have telephone access to 'health coaches' who can help them plan for a surgery, evaluate medical options, identify a home remedy or make other decisions.

Definity's clients saw an average increase in health care spending of less than four per cent for 2004, in comparison with the U.S. trend of more than 12 per cent. The savings are driven by, among other things, higher use of generic drugs, lower use of emergency rooms and lower rates of inpatient hospital admissions. Definity currently has a 95 per cent member re-enrollment rate.

3. Emphasize Prevention

Persuading employees to lead healthier, safer lifestyles is no small task. Moreover, the health care system is designed to treat illness and injury, rather than prevent them. Further, the payoffs from prevention are less obvious than the payoffs from treatment; and companies with high employee turnover may be reluctant to invest in prevention under the assumption that another employer will reap the benefits. Despite these obstacles, much disease and many injuries are preventable. Diabetes is an instructive example.

From 1990 through 2001, the percentage of U.S. adults with diabetes grew by 33 per cent, and Type 2 diabetes, traditionally an adult disease, is becoming prevalent in overweight children. Employers have good reason to invest in the prevention and effective treatment of this disease. If a company could reduce the onset of diabetes in its work force by 25 per cent within five years, it would significantly improve employee productivity, overall health care spending in the firm, and the quality of life for its employees.

Managers concerned about employee health should answer this question: What are the biggest health risks in our company that can be lowered effectively? To answer that, **Coors Brewing Co.** couples a health-risk appraisal survey with an assessment of employees' readiness to change their behaviour. Coors has partnered with **MayoClinic.com**, which developed a customized Web site that Coors employees can use to complete the confidential appraisal and readiness-to-change survey and obtain a wide range of health-related information. The appraisal includes an employee consent form allowing **Coors Wellness Centre** staff to gain access to an employee's specific results.

Almost all employees give their consent, enabling staff to contact high-risk individuals to offer intervention programs. For example, employees who are at risk of heart disease are invited to participate, during work hours, in a risk modification program known as the Coors Health Intervention Program. Participants are supervised on site by a physician as they exercise and receive instruction on nutrition and stress management. Follow-up monitoring occurs at regular intervals. Coors has increased employee participation in wellness activities by tailoring programs to specific work groups and delivering programs on site.

4. Catch and Manage Disease Early

As important as efforts at prevention are, people will still contract serious diseases. Early detection and effective treatment should also be part of a firm's health care agenda. For health and cost reasons, it is better to treat high cholesterol than heart disease, and better to detect cancers in their early stages.

SAS Institute Inc. CEO **Jim Goodnight** has a deep interest in health care. SAS provides free primary medical care for employees and dependents in company-owned clinics. Presently staffed with three physicians and 13 nurse practitioners, the **SAS Institute Medical Centre** saves the company money: documented savings come from not having to pay the higher

Partnering With Suppliers and Influencers

Rising health care costs have created an adversarial relationship between businesses and the suppliers and influencers of health care services. Companies are frustrated with endless cost hikes from providers, lack of innovation by insurance companies, and weak leadership from public officials. The

From 1990 through 2001, the percentage of adults with diabetes grew by 33 per cent. Employers have good reason to invest in the prevention and effective treatment of this disease.

costs of external providers, and from employees spending less time away from work for medical appointments; hypothesized savings come from employees seeking health care earlier in an illness cycle and missing less work time later.

SAS is one of approximately 40 large companies embarking on an ambitious collaborative cancer initiative called the Gold Standard. The companies are members of the **CEO Roundtable on Cancer**, covering more than 27 million employees and their dependents. Gold Standard companies have committed to a three-part cancer strategy. First is education aimed at prevention. CEOs are expected to play a personal leadership role in raising awareness. Second is early diagnosis. The companies are expected to use the best available screening tests and to encourage people to undergo screening. Third is facilitating access to clinical trials for individuals diagnosed with cancer. Medical specialists help newly-diagnosed patients obtain credible information, and then help them decide whether to enroll in a clinical trial. Whereas most children nationwide who get cancer enroll in clinical trials, only about 10 per cent of adults do.

These examples show how costs can be reduced while quality of care and life are improved. But partnering with health care users is only part of the agenda: another crucial step involves partnering with suppliers and influencers within the system.

health care industry, logically the group to overhaul health care, is balkanized by the conflicting goals of doctors, hospitals and health plans. Business, with so much at stake, and in its role as customer, needs to use its clout to create a dialogue with these groups to accomplish the following:

1) Align Insurance Company Incentives

In an effort to control costs, businesses during the 1990s persuaded employees to enroll in managed-care plans. Such plans contributed to the relatively low growth in health care spending in the 1990s, mainly by reducing payments to providers and shortening hospital stays. But providers and patients chafed under the tight cost controls. Employers responded to the backlash by loosening the controls, unleashing the double-digit cost spiral of the early 2000s.

Today's innovative purchasers are building on the managed-care legacy to establish more effective relationships with insurance companies. A few companies are now expanding negotiation criteria to include quality of care, using quality standards offered by the **National Committee for Quality Assurance**. And some insurance companies and businesses are partnering to fix systemic issues that drive up costs.

About 75 per cent of total health care spending is dedicated to the treatment of chronic disease. A few companies are struc-

turing contracts to help align insurers' interests with their own. Some pioneering contracts allow for premium adjustments based on the risk and illness severity of enrollees, and other contracts extend over multiple years.

One notable partnership is between **Ukrop's Super Markets Inc.** of Richmond, Virginia, and **Anthem Blue Cross Blue Shield**. Self-insured Ukrop's was bludgeoned by a 32 per cent medical cost hike in 2002. In the new three-year contract, Anthem is investing in disease management and prevention programs tailored to Ukrop's employees' medical needs. After evaluating Ukrop's claims history, Anthem identified four areas in which Ukrop's employees differ from their peers. For example, they were frequent users of the emergency room. By requiring higher co-payments for ER visits, the benefits program steers employees toward their regular doctor when conditions are not true emergencies. To make the disease management programs cost-effective, Anthem uses statistical modeling to select patients who will benefit the most. Less-sophisticated programs often target the previous year's sickest patients, many of whom would have rebounded without the intense intervention.

Insurance companies and businesses are also collaborating to identify which new medical technologies to adopt in their communities. In Rochester, New York, an advisory board on technology assessment advises payers and other interested parties on the need for, and efficacy of, new technology or novel applications of existing technology, taking into account geographic location, access, cost-effectiveness and quality. The board is led by a local business leader and includes insurers, physicians, health system administrators and consumers. A physician committee of the board analyzes the issues on the basis of scientific, evidence-based studies. The process restrains unnecessary capital expenditures; for example, Rochester's use of MRIs is 37 per cent lower than that of nearby Syracuse, a demographically-similar market.

2) Demand and Reward Quality From Providers

While it's important to have smart relationships with insurers, individual doctors and

hospitals have even more influence over health care outcomes and costs than health plans do. A major problem is the wide variation in efficiency and quality among doctors and hospitals. Tens of thousands die each year because the care they get strays from medical standards. This includes heart attack patients who didn't get beta blockers, and chronically-ill patients whose blood pressure, diabetes or cholesterol were not brought under control.

Some doctors and hospitals are more likely than others to adhere to the strongest scientific findings, a practice known as 'evidence-based medicine'. Proponents argue that the use of evidence-based medicine yields better health outcomes, with lower total cost to payers. But providers have no financial incentive to adopt best practices, because purchasers typically pay health care providers the same, regardless of efficiency and quality. That's beginning to change. Several large employers are starting to steer patients to better-performing providers, and to reward clinicians and hospitals for meeting quality goals.

General Electric Co. rewards physicians treating diabetic patients for following evidence-based care guidelines such as controlling blood-sugar levels and providing regular foot exams. Ten per cent of GE's total health plan costs go for diabetic care and related hospitalizations. GE estimates an annual \$350 savings for each

following their doctor's advice about medications and exercise.

The ultimate way to demand quality? "Stop paying for bad care," suggests **Helen Darling**, president of the **National Business Group on Health**, an alliance of large employers. "We expect GE to fix the refrigerator or take it back. If employers refused to pay for care when there is a preventable medical incident, quality would improve."

3) Leverage Group Power

A single business, no matter how large, lacks the muscle to overhaul the health care market on its own. Accordingly, businesses are banding together to tackle the health care crisis. As a first stage, they are forming alliances to leverage their buying power. **General Mills Inc.**, for example, has achieved deep pharmaceutical discounts by joining with several other large employers to purchase drugs.


The employers sponsoring the **Leapfrog Group** go further, using their buying power to promote safety improvements that will ultimately enhance overall health care value. Leapfrog is challenging hospitals to implement computerized physician order entry to reduce medication errors, to refer patients requiring selected complex treatments to hospitals with the best outcomes or the most experience, and to use physicians trained in critical care medicine to monitor patients in the inten-

Cooperative, for example, prodded the state's medical groups to publish performance reports. Now employers in the alliance are experimenting with an approach that ties health care rate increases not to inflation, but rather to improved performance; providers are rewarded, for example, for having lower rates of hospital readmissions, complications from treatment, and Caesarean sections. As quality-of-care metrics about individual physicians become available, the organization will help design incentives to encourage employees to use the best combination of cost and quality.

The Truly Healthy Company

Innovative companies seek to control their company's health care destiny. They acknowledge the influence of illness and injury on the company's prosperity. They believe healthy people deliver healthy profits. They avoid a silo approach in favor of a holistic one, and they measure outcomes from their investment.

Innovative CEOs use their positions to create a burning commitment to change. They align health benefit incentives and give employees the tools and encouragement to stay healthy and make smart health care decisions. They reward insurance companies and providers for improving outcomes and efficiency. They strive to improve health care system performance not just in their own companies but throughout their communities.

The pioneering companies in our study demonstrate that the business community can set the agenda for a better future, and that everyone shares the rewards when the whole system improves. 

Innovative companies seek to control their company's health care destiny. They acknowledge the influence of illness on their prosperity.

diabetic employee who is treated according to standards set by the **American Diabetes Association**, the **National Committee on Quality Assurance** and other quality organizations. The company is sharing half the savings with doctors and patients to motivate best-practice behaviour. Qualified doctors earn a \$100 annual bonus for each diabetic patient for whom they provide care that meets national best-practice standards. Patients pocket \$75 for

sive care unit. Leapfrog's initiatives have attracted controversy; for example, software systems to support computerized order entry are costly. The group counters that these three initiatives will save up to 58,000 lives and prevent up to 522,000 medication errors each year.

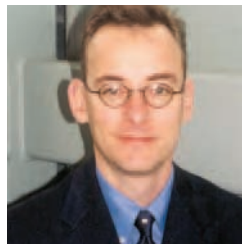
Several business coalitions help their members reward strong performance by hospitals and physicians. Wisconsin's **Employer Healthcare Alliance**

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Culture Clash:

The Professional- Manager Dichotomy



by Brian Golden

Health care leaders must keep in mind that identical issues can be interpreted in myriad ways by professionals and managers, and that it is these varied interpretations – not individual roles – that best predict how issues get resolved.

In professional organizations such as hospitals, universities, law firms, and research laboratories, professionals perform the core functions of the organization, while managers provide the means to the major activity carried out. For example, hospital administrators ensure the well-being of the hospital so that physicians and other health care providers can care for patients. Despite what is ostensibly a symbiotic relationship, many professional organizations are rife with conflict between managers – who mainly represent the interests of the organization, and professionals – who mainly represent the interests of their professions. Members of both groups believe they are doing the ‘right thing’ – all the while questioning the motivations and actions of the others.

This article explores the particular challenges of managing the ‘professional-manager dichotomy’ in health care organizations – which the late **Peter F. Drucker** has called “the most complex form of human organization we have ever attempted to manage.”

In organizations of all types, potentially-paralyzing interpersonal and intergroup conflict is most likely to rear its ugly head when certain conditions are present: a diversity of views on important issues, high interdependence among individuals, and scarce resources. This is especially true when issues emerge in the form of resource allocation dilemmas – issues for which equally-compelling, and mutually-exclusive alternatives exist.

For example, given the increasingly-limited resources available for health care, physicians and hospital managers may debate the merits of providing an expensive heart transplant to an indigent person; physicians may argue that the decision should be dominated by medical concerns, and that life-and-death decisions based on financial considerations are inappropriate. The hospital’s chief financial officer

may argue that expending such great financial resources on a single individual, for which the hospital will not likely be fully reimbursed, puts the long-term financial well being of the hospital at risk. Such

their patients and The College. Although they may face mobility costs and limited (or only similar) employment opportunities elsewhere, physicians, nurses and other allied-health professionals tend to have

“A rational man acting in the real world may be defined as one who decides where he will strike a balance between what he desires and what can be done. It is only in imaginary worlds that we can do whatever we wish.”

–Walter Lippmann, *The Public Philosophy* (1955)

issues can be a source of significant conflict, not only putting the patient and hospital at risk, but also the relationship between decision makers.

Socialization and Dependency

While numerous differences exist between professionals and managers, two distinctions are fundamental. First, in contrast to managers, professionals are subject to a significantly more intensive and long-lasting socialization process, which establishes and reinforces the values of the profession and increases their identification with it. Also in contrast to managers, the behaviour of professionals is regularly monitored by peers (e.g., **The Royal College of Physicians and Surgeons**) who have the authority to sanction them for violating the norms of the profession. Of great importance, then, is that professionals belong to an identifiable body that enforces a values-based code of conduct and insists that its values and standards supersede those of employers.

Professionals and managers also differ with respect to how dependent they are on a particular organization for their livelihood. Specifically, managers are generally more dependent upon and accountable to their employing organization than are professionals.

For example, most physicians in Canada are not actually employed by the hospitals in which they work: rather, they are self-employed and are accountable to

greater freedom to pick up their ‘kit bag’ of skills and move on. Managers are less mobile, since much of their organizational ‘goodwill’ is employer-specific.

These two distinctions, namely the values and controls associated with becoming a professional, and the professional’s ability to move on, are often held up as major explanations for the clash between professional and managers. The clash between such groups in any organization would be problematic, but it is especially so given this unique feature of hospitals: those who control the bulk of hospital expenditures are not employees of the hospital. For example, it is not uncommon for as much as 80 per cent of a hospital’s budget to be consumed by labour costs; most of these costs are for nurses’ wages and benefits, and it is physicians’ directives that largely determine the hospital’s demand for nursing services. Physicians also greatly impact the remaining cost drivers in hospitals, including equipment use, drug expenditures, and lab tests. Thus, the vast majority of a hospital’s costs are controlled by individuals who are not employees of the organization.

Of course, physicians recognize, in principle, that medical centres and hospitals must survive if they are to have a setting in which to provide care; however, when scarce resources are up for grabs and alternative uses are mutually exclusive (e.g., either purchase new imaging tech-

nology or a new cost-accounting system), conflict can be expected.

Prior to the research conducted by my colleagues and me, the prevailing view was that professionals prefer resource allocations that protect or promote the standards of practice over those made to pursue other ends, such as market share and profitability.

“Gentleman, we are out of money. Now we must think.”

– Sir Ernest Rutherford, Director of Cavendish Laboratory, Cambridge, England (1919)

In contrast, managers were thought to be primarily accountable to the organization, and therefore likely to be guided primarily by concerns of economic efficiency and making the best ‘business decisions’. We found these assumptions too simplistic to be useful, and worse, not supported by anything more than anecdote.

Our research attempted to understand why professionals and managers might be at odds when faced with resource-allocation dilemmas. Specifically, we focused on the ‘mental models’ held by members of both groups as a result of their roles, training, and socialization. More complicated than ‘professionals prefer x’ and ‘managers prefer y’, our predictions about how professionals and managers think could help both groups work together more cooperatively.

The Role of Mental Models

Decision makers in organizations – whether they be professionals or managers – are confronted with extremely complex and ambiguous ‘information worlds’, and as a result, they often make sense of problems and issues by categorizing and labeling them. They do so by employing schemata, or ‘mental models’, which act like filters, accentuating and downplaying various elements of complex information worlds.

These mental models serve several purposes: they provide a structure against which experience is mapped; direct information encoding and retrieval from memory; affect information-processing efficiency and speed; guide filling gaps in the information available; provide templates for problem solving; facilitate the evaluation of experience; and facilitate anticipations of the future in terms of goal setting, planning,

and goal execution. In short, mental models affect what we notice, how we interpret things, and how we make decisions and act.

To examine the utility of the ‘mental model’ concept as an explanation for conflict between physicians and managers, we began with the premise that individuals may come to very different understandings of identical

issues, and that these differences result from the differing experiences (e.g., professional training) and values that decision makers hold dear. We examined the idea that identical issues get interpreted through decision makers’ different mental models, and thus that they ‘see different things’ when faced with the same resource-allocation issue. We examined this in two steps: first, we conducted intensive interviews with dozens of hospital managers and physicians in order to understand how members of both groups might categorize issues; and second, we examined the actual decisions of over 300 physicians and managers when faced with resource allocation dilemmas.

We didn’t expect surprises during the interview stage, and for the most part, none were observed. The interviewees – both managers and physicians – seemed to have accepted stereotypical notions of themselves and each other. For instance, the participants suggested that, in contrast to physicians, managers tend to see issues as dominated by financial and management concerns (e.g., “Can we afford the equipment?”; “Does management have the authority/expertise to make this decision?”), and were more likely to characterize issues as opportunities or threats. In addition, the managers we interviewed described the need to consider how the allocation of resources would be perceived not only by other managers, but also by regulators and the wider community. This suggested to us that managers are especially sensitive to the ‘public visibility’ of an issue.

Characterizations of physicians were also consistent with common expectations. Physicians reported that they’d be less

likely to ask, “Can we afford the new equipment?,” than “Does this purchase best serve the medical needs of our patients?” And, because the health care profession has a dominant human-service component, physicians told us they (more than others) often considered the ‘social welfare’ and ‘justice’ implications of decisions.

Overall, then, our interview results suggested that physicians’ interpretations of resource allocation decisions are likely to be dominated by medical concerns, social welfare and justice interests; while managers’ interpretations are likely to be focused on managerial and financial concerns, as well as the extent to which the issue involves a threat or opportunity and is visible to the organization’s critical stakeholders. These initial findings weren’t terribly surprising; however, it was necessary to establish them in order to proceed to the more interesting stage of our research, in which we examined the link between how issues are interpreted and how resource-allocation decisions are made.

Issue Interpretation and Decision Preferences

The second stage of our research involved examining how identically described, or ‘framed’ issues are variously interpreted, and how interpretations – not simple distinctions between ‘managers’ and ‘professional’ – influence decisions (e.g., the allocation of scarce organizational resources). We conducted two studies, one exclusively in the highly-competitive U.S. hospital sector, and the second in both a U.S. and a largely-socialized Australian hospital. Participants included hospital chief financial officers (CFOs), full-time physicians, and chief medical officers (CMOs) – physicians who have assumed substantial managerial responsibilities.

We examined several predictions. First, we challenged the taken-for-granted assumption that doctors and hospital managers (especially ‘finance types’ such as CFOs) are bound to disagree when faced with resource-allocation dilemmas. Second, we predicted that if they do disagree, it would not be along simple physician/manager lines. Rather, we believed they would disagree only when they came to different understandings about identical issues; we predicted that

those who interpreted identical issues in similar ways would not differ in their resource allocation decisions.

We were also curious about managers who began their careers as full-time physicians, but increasingly gave up their clinical practice for administrative duties. The physicians in our interviews suggested that these individuals had “sold out the medical profession,” and “thought and acted like suits” (i.e., managers). In contrast, the managers we interviewed suggested just the opposite: in their view, “once a physician, always a physician,” and “they tend to continue thinking and acting like doctors, even when they take senior management positions.” Finally, we predicted that social context would have an affect on their interpretations of issues, and consequently, the decisions they favoured.

In the study we conducted in the highly-competitive U.S. hospital market and the more socialized Australian system, we expected that if we indeed observed differences between the resource-allocation decisions of physicians and managers, these differences would be greater in the U.S. than in Australia. The reasoning behind this is that Australian physicians understand the concept of a health-care spending ‘fixed-pie’, and as a consequence, they attend to patients’ needs while simultaneously considering how the resources they expend on a particular patient affect the resources that may (or may not) be available for others in the public system.

What we found – and did not find – in both studies was interesting. First, we found that the professional-manager dichotomy is a false one, and that the relationship between physicians and managers is both complex and manageable. Consistent with the ‘mental model’ arguments, we found that individuals who interpret resource-allocation issues as dominated by ‘managerial concerns’ (e.g., management, financial, opportunity, threat, public visibility) prefer decisions that are in the interests of the organization. And, when interpretations of these identically-framed issues are dominated by the concerns of the profession (e.g., medical, social welfare, justice), decision-makers are likely to prefer decisions that are in the interest of the profession. We also observed decreased variation among all participants (physicians

and managers) in the Australian sample, which confirmed our prediction that decision makers in public systems such as Canada’s are more experienced at seeing multiple sides of a resource-allocation issue.

Interestingly, we found virtually no support for the simple prediction – on which physician and management stereotypes are based – that physicians tend to view issues in medical terms while managers view issues in financial and managerial terms. That is, physicians were just as likely as CFOs to interpret a capital-allocation decision as a financial issue rather than one about health-care access. Also, we found only a modest relationship between the decision maker’s role (i.e., physician or CFO) and their resource-allocation decisions. Essentially, if all we knew was a decision maker’s role as either physician or CFO, we would not be comfortable predicting how they would choose to allocate scarce resources.

Our examination of CMOs proved interesting. Our interviews suggested that these individuals – who had begun their careers as physicians, but had taken on substantial management responsibilities in their hospitals – are often viewed with suspicion: physicians viewed them as representing management, and managers viewed them as representing physicians. Our findings revealed that in the rare cases when physicians and managers systematically differ in their interpretations and decision preferences (but remember – we found only modest differences between physicians and managers), CMOs thought and acted more like physicians than managers. That is, they had not gone over to the ‘dark side’, as many of their former physician colleagues feared; their initial training and socialization endured.

Managerial Implications

Our findings do not suggest that professional organizations, and hospitals in particular, are devoid of conflict. Anyone who has worked in such organizations understands that conflict will always be present when resources are scarce and well-intentioned decision makers have diverse views and values. However, our research does provide a more nuanced way of thinking about sources of conflict, and how it may be avoided or minimized. First, we believe that an exaggerated belief

in a simplified professional-manager dichotomy can have profound, unhealthy implications for the management of professional organizations. For example, a CEO may exclude certain classes of participants (e.g., surgeons) from the organization’s budgeting or strategy formulation process in order to avoid presumed opposition. Such executive decisions to exclude others may in fact be a cause, rather than a consequence, of conflict between physicians and managers.

Rather than assuming that physicians and managers preferences are predictable based on their roles in the hospital, it is important to manage the ‘framing’ of issues. Health leaders need to keep in mind that identical issues can be interpreted in myriad ways, and that it is interpretations – and not roles – that are the greatest predictor of how issues get resolved. Thus, leaders must be adept in presenting an issue about the financing of a new program also in terms of patient access. More generally, health care leaders have to be educators; they must be able to show, when valid, how the well being of patients is inextricably linked to the well-being of our health care institutions.

Managers in professional organizations, and health care organizations in particular, are influenced by a multitude of organizational goals, and the competing pressures they face may result in cognitively-complex views of their organizational responsibilities. We believe it is time to consider the classic professional-manager dichotomy as an anachronism: the resource requirements, strategies, and environments of today’s health care organizations are too complex for their members not to recognize and be influenced by the legitimacy of multiple perspectives. Based on our research, we encourage health care leaders to use the power of issue framing to influence how others understand and thus resolve issues in a way that supports their organization’s mission. ■

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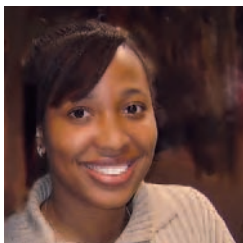
MAKING IT SAFE:

THE EFFECTS OF
PROFESSIONAL STATUS
ON TEAM LEARNING

*by Amy Edmondson and
Ingrid Nembhard*



Amy Edmondson



Ingrid Nembhard



Leadership inclusiveness can help to overcome the profession-related status differences that serve to hamper quality improvement and heighten tensions in cross-disciplinary teams.

The combined challenges of teamwork and collaborative learning are emerging as central to the health care delivery enterprise. Increasingly, cross-disciplinary teams are responsible for delivering care to patients in settings ranging from primary care to chronic care, geriatrics and end-of-life care. Most patients require care from a range of disciplines, making teamwork in the routine delivery of care essential. Few industries have more at stake when teams learn – or fail to learn – than health care.

Health care professionals face a staggering rate of change in medical knowledge. Whereas in 1966, only 100 new articles were published reporting on randomized control trials – medicine’s ‘gold standard’ for recognizing new knowledge – 1995 brought more than 10,000. In terms of sheer volume of new information, the Medline bibliographic database adds 30,000 new references each month, and the **Federal Drug Administration** reviews thousands of applications for new devices and drugs annually. And while no single individual can absorb all of this new knowledge in a timely manner, it is clear that a capacity to learn is essential to continued effectiveness in health care delivery.

A second trend is the increasing specialization of health care professionals. Prior to 1930, there were only two boarded medical specialties: ophthalmology and otolaryngology. Today, there are 26 specialties and 93 subspecialties within the major specialties, eight of which were approved during the 2002-2003 accrediting year. Thus, the scope of an individual physician’s domain of expertise has diminished, while depth of expertise has increased. At the same time, a growing number of non-physician professions have joined the patient care enterprise: specialists in nutrition, respiratory therapy, physical therapy, phlebotomy, and so on, have joined nurses as non-physician caregivers, playing vital roles in the health care system. In 1900, the ratio of physicians to

non-physicians was one in three; by 2000, that had exploded to one in 16, creating greater fragmentation of expertise, and more hand-offs in the patient care process. An increasing number of different caregivers treat each patient at the bedside, each bringing information necessary and relevant for development of a cohesive care plan.

A third trend – almost a necessary outcome of the first two – is increasing interdependence. Many new technologies and care practices involve reciprocal (as opposed to sequential) interactions, in which caregivers cannot simply do their jobs and assume others will come along and do theirs. Instead, their knowledge and efforts must be integrated to deliver quality care. These trends, which are more prominent in health care than in other industries, all imply a need for collaborative learning in groups of professionals from different disciplines.

Barriers to Collaborative Learning

Despite the need for collaborative learning in cross-disciplinary health care teams, team-based quality improvement (QI) efforts may stall for a number of reasons. First, the stakes are undeniably high. Human life is at risk when processes fail, creating understandable risk aversion that can inhibit willingness to engage in the chaos and uncertainty of team brainstorming and experimentation.

Second, cross-disciplinary teamwork – intended to integrate knowledge and expertise from different sources – is widely recognized as difficult to carry out in practice. Improving the quality of care-delivery processes necessarily requires multiple viewpoints, each grounded in deep knowledge of a different aspect of the process, and different ideas about how to improve it. For example, while physicians present specialized medical expertise, nurses and allied health workers (e.g. respiratory therapists, dietitians) have greater knowledge of daily patient-interaction processes. In the

course of their work, nurses witness and experience a variety of problems and often employ a number of creative solutions to resolve emergent issues, generally without communicating these to others in the hierarchy. Thus, collaborative learning does not occur naturally in health care.

Third, a well-entrenched status hierarchy exists in medicine, making it difficult to speak across boundaries to collaborate for learning. The medical training that instills a culture of autonomy for action can diminish professionals’ tendencies to seek opportunities to learn to communicate, share authority and collaborate in problem-solving and QI.

The Role of Status in Psychological Safety

The existence of a professional hierarchy in medicine and the differential status – defined as prominence, respect and influence – accorded to those who occupy different positions within that hierarchy is well established in the literature. We know that surgeons garner more prestige than other specialty physicians, that specialty physicians rank above primary care physicians, that physicians possess more power than nurses, nurses than physical therapists, and so on.

Membership in professional groups, and the associated status accorded to each, significantly influences interpersonal interactions. Compared to high-status individuals, those with low status are more likely to withhold valid information, limit their organizational citizenship behaviour, defer decision rights to higher status others and speak less. Such self-censoring behaviours are related to perceptions of risk to self and fear of negative repercussions (e.g., public reprimand or assignment to a ‘bad’ work shift).

Research on organizational silence indicates that sense of threat and/or risk is a key determinant of employees’ willingness to speak up freely. Speaking up freely only occurs when there is a state of ‘psy-

chological safety' – where people are not constrained by the possibility of others' disapproval and/or the negative consequences that might accrue to them as a result of speaking up.

Those with high status have more control over formal appraisals and resources and therefore are likely to be less concerned about what low-status others think of them than the other way around. In a related vein, research on politeness shows that those with low status employ more 'facework' (face-saving verbal strategies) when addressing those with higher status than the other way around. With increased status, people exercise less concern about damaging others' 'face'; opinions can be freely voiced and requests made of others without verbal compensation to convey apology, humility, or deference.

The well-documented inverse relationship between status and politeness can be partly explained by differences in psychological safety across different status groups. In cross-disciplinary teams, higher-status individuals experience greater psychological safety than lower-status individuals. In general, high-status individuals tacitly assume that their voice is valued; accustomed to having their opinions sought, they learn to offer them freely, not perceiving the same interpersonal risk associated with self-expression experienced by those with low status. Individuals lower in the medical hierarchy are likely to view such behaviours as raising concerns or suggesting alternatives to current practice as interpersonally risky.

The relationship between status and psychological safety may vary in strength, depending on how status differences are handled in different workplaces. Interpersonal dynamics have been shown to vary greatly across work groups, even within the same strong organizational culture. Bringing together professionals with different backgrounds and expertise may exacerbate this variance, if some groups handle the challenge of managing differences more skillfully than others. In particular, when status differences are salient in a cross-disciplinary team, how the tension between the norms of collaboration that underlie the notion of teamwork and the reality of

status differences is managed is likely to affect psychological safety.

If those with high status in a team take actions to alter how low-status others perceive the interpersonal climate, then status and team membership will interact to determine the level of psychological safety an individual feels. In a study of specialized AIDS units versus general medical units treating AIDS patients, researchers found that the relative status of nurses was increased after the conversion to specialized units. They attributed the elevation in status to an increased appreciation for nurses' specialized knowledge and client differentiation. Another possibility is that leader behaviour, particularly in demonstrating inclusiveness, can frame the meaning of status differently across units, even with similar structures or work design.

Leadership Inclusiveness

Team leader behaviour has been shown to affect the internal dynamics of a team, influencing team climate and learning orientation. Team members are highly attuned to the behaviour of leaders, and examine leader actions for information about what is expected and acceptable in team interactions. If a leader takes an authoritarian, unsupportive, or defensive stance, team members are more likely to feel that speaking up in the team is unsafe. In contrast, if a leader is democratic, supportive, and welcomes questions and challenges, team members are likely to feel greater psychological safety.

Preliminary evidence of leadership effects on psychological safety emerged in a study of medication errors in nursing teams. In some units, nurses described nurse managers as authoritarian and expressed deep fears about being reprimanded for revealing mistakes. In contrast, nurses in other units felt safe speaking up about errors because their nurse manager had stressed the importance of using this information as a learning tool for the unit.

A later study of cardiac surgery teams suggested that teams with leaders who actively invited others' input had higher psychological safety than those in which this behaviour was absent. Further analyses showed that team leaders handled the issue

of status differences in very different ways. Although all teams comprised four professional roles, with clear traditional status differences, in some, the surgeons (those with the highest status) made an effort to minimize status differences as a means of facilitating the speaking up needed to implement the new cardiac procedure effectively and efficiently. In other teams, little to no attention was directed to managing status differences, and the inhibiting effects of status on psychological safety prevailed.

Building on these insights, we propose the construct of 'leadership inclusiveness', defined as words and deeds by a leader or leaders that indicate an invitation and appreciation for others' contributions. Leadership inclusiveness captures attempts by leaders to include others in discussions and decisions where their voices and perspectives might otherwise be absent. It is related to team leader coaching behaviour, which describes team leader behaviours that facilitate group process and provide clarification and feedback, but differs in that it directly pertains to situations characterized by status or power differences. Leaders who recognize that others might have difficulty speaking up, and therefore explicitly invite others' voice, are demonstrating leadership inclusiveness.

Leadership inclusiveness describes behaviour that, through direct invitation, should create psychological safety for speaking up. We suggest that both invitation and appreciation are needed to convey the inclusiveness that helps people believe that their voices are genuinely valued. Without a recognizable invitation, impressions derived from the historic lack of invitation will prevail. And without appreciation (i.e., a positive, constructive response), the initial positive impact of being invited to provide input will be insufficient to overcome the subsequent hurdle presented by status boundaries. Defining leadership inclusiveness in this way, we hypothesize that leadership inclusiveness is positively associated with psychological safety.

Leadership inclusiveness alters the status/psychological safety relationship as follows: when leaders demonstrate inclusiveness, lower-status others are likely to feel supported and to view themselves as

important members of a team involved in a collaborative task; they may develop mutual respect for one another as persons and as professionals with specialized, valuable expertise; this esteem equalizes the value associated with different members' contributions, diminishing attention to traditional status differences. In this egalitarian and democratic context, the level of psychological safety for everyone may rise, but the effect is likely to be greater for low-status individuals, who have less prior experience with others expressing interest in their input, than it is for those with high status. In contrast, when leadership inclusiveness is low, a lack of opportunity to overcome traditional status barriers allows them to prevail, such that low status individuals are more likely to feel unsafe speaking up than those with high status.

Predicting Engagement in Quality Improvement (QI)

Improving quality-of-work processes and outcomes requires effort and engagement – which we define as being physically, cognitively and/or emotionally connected to the improvement work. Engagement is essential for overcoming powerful barriers to quality improvement that exist in busy and chaotic service contexts. Health care professionals are often stretched thin, barely able to complete their required tasks in the workday, let alone devote time to improving the system. Participating in quality improvement efforts thus requires deliberate and effortful allocation of time. Yet, despite time and resource constraints, many in health care are embracing quality improvement projects because of what is at stake when systems fail. The construct of engagement appropriately captures the commitment and effort these individuals devote to QI.

While previous research has shown that personal engagement at work in non-health care settings depended on psychological safety, we argue that engagement in quality improvement in health care is likely to be enabled by psychological safety. First, team members must be physically willing to try new technologies and procedures, remaining cognitively 'mindful' of relationships between tasks and team members and emotionally open to giving and receiving

feedback in these states of transition. These behaviours are most likely to be found when psychological safety is present. Without this, the risk involved in suggesting new procedures (especially in health care, where the human stakes are high), in overstepping professional status boundaries to be attentive to others, and in offering unsolicited feedback, would likely deter these behaviours.

In a psychologically-safe environment, team members do not feel they must be guarded in their behaviour, instead feeling encouraged to question current practices and to share what may be regarded as provocative ideas, challenging the group to develop more innovative solutions. The minority opinion is valued for its role in facilitating the learning process, and research shows that the discovery of novel solutions often arises from the discussion surrounding minority opinion. Instead of dismissing a novel suggestion on the basis of speaker characteristics, team members share their own positive and negative experiences, analyze their collective experience to arrive at a possible solution, experiment and reflect on the outcomes – all of which is most possible in a psychologically safe environment.

Researchers have argued and shown that individuals' willingness to participate in such problem-solving activities diminishes significantly when they view the team as hostile. In fact, they are more likely to act in ways that diminish learning behaviour, such as withdrawing from the team and its work. This has been described as 'personal disengagement', the counter behaviour to personal engagement.

Quality improvement for teams often requires changing members' own practices, and psychological safety creates the willingness to change personal habits. It further allows team members to be enthusiastic about improvement and their role in that process. Psychological safety therefore mediates the relationship between leadership inclusiveness and engagement. It is not leadership inclusiveness itself, but rather the psychological safety created by it that leads to team engagement in QI work.

Conclusion

Unlike in other industries, where employees may advance in the hierarchy, medical profes-

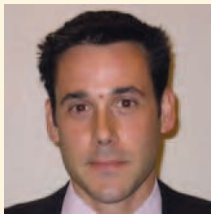
sionals cannot rely on professional mobility to confer greater status. Professions tend to be stable over a career, and as a result, opportunities for natural status gains by lower-status individuals can be rare. With history and industry structure as perpetuators, profession-related status differences will continue, and the growing interdependence among professions only heightens intergroup tensions. However, our results suggest that leadership inclusiveness – words and deeds by leaders that indicate an invitation and appreciation for others' contributions – can help to overcome status' inhibiting effects. In cross-disciplinary teams with high leadership inclusiveness, the status-psychological safety relationship can be softened.

Our research provides support for the notion that engagement lives not only at the individual level, but also at the team level. We believe that this is particularly so for QI work in health care, where the interdependences are great and engagement is particularly likely to be a social experience, shared within teams. While we have not tested the relationship between engagement in QI work and QI outcomes, we predict a strong positive relationship, given past research showing a positive relationship between employee engagement and other organizational outcomes, including customer satisfaction, productivity, profit and safety.

While our focus here is on the health care context, our findings may have relevance for any context that features cross-disciplinary teams, salient diversity and a need for teams to continuously improve the services or products they produce. A growing number of contexts are characterized by these features, as organizations realize that individuals in different functions, locations and stations of life possess specialized knowledge that, if shared and combined with the knowledge of others, can be extremely valuable for problem-solving and innovation. □

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ONE-TIER MEDICINE GOES ON TRIAL



Mark Stabile



Colleen Flood



Sasha Kontic

The conclusions reached by the Supreme Court in *Chaoulli vs. the Crown* ignore some key Canadian health care issues, including our ability to increase the capacity of our workforce, and equitable access to improvements in care.

by Mark Stabile, Colleen Flood and Sasha Kontic

Opponents of Canadian-style Medicare have long argued that the inability to purchase private insurance for necessary services has prevented the emergence of a viable second tier to compete with publicly-administered health care. In June of 2005, the Supreme Court majority in *Chaoulli vs. the Crown* dealt a blow to the country's public health system when it decided that Quebec's health care system must be 'two-tier' in order to comply with the *Quebec Charter of Human Rights and Freedoms*. The Court agreed with petitioners **George Zeliotis**, a patient who had waited a year for hip replacement surgery, and Dr. **Jacques Chaoulli**, a Montreal physician seeking to open an independent private hospital, that the system of government-mandated care is an unconstitutional infringement of their rights under the Charter.

The court was evenly split on whether or not Section 7 of the *Canadian Charter of Human Rights and Freedoms* – which guarantees Canadians “the right to life, liberty and security of person and the right not to be deprived thereof except in accordance with the principles of fundamental justice” – was breached, and thus split on the application of this ruling to other provinces and to the rest of Canadian Medicare. Three of six justices found Quebec laws banning private insurance to be in breach of Section 7, concluding that these laws were “arbitrary,” and not in accordance with the principles of fundamental justice.

In hearing and deciding this case, the court took a major step into the public policy debate over health care. In the majority opinion in particular, the justices analyzed social science evidence in order to draw conclusions about the viability of the public

health insurance system, and the interactions between public and private insurance. In this article we analyze four of these conclusions.

Conclusion #1: The public sector monopoly causes waiting lists.

Justices **Beverley McLachlin** and **John Major** write, “The result is a virtual monopoly for the public health scheme [which], on the evidence, results in delays in treatment that adversely affect the citizen's security of the person.” But the majority's solution to this problem is not consistent with experience in other jurisdictions. A recent review of waiting times in OECD countries demonstrates that many countries with two-tier systems (in which their citizens may purchase private insurance to cover essential hospital and physician services) also struggle with waiting lists, including Australia, Denmark,

Finland, Ireland, Italy, the Netherlands, New Zealand, Norway, Spain, Sweden and the UK. Indeed, many of these countries have waiting lists problems that are far worse than those in Canada.

Countries that do not record waiting lists – or at least don't acknowledge them as a political problem – include the U.S., Switzerland, Luxembourg, Japan, Germany, France, Belgium, and Austria. A complicated range of factors explains why one group of countries experiences problems with waiting lists, and others do not; but the difference is not simply due to the inability to purchase private insurance. Only in Canada is there a 'public monopoly', whereby there are (in some provinces) express prohibitions on private insurance for essential hospital and physician services; but clearly, Canada is not alone in struggling with waiting lists.

Access problems manifest themselves in other ways in private systems, in that people either cannot afford to buy private insurance or care, and/or do not qualify for it because of their health needs. The U.S., for example, does not have a problem with waiting lists, but some 45.8 million Americans do not have any insurance coverage at all; and France has high user charges or out-of-pocket payments, meaning that many people may not get into the system in the first instance to 'wait'.

Waiting lists are caused by a variety of interacting factors, including capacity of health professionals, capacity within hospitals, and differing incentives for productivity (salary, fee-for-service, capitation, etc.) Waiting may occur in any system that attempts to limit its level of capacity in order to control total spending. There is no evidence from other jurisdictions that simply allowing a second tier, without addressing any of these fundamental causes, will alleviate wait times.

Conclusion #2: Freedom to purchase private insurance will reduce the burden on the public system.

Justice **Marie Deschamps** writes, "because the public plan already handles all serious cases, I do not see how the situation could be exacerbated if that plan were relieved of the clientele with less serious health problems." The unspoken assumption is that waiting times would decrease in

a two-tier system. This is the policy argument most frequently advanced by those in favor of greater privatization, and it accords with the intuition of many about the effect of introducing a private tier.

The key assumption made by Justice Deschamps is that treatment in the private sector would be performed by provider time that is not currently being used in the public system; but the Canadian system, as in many other OECD systems, is characterized by a limited supply of physicians and other skilled medical personnel; there is limited capacity, and this is a critical component of waiting times.

A recent OECD study of the factors causing waiting lists showed that the availability of doctors is the most significant association with waiting times. Such results point to the dangers of allowing a private tier that would attract capacity (particularly time spent working by specialists and other physicians) away from the public system without bringing new capacity on-line. Fewer physician hours spent in the public sector is likely to be associated with even longer waiting times.

The Supreme Court also assumes that medical need would remain the same, and simply be transferred from the public to the private sector. It is much more likely that the private sector would expand the concept of 'need' for those with private insurance, and that these needs would be fulfilled using physicians and nurses that could otherwise have been working in the public system to fulfill greater needs. In essence, wait times could be exacerbated by an increase in demand fuelled by both consumers and producers.

In New Zealand's two-tier system, a survey of private insurers revealed that, "evidence for efficacy and cost-effectiveness is seldom explicitly sought" in determining what services are insured; insurers seldom look beyond the professional opinion of the doctor recommending the intervention. As a result, an anxious patient who demands an MRI in the event of a headache may well have this 'need' met in the private sector, given economic incentives to respond to such need. On the one hand, since these individuals are paying for this extra treatment, its efficacy is not as great a concern to policy makers; however,

when meeting this need comes at the expense of time and resources that could have met greater needs in the public sector, policy makers should be concerned.

The ability of a private, second-tier to reduce the demand on the public system depends, therefore, on the answers to several important questions: first, is there an ability to increase total system capacity, or would we simply be diverting resources to the private sector? In the short- to-medium term, we argue, capacity is quite limited. Second, how much of current demand would be shifted from the public to the private tier? Presumably, doctors would take less than their fair share of cases in order to offer more responsive care to their private paying patients. Finally, how much would the demand for care increase as a result of a private tier, potentially further diverting public sector resources?

Conclusion #3: Freedom to purchase private insurance will allow many residents to avoid delays in treatment in the public sector.

From a policy perspective, it is clear that if one agrees that equitable access is an important goal, then the answers to reducing wait times lie within the public system itself, and in improving its capacity and performance. But in the Chaoulli case, the Supreme Court has not addressed this larger policy question.

They contend that "the question in this case is not whether single-tier health care is preferable to two-tier health care," and that "the appellants have established that many Quebec residents face delays in treatment that adversely affect their security of person and that they would not sustain but for the prohibition on medical insurance."

A key question in light of this statement is, how many Quebecers or Canadians would benefit from the introduction of a two-tier system? Nowhere in any of the factums presented was this issue directly addressed; but nonetheless, Justices McLachlin and Major write that the appellants have established that "many" Quebec residents would not have their security jeopardized if indeed private health insurance were available. They also conclude that "ordinary" Quebecers could avoid suffering if the ban on private insurance was not in place.

Having concluded that 'many' and 'ordinary' Quebecers would benefit, the

judgment goes on to note, contradictorily, that only a relatively small percentage of the populations in other jurisdictions have private insurance. They state that in Sweden, only a “small minority of the population” purchases private insurance; that in Germany only nine per cent of the population purchases private insurance; and in the UK, just 11.5 per cent buy private insur-

ance. These statistics are used as partial justification to dismiss the Quebec government’s claim that it is necessary to ban private insurance to protect public Medicare and to conclude that governmental policy in this regard is ‘arbitrary.’

But they can’t have it both ways: if only a small percentage of the population is likely to purchase private insurance – thus eliminating concerns that the public sector will be imperiled – then this seriously qualifies their conclusion that ‘many’ Quebecers would benefit. If indeed ‘many’ would benefit and buy private insurance, then is it possible to so readily dismiss concerns that

the sustainability (politically and financially) of the public sector would be imperiled?

UK for example, where private health care exists as a parallel alternative to a publicly-funded system, about 12 per cent of the population has private insurance: a 2001 study reveals that 40 per cent of people in the wealthiest ten percent of the population are privately insured, whereas only five per cent of people in the bottom 40 per cent have private insurance.

A recent OECD study of the factors causing waiting lists showed that the availability of doctors is the most significant association with waiting times.

Greater numbers of people have private coverage in Australia and New Zealand, where patient cost-sharing (or out-of-pocket payment) is required within the basic public system. For example, in New Zealand, most people have to pay the full out-of-pocket cost of a visit to a family doctor, which ranges between \$50 and \$60 per visit. Similar to the UK, the likelihood of having private insurance is associated with income: in New Zealand, approximately 37 per cent of the population has private coverage, including 60 per cent of people in the above-average income bracket and 24 per cent in the below-average income bracket.

In countries around the world, those with high or above-average income are always more likely to have private coverage than those in lower income brackets. In the

Health Care and The ‘National Delusion’

by Sagar Parikh and Dilip Soman



Sagar V. Parikh



Dilip Soman

the neighbourhood. But we believe that perspective would qualify for another aphorism: the “national delusion.”

Universal health care in Canada is threatened! So the stories would have us believe, in response to the recent Supreme Court ruling establishing that overly-long waiting lists violate the *Quebec Charter of Human Rights and Freedoms*. This decision is seen as opening the door to private health care, the first step toward wholesale erosion of publicly-funded health services in Canada; but is this really the case?

We have an alternate view. The central tenet being touted by the alarmists is that any private care spells doom for the public system: allow an exception, and there goes

The national delusion is the feeling in Canada that any breach of the public monopoly on ‘medically-necessary’ health care constitutes not only a threat to our public system, but to Canada’s very fabric. Justifiably, Canadians are proud of the values that created our national health system, and no government program holds higher public support. We, too, are passionate about our health care system — and we devote a considerable part of our professional lives to helping improve it.

Many approaches can improve our health-care system: new public health measures, better equipment, new facilities, more health-care professionals, new treatments. Many governments and academics have also advocated other methods: eliminate waste, reorganize services to achieve

both efficiency and cost containment, and attempt other managerial measures. Given the central importance and massive costs associated with health care, it would seem only logical that all tools should at least be reviewed for utility.

Ironically, in this atmosphere of need, there is a key approach that is used universally in all other areas of our life, one that is acknowledged to be a powerful shaper of human behaviour, one that can cause massive alterations in behaviours of entire populations: economic policy in the form of incentives and disincentives. Yet the dominant Canadian response to this topic in discussions of universal health care is unsettlingly universal — “no way!”

Suppose, for an instant, that some form of economic incentive could be used to shape health care in a way that benefited us all directly, both in terms of health and in terms of costs over the long term. Is it not

Australian data from 1998 shows that 20 per cent of people with an annual income of less than \$20,000 had private coverage, compared to 76 per cent of people with an income of \$100,000 or more per annum. After the introduction of a tax rebate scheme in 1998, private insurance purchasing did increase, and about 42 per cent of the Australian population currently has some type of private insurance coverage. However, a Commonwealth study conducted in 2001 found that despite the rebates, 68 per cent of people in the above-average income bracket have private coverage, vs. only 33 per cent in the below income bracket.

There is nothing to suggest that private insurance would be distributed any more evenly in Canada. Income-related disparities connected to private insurance already arise in Canada *vis-à-vis* prescription drug, dental and other benefits that are not protected by the *Canada Health Act* (and thus for which private insurance/private payment is allowed.) The 2001 Commonwealth survey shows that about 79 per cent of Canadians in the above-

average income bracket have supplementary health insurance, as compared to only 36 per cent in the below-average bracket. Results also show that because of the cost involved, 22 per cent of people questioned did not fill a prescription, and 42 per cent did not access needed dental care.

Conclusion #4: Allowing a two-tier system will have no detrimental effect on the public system, as evidenced by the experience of other jurisdictions with two-tier systems.

Justices McLachlin and Major conclude that governmental policy was “arbitrary,” given the lack of evidence supporting the contention that ‘allowing private insurance would undermine publicly-funded Medicare’. But as Justices **William Ian Corneil Binnie**, **Louis LeBel** and **Morris Fish** point out in the minority judgment, the majority prefers the evidence of just one physician called by the appellants, and dismisses the conclusions reached by the trial judge in her assessment

of the credibility and reliability of the expert witnesses called, and the substantial testimony provided by social scientists.

Through their comparative analysis of health care systems, the majority amply demonstrates why courts should be extremely cautious of wading into these difficult policy choices. The fundamental error it makes is to conflate all health care systems with some role for private insurance into one group, which they consider to be “two-tier”. But in fact, there are at least four distinct ways of financing health care, and European countries such as the Netherlands and Germany are better classified not as two-tier systems, but ‘group-based’.

In group-based systems, private insurers do not perform a duplicate role, as would be allowed by the Chaoulli decision, and people are not permitted to jump queues for treatment. Instead, private insurance is required to provide full coverage for certain segments of the population. For example, in the Netherlands, an individual earning less than CAD \$48,886 must con-

reasonable in a democratic society to at least allow some consideration of the issue? For example, we now use an economic tool, among other tools, to reduce smoking: governments use high tax rates on cigarettes not only to raise revenue but to decrease use (which economic research has proven to work). This is a sensible and effective use of an economic tool to shape behaviour. And ultimately it supports, not undermines, our public health-care system.

Suppose we were to look at additional economic tools, and test them through research to ensure that they actually work: would we then be able to sustain and even enhance our health care system? Would we dare to implement it? Or are we too burdened by ideology to even try? As health-care researchers, we don’t have a set of tools ready for immediate testing, but we would like to ask Canadian society to look beyond the national delusion: is it possible

NOT to panic when economic methods are discussed as potential ways to strengthen our system?

Imagine if we discovered that we could save money by increasing participation in preventative health measures through incentives or other persuasive techniques: would that be a sin? What if we gave every teenage smoker a reward of the latest **Harry Potter** book for quitting smoking? If research established that such incentives work, would we dismiss them out of hand for being ‘economic’ tools? User fees carry as much negative press as Potter’s Lord Voldemort (the baddest guy in those books). But, if it turned out that some form of user fee could reduce inappropriate use of health services, can we afford to dismiss such tools as being unacceptable?

Like the overwhelming majority of Canadians, we are proud defenders of Canada’s health care system. To ensure its

survival, we want to consider all methods available. Economic measures do not necessarily imply a two-tier health system, where only the rich get the best health care.

Universality of health care can – and should – continue to be enshrined with the fundamental Canadian commitment that money should not be a barrier to necessary health care. Careful and selective use of economic tools, with wide public debate and oversight, offers one more method to treat our system.

Let us drop our national delusion that any use of such economic tools involves a pact with the devil or a sellout to right-wing extremists.

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tribute to and is eligible for social insurance (similar to Canadian Medicare.) All others are free to purchase private insurance, but private insurance does not ‘top-up’ coverage in the public system; it must cover those who elect it for all their needs.

Moreover, Dutch physicians don’t have an incentive to prefer patients with private insurance, as the fees or tariffs paid are the same and, indeed, it is part of the ethical code of physicians not to treat patients differently. In Germany, wealthier patients can opt to stay in the social insurance scheme or take out private insurance, but it must cover all their needs (i.e. it doesn’t ‘top-up’ coverage in the social insurance scheme), and one can-

Canada: an underlying lack of capacity. Where would the specialists and physicians come from to staff a private tier, if not from the public sector? In the short-run at least, the system’s capacity is limited: it takes six years to train a family doctor; nine to train a medical oncologist; and 11 for a surgical oncologist. Even assuming a huge influx of capital from the private sector, it is simply not feasible to bring on stream a whole new wave of physicians in the next few years.

If we assume that physician, technologist, and attendant capacity will remain constant in the short term (up to 10 years), what would happen to wait times in the public system if we allowed a private second tier?

private insurance into a private sector would have few, if any, financial consequences for the hospitals and specialists remaining in the public sector. Perversely, there would be a greater opportunity to ‘slack off’ rather than improve performance and reduce waiting times, particularly since the more vocal and politically-connected ‘customers’ will be at the forefront of an exodus to the private tier.

Jurisdictions that maintain a single tier and encourage competition among providers, while maintaining equality of access, are likely to provide more promising models for introducing competition into health care. Even more important is the need to improve accountability for governance within public health care. Unfortunately, a far easier option for the federal and provincial governments is to allow elites the ability to ‘exit’ to the private sector, rather than improving their own management of publicly-funded health care.

In the aftermath of the Chaoulli case, the key question will be the extent to which provincial governments can defend the integrity of their respective health care programs. In several provinces, physicians are prohibited from charging more in the private sector than they charge in the public sector, which discourages physicians from opting out of publicly-funded Medicare and thus preserves and protects limited human resources. In the wake of the Chaoulli case, will such provisions become the subject of Section 7 Charter challenges?

In any subsequent litigation, a fully-constituted Supreme Court should revisit its conclusions about the dynamics between public and private health insurance and the inter-relationship between these various modes of finance and waiting lists. As we have demonstrated, the conclusions reached by the majority ignore key issues such as our capacity to increase the health care workforce in the short run, and ensuring equitable access to improvements in care. ■

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In Australia, 20 per cent of people with annual incomes of less than \$20,000 had private coverage, compared to 76 per cent with an income of \$100,000 or more.

not easily opt back into the social insurance scheme. These systems, then, are very different from what the majority envisages in the Chaoulli case, where the universal public system would stay in place, but citizens could buy private insurance to access duplicate coverage of certain services offered in the public system, in order to avoid wait times.

Jurisdictions with systems such as that which is likely to emerge in Quebec include New Zealand and the UK. In these countries, private insurance duplicates coverage of services that should be provided publicly; physicians work in both the public and private sectors, with specialists often ‘topping-up’ their public sector incomes in the more lucrative private sector. Historically, both countries have wrestled with waiting lists that are much longer than those in Canada, which strongly refutes the linkage made by the majority between long waiting lists and Canada’s public monopoly on insurance.

The Elephant in the Room: The Capacity Issue

The Chaoulli decision fails to address what many consider to be the fundamental problem with introducing a two-tier system in

The majority assumes that there would be no effect. Using data and empirical estimates from an OECD study, we calculate what the upper bound on the increase in wait times in Canada’s public health care sector might be if specialists move from the public to a private sector. Our estimates suggest that if 10 per cent of the specialist base moves to the private sector, public sector wait times could increase by up to 16 per cent. While this estimate is based on a number of assumptions – each of which deserves further research – it is meant to illustrate an important point: given a constant number of specialists working a set number of hours across both public and private sectors, diverting resources from the public sector to the private sector results in an increase in wait-times in the public sector.

Conclusion

It is often argued that allowing a two-tier system would introduce a much-needed element of competition into the health care system; but it would simply be a façade of competition. Unlike the shoe store owner who will feel the monetary pinch as her customers depart to a new store down the road, the departure of those able to afford



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The Contagious Leader:

The Impact of Leaders' Moods on Group Members

by *Stéphane Côté, Thomas Sy, and Richard Saavedra*



Stéphane Côté



Thomas Sy

If your boss is grumpy, it's likely that you and the rest of your team will follow suit. Fortunately, 'mood contagion' works both ways: team leaders also pass on good moods to people they manage – and both scenarios have implications for group performance.

Moods are defined as 'generalized feeling states' of relatively low intensity, with no clear antecedent causes. Positive moods include states of enthusiasm, excitement, and elation, while negative moods include states such as hostility, nervousness, and distress. Like everyone, business leaders frequently experience moods, but the effects of their moods on subordinates are unclear. A better understanding of this is critical, because leader's moods may influence the way subordinates feel, think, and act, ultimately impacting performance.

Research indicates that experienced mood states manifest themselves through facial, vocal, and postural cues. Individuals have innate abilities to express their moods and to ascertain the moods of others. Cross-cultural research indicates that people can accurately identify the emotional displays of others; accordingly, facial, vocal, and postural cues serve as reliable and readily available information about others' moods, and leaders in positive and negative moods vary in their facial, vocal, and postural expressions.

People have been shown to transmit their moods to others through 'mood contagion', a mechanism that induces a congruent mood state through the observation of another person's public display of mood. Researchers have described mood contagion and the related process of emotional contagion as a two-stage process.

In the first stage, individuals unintentionally mimic the public mood displays of others. Evidence exists for this 'chameleon effect'; for example, participants in a social interaction may subconsciously mimic the

smiling activity of their partners. In the second stage of the mood contagion process, facial, postural, or vocal mimicry produces a corresponding mood response. In other words, mimicking facial, vocal or postural behaviors leads one to experience the moods that are associated with those behaviours. For example, smiling elicits a positive mood.

Evidence of mood contagion is found in a wide range of individuals in natural and experimental settings. Recent studies have shown that people 'catch' others' affect in organizations, and that individuals are most likely to transmit their moods when they are able to express them to others. Further, individuals are most likely to catch others' moods when they attend to others' moods, and are able to read them.

All of this suggests that leaders are likely to be *transmitters* of moods and subordinates are more likely to be *receivers* of moods. Leaders should have more opportunities to express and transmit their moods because they influence and control groups' time, resources, and interactions. Furthermore, subordinates are more likely to attend to leaders' moods because they depend more on the leader than vice versa. Supporting this argument is evidence that subordinates readily ascertain leaders' affective displays, and that lower status individuals more often 'catch' the moods of higher-status individuals than vice versa.

We can therefore infer that group members with leaders in a positive mood will experience a more positive mood than group members with leaders in a negative mood; and that group members with leaders in a negative mood will experience a more negative mood than group members with leaders in a positive mood.

'Group affective tone' is an aggregate of the moods of the individual members of a group, referring to mood at the group level of analysis. If the moods of the individual group members are consistent, then group affective tone can be treated as a group property. Not all groups possess an affective tone; members of some groups do not experience similar moods; however, research indicates that a majority of groups do possess an affective tone.

Group members tend to experience similar moods based on several theoretical mechanisms, including the selection and

composition of group members, their socialization, and exposure to the same affective events, such as task demands and outcomes. Also, moods tend to be shared among group members through processes such as mood contagion and impression management.

Group affective tone is associated with various organizational outcomes, such as group prosocial behaviour. We propose that leaders influence group affective tone through mood contagion, in the same way that leaders influence the moods of individual group members. Thus, groups with leaders in a positive mood have a more positive affective tone than groups with leaders in a negative mood, and groups with leaders in a negative mood have a more negative affective tone than groups with leaders in a positive mood. The results of our study were consistent with our expectations: Leaders transmitted their moods to their groups.

How Moods Influence Group Processes

In a recent study to determine whether leaders' moods influence group performance, we focused on three group processes that contribute to performance effectiveness: coordination, effort expenditure, and task strategy. Coordination refers to the synergistic interactions of group members that avoid slippage and wasted effort. Effort is the collective level of energy exerted by group members towards completion of the task. Task strategy represents the development of an approach to the work that is fully appropriate for the task being performed.

We proposed that leaders signal their goals, intentions, and attitudes through their expressions of moods, and that group members respond to those signals cognitively and behaviourally in ways that are reflected in the coordination, effort expenditure, and task strategy of the group. Our predictions of the effects of leaders' moods were based on the presumption that public expressions of mood impact how group members think and act. Following are our findings for the three group processes we studied.

Leader mood and coordination. In a performance context, expressions of positive moods by leaders signal that leaders deem progress toward goals to be good. We contend that as a result, leaders in a positive

mood convey a sense of security to group members that, in turn, invites group members to engage in agreeable and friendly behaviour. These behaviours contribute to high coordination among group members. Groups with high positive affect have been shown to exhibit more cooperation and less conflict than groups with high negative affect, and groups with leaders in a positive mood exhibit more prosocial behaviours than groups with leaders in a negative mood. We hypothesized that a leader's mood influences group coordination, such that groups with leaders in a positive mood exhibit better coordination than groups with leaders in a negative mood. We found support for this hypothesis: The groups that were the most coordinated tended to have a leader in a pleasant mood.

Leader mood and effort expenditure.

Group members interpret leaders' expression of negative moods as signals that leaders deem progress on the task to be inadequate. Subordinates who perceive these signals should as a consequence increase their effort toward the completion of the task. This reasoning is consistent with previous findings. For example, individuals read more information about a person before making a judgment about that person when in a negative mood than when in a positive mood in a context that emphasizes the quality of the judgment (i.e., a performance context). Also, workers exhibit more creativity when they tend to experience negative moods than when they tend to experience positive moods in contexts that reward creative performance, to the extent that workers' moods are clear. We therefore hypothesized that groups expend more effort in response to leaders' expressions of negative moods than positive moods. We found support for this hypothesis: The groups that exerted the most effort tended to have a leader in an unpleasant mood.

Leader mood and task strategy. In a performance context, group members interpret leaders' expressions of negative moods as signals that leaders are not satisfied with the progress on the task, and as a result, subordinates increase their effort toward the completion of the task. Leaders' displays of positive moods signal

that progress on the task is good, and as a result, subordinates expend relatively little effort toward the completion of the task. We extended these arguments to generate hypotheses concerning the development of a strategy for a task: with a leader in a negative mood, the group may feel the

indicated that leaders' moods had a direct influence on group effort. That is, the effects of leaders' moods on group effort did not go through groups' affective tones. Also, groups with a leader in a positive mood exhibited more coordination than groups with a leader in a negative mood.

Leaders who are inept at regulating their moods could transmit moods that fail to improve group processes.

urgency to develop an optimal strategy as a result of receiving a signal that progress is inadequate. With a leader in a positive mood, however, the group may feel little need to develop strategy as the group believes that it is already making adequate progress. We hypothesized, based on the preceding arguments, that groups with a leader in a negative mood would exhibit a better strategy than groups with a leader in a positive mood. We did not find support for this hypothesis.

Summary of Findings

Our study confirmed that the moods of leaders do indeed have important consequences on group processes. First, leaders' moods are transferred to other group members. Individuals with leaders in a positive mood experienced more positive moods and less negative moods after interacting with the leader than individuals with leaders in a negative mood. The mood contagion from leaders to subordinates was also observed at the group level of analysis: groups with leaders in a positive mood had a more positive and a less negative affective tone than groups with leaders in a negative mood. These findings are consistent with conceptualizations of the mood contagion process. This is not to say, however, that subordinates can never transmit their moods to leaders.

The moods of leaders also influenced two group processes that are critical to group effectiveness. Groups with a leader in a negative mood expended more effort on the task at hand than groups with a leader in a positive mood. Our analyses

Leaders' moods had both a direct and an indirect (through group affective tone) influence on group coordination. These findings have important theoretical implications concerning the effects of leaders on subordinates. Displayed moods communicate goals, objectives, and attitudes to other people. In our study, subordinates presumably interpreted leaders' displayed moods as cues concerning progress toward goal attainment in a performance context. Subordinates presumably interpreted negative moods as signals that progress was inadequate and that progress needed to be accelerated, leading to high effort. Conversely, subordinates presumably interpreted positive moods as signals that progress was adequate and as invitations to be agreeable. As a result, groups with leaders in a positive mood exhibited better coordination.


Our results concerning task strategy did not support our predictions, and call for additional research on how the moods of leaders may affect strategy development in groups.

Practical Implications

The present study suggests that leaders' moods can be powerful forces within groups. Currently, many leadership courses are designed to increase group performance. They tend to cover things like impression management, team building, group communication, and work design. The findings of the present study accord an important role to the emotional intelligence of leaders in determining their effectiveness. Three implications stand out.

First, leaders must understand the role of moods to be successful. The effects of mood seem to depend on the specific group process involved and the context of the task. Second, successful leaders must efficiently regulate the affective tones of their groups. Leaders who are effective at managing their group's affective tone should have more impact on group processes than their counterparts. Third, leaders who regulate their mood displays by revealing them or concealing them may influence their groups. It would be beneficial for leaders to learn how to regulate their displays of moods to subordinates to attain desired outcomes.

Our findings suggest that leaders who are inept at regulating their moods could transmit moods that fail to improve group processes. Enhancing leaders' capability in regulation should result in mood contagion that may lead to more effective groups.

As human capital has risen to the forefront as the most important organizational resource in the global knowledge economy, managers are continuously looking for ways to leverage their human resources. As such, emotion is receiving increasing attention in the study of leadership. Whereas it was once thought of as being detrimental or 'unprofessional', emotion is increasingly being accepted as an important factor that contributes to organizational performance. It is our hope that as knowledge accumulates, managers can begin to effectively integrate and leverage emotions to facilitate performance. 

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Point of View: Andrew Grove

Efficiency in the Health Care Industries: A View From the Outside



Technology is the key to making the health care industry more efficient, and consumers are starting to take matters into their own hands.

The health science/health care industry and the microchip industry are similar in some important ways: both are populated by extremely dedicated and well-trained individuals, both are based on science, and both are striving to put to use the result of this science. But there is a major difference between them, with a wide disparity in the efficiency with which results are developed and then turned into widely-available products and services.

To be sure, there are additional fundamental differences between the two industries. One industry deals with the well-defined world of silicon, the other with living human beings. Humans are incredibly complex biological systems, and working with them has to be subject to safety, legal, and ethical concerns. Nevertheless, it is helpful to mine this comparison for every measure of learning that can be found.

First, there are important differences between health care and microchip industries in terms of research efficiency. This year marks the 40th anniversary of a construct widely known as *Moore's Law*, which predicts that the number of transistors that can be practically included on a microchip doubles every year. This law has been a guiding metric of the rate of technology development. According to this metric, the microchip industry has reached a state in which microchips containing many millions of transistors are shipped to the worldwide electronics industry in quantities that are measured in the billions per month.

By contrast, a *Fortune* magazine article suggested that the rate of progress in the 'war on cancer' during the same 40 years

was slow. The dominant cause for this discrepancy appears to lie in the disparate rates of 'knowledge turns' between the two industries. Knowledge turns are indicators of the time it takes for an experiment to proceed from hypothesis to results and then lead to a new hypothesis and a new result.

The importance of rapid knowledge turns is widely recognized in the microchip industry. Techniques for early evaluation are designed and implemented throughout the development process. For example, simple electronic structures, called 'test chips', are incorporated alongside every complex experiment. The test chips are monitored as an experiment progresses; if they show negative results, the experiment is stopped,

If reliable biomarkers existed that track the progression of disease, their impact on knowledge turns and consequently on the speed of development of treatments and drugs could be dramatic.

the information is recorded, and a new experiment is started.

This concept is also well known in the health sciences. It is embodied in the practice of 'futility studies', which are designed to eliminate drugs without promise. A recent example of the use of futility studies for this purpose is the exercise of narrowing the list of putative neuroprotective agents before launching a major randomized clinical trial.

The difference is this: whereas the surrogate 'end point' in the case of microchip development – the test chip failure – is well defined, its equivalent in the health sciences is usually not. Most clinical trials fall back on an end point that compares the extent by which a new drug or therapy extends life as compared with the current standard treatment. Reaching this end point usually takes a long time; thus, knowledge turns are slow. In many instances, a scientist's career can continue only through two or three such turns. The result is wide-scale experimentation with animal models of dubious relevance, whose merit principally lies in their short lifespan. If reliable biomarkers existed that track the progression of disease,

their impact on knowledge turns and consequently on the speed of development of treatments and drugs could be dramatic.

Even though such biomarkers could have a profound effect on medical research efficiency, biomarker development efforts seem far too low. Although precise numbers are difficult to come by, in my estimation, in the microchip industry, research into development, test, and evaluation methods represents about 10 per cent

of total research and development budgets. This 10 per cent is taken off the top, resulting in less actual product development than the engineers, marketers, or business managers would like. But an understanding that this approach will lead to more rapid knowledge turns protects this allocation from the insatiable appetite of the business. The **National Institutes of Health** (NIH) budget is about US\$28 billion a year; it seems unlikely that anywhere near 10 per cent – \$2.8 billion – is spent on biomarker development.

A second difference between the microchip and health science industries is the rate at which hard-fought scientific results are 'brought to market' – produced in volume in the case of microchips, or translated into clinical use in the case of medicine. A key factor in accelerating the movement of discoveries from the research laboratory to marketplace (or from bench to bedside) is the nature of the facilities in which translational work is performed. The world of business has many stories of failures of organizational designs that impede technology transfer. The classical research laboratory, isolated and protected from the chaos and business-driven urgencies of production units, often led to disappointing results. For example, when **Intel** started, the leadership resolved to operate without the traditional separation of development from production, which worked remarkably well for quite some time. Developers had to compete for resources with the business-driven needs of production, but their efforts were more than compensated by the ease with which new technology, developed on the production line, could be made production worthy.

Today, an evolution of this resource-sharing principle continues in the microchip industry. Dedicated developmental factory units are designed from the ground up with the aim of eventually turning them into production units. They are overbuilt for the needs of development, but once development is completed, the facility is filled with equipment and people and transformed into a production unit in a matter of months. Although overbuilding for the development phase costs more initially, the savings in efficiency of moving products to production more than make

up for this initial outlay. Medical facilities are designed for a variety of purposes, ranging from outpatient clinics to surgical centres, from general hospitals to tertiary hospitals. There is room for a translational hospital designed from the ground up with the mission of speeding new developments toward usage in general hospitals. These

Nothing illustrates the chasm between the two industries better than a comparison of the rate of implementation of electronic medical records with the rate of growth of electronic commerce.

hospitals would be flexible, equipped for capability of extra monitoring, ready to deal with emergencies – all extra costs but likely to be made up by the resulting increase in translational efficiency. Some examples exist, such as the NIH Clinical Centre. Some cancer centres have adopted changes in hospital design that are steps in this direction. However, much more needs to be done before these designs are evaluated and an optimal approach is adopted and proliferated throughout the health care industry.

When it comes to operational efficiency, nothing illustrates the chasm between the two industries better than a comparison of the rate of implementation of electronic medical records with the rate of growth of electronic commerce (e-commerce). Common estimates suggest that no more than 15 to 20 per cent of U.S. medical institutions use any form of electronic records systems. By contrast, during the last 10 years, more than \$20 trillion worth of goods and services have been bought and sold over the Internet.

e-Commerce started in the era of mainframe computers. It required specialized software, created and owned by the participants (so-called proprietary software.) To link buyer with seller, each had to have the same software. The software was expensive and difficult to modify and maintain. Consequently, the use of e-commerce was limited to a few large companies.

The Internet changed all that. Computing became standardized, driven by the volumes of substantially identical personal computers; interconnection standards were defined and implemented everywhere. A virtuous cycle evolved: standards begot large numbers of users, and the increasing numbers of users reinforced the

standards. It was easy to become part of an electronic marketplace because it no longer required the installation of proprietary software and equipment.

The early results were pedestrian: orders taken by telephone, manual data entry and reentry, and the use of faxes were reduced. But the benefits were spectacular. Costs and error rates plunged. Small- and medium-sized companies rushed to join the electronic marketplace, necessitating the development of a standardized software code that would translate information from one company's system to that of another, the computing version of the Rosetta stone.

Although the computer industry is fairly fragmented, the health care industry is even more so. Like the computer industry, health care is a largely horizontally organized industry, with the horizontal layers representing patients, payers, physicians, and hospitals, as well as pharmaceutical and medical device companies. Standard ways of interconnecting all these constituencies are crucial. The good news is that the desire to increase internal productivity has led to at least partial deployment of information technology within the companies of many of the participants. Further good news is that the physical means of interconnecting the many participants already exists in the form of the Internet.

The bad news is that with the exception of a few, large, vertically-integrated health care organizations, in which partici-

pants from several layers are contained in one organization (as is the case with the **U.S. Veterans Affairs Administration** and **Kaiser Permanente**), the benefits of electronic information exchange are not necessarily realized by the participants in proportion to their own investment. The industry faces what is called in game theory the 'prisoners' dilemma', whereby all members have to act for any one member to enjoy the benefit of action.

Such collective action often requires external stimulus. The year 2000 problem ('Y2K') was an example of such a stimulus, causing the near-simultaneous upgrade of the worldwide computing and communications infrastructure. Although its ostensible benefit was the avoidance of a digital calamity at the turn of the century, its greatest benefit was in readying thousands of commercial organizations for the age of the Internet and e-commerce.

Even though the task facing the health care industry in developing and deploying the crucial 'Rosetta code' is much smaller

than the task of getting ready for 2000 was, external impetus is still needed to catalyze serious action. The **National Health Information Infrastructure Initiative** demonstrates some desire to encourage progress along these lines.

However, what is needed to cause the industry to act is customer demand. The largest customer – approaching half of total health care spending – is the Medicare system. It seems that the entire health care industry would benefit if Medicare mandated the adoption of a Rosetta code for the health care industry before institutions were granted permission to participate in Medicare business.

There are signs that individual consumers may be taking matters into their own hands. The proliferation of companies providing personal health record services is an indication of such a movement. This phenomenon has all the makings of becoming a disruptive technology. Usually initiated by small businesses that are new to the industry in question, these technologies can force

widespread defensive actions by the much larger industry incumbents. In this case, inadequate response by the incumbents could lead to some of the emerging providers of personal health record services becoming the owners of the customer relationship – a development of considerable strategic significance to all such businesses.

The health care industry in the U.S. represents 15 per cent of the gross domestic product, and bearing its cost is a heavy burden on corporations and individuals alike. The mandate for increasing its efficiency – in research, translation, and operations – is clear. History shows that whatever technology can do, it will do.

If not here, where? If not now, when? **R**

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 Andrew Grove is the past chairman of Intel Corporation, where he is a senior advisor to executive management. He served as CEO of Intel from 1987 to 1998, and as president from 1979 to 1997. This article appeared in the *Journal of the American Medical Association* in August 2005. Reprinted with permission.

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Questions for: Regina Herzlinger

The Rise of Consumer-Driven Health Care



The Harvard professor and author on why employees should buy their own health insurance, and the entrepreneurial opportunities created by consumer-driven health care.

Karen Christensen: You have said that health care has become “a lose-lose proposition for business,” and that the key to improving the system lies with the business community. Please explain.

Regina Herzlinger: Well, it’s a lose-lose proposition because they’re spending more and more. As productivity has risen, the U.S. economy has grown by about 2.5 per cent annually for the past 10 years, which is great; but health care costs have grown by 7.7 per cent annually, so clearly, that’s not a sustainable situation. And even though people are paying more and more for it, they don’t like their health care, and they are dissatisfied with their insurance. Nobody wants to be in a situation of paying more and more for something that is not very highly valued. I think the key is for employers to give people money for health insurance and say, for example, ‘We’ve been spending \$10,000 a year on your behalf; instead, we’re going to give you \$10,000 in a health ‘savings account’, and tax-wise you’re going to be in the same situation as before. Here’s your money, now go and purchase your own health insurance’. Unfortunately, we can’t do this, in part for tax reasons, but mainly because the health insurance market sells to employers, not to individuals. It’s like the mutual fund market 30 years ago, which sold almost exclusively to employers. We’re going to undergo a transition period where an individual insurance market will develop, and it will gradually become a benefit that is purchased by individuals, not businesses. But clearly, businesses will be instrumental in this transition phase.

KC: You are credited with coining the term ‘consumer-driven health care’. What is the idea, in brief?

RH: The economy is driven by consumer markets. Whether it be automobiles, food, or housing, very important things are purchased directly by consumers; but health care is not. In Canada, it’s largely driven by the government, and in the U.S. it’s primarily purchased by employers on behalf of their employees. Employers don’t buy their employees’ cars, clothes, or housing, but for some reason, they buy their health insurance. And typically when you have an agent acting on your behalf – even if that agent is completely neutral, which virtually no agent is – they have no idea what the heck you want or need. As a result, a consumer driven market is typically viewed by economists – myself included – as a more efficient market. In most consumer markets, there is substantial choice, which spurs competition; whereas with health insurance, typically there is ‘a choice of one’. Consumer-driven markets are also characterized by control, which lies with the person doing the choosing; they tend to have a tremendous amount of information at hand, so that when they choose, they can make informed decisions. A good example is the automobile industry. Cars are very high-tech items; the average consumer has no idea how they work. Nevertheless, cars have become both cheaper and better over time, and the reason is that it is a consumer-driven market, and the consumer has ultimate control. Even someone who doesn’t know a piston from an axle can still make intelligent choices when buying a car, because of the excellent information avail-

able. In short, consumer-driven health care combines free demand and supply, transparency, and active governmental oversight. It has the potential to create a competitive market that increases efficiency, effectiveness and access to care.

KC: When consumers apply pressure on an industry, it invariably produces a surge of innovation. Do you see this happening with health care? Are consumers demanding enough?

RH: It’s a ‘chicken-and-egg’ scenario: consumers can’t be demanding until they have some control, and they really don’t have much right now. The first wave of making the industry more consumer-driven involves giving people more control and choice. And that’s happening in health insurance, where a new kind of health plan has emerged: it’s called ‘consumer-driven’ (as if it represents the entirety of the consumer-driven health care market, which is ridiculous, but at least there is a new kind of insurance plan being offered.) So now, enrollees have a choice between two, rather than a choice of one. These plans typically have high deductibles and feature ‘health savings accounts’ for members. What’s great about them is that people feel it’s their own money: even though they have a \$2,000 deductible and \$2,000 in their ‘savings’ account (so in theory, they’re just like they were before), they behave very differently, because now that \$2,000 is their money. These high-deductible plans have induced very profound changes in health care behaviour, but I think the most important revolution will occur with changes in supply. And

that's true in any consumer-driven industry: once the consumers have control, they say, 'gee, I really don't like what you're offering me; I want you to change the products and services you're offering.' That surge of innovation has not yet begun, and in my opinion, it's much more important than the first phase of change, which is the change in demand.

KC: Are consumer-driven health plans key to curing the health sector's woes?

RH: Right now, a lot of people are saying that these consumer-driven plans control costs. **McKinsey** has come out with a study that shows people with chronic diseases take better care of themselves under consumer-driven plans, because they say, 'I better take care of myself, because it's my money I'm spending.' And that's good. But like much of life, health care is 80/20: 80 per cent of the money is spent on 20 per cent of the people, and these people are very sick. So these high deductible plans will affect them somewhat, but after they cross the deductible, they're going to be fully insured, so will it really affect them? And these are the cases where most of the system's money is spent. So the first wave

ties, or populations, and they will offer them at a fixed price. Say you have stage-four breast cancer, and the following list of complications; an insurer will say, 'we have the following panel of people who work closely together, focusing solely on people just like you. And the price to have them take you on is 'x'. This will be a new kind of insurance product, which I call 'focused factories'. The insurer's role will be to bundle these focused factories, and this will result in considerable price and quality competition.

KC: It sounds like a consumer-driven approach opens up avenues for a more entrepreneurial approach to health care.

RH: There will be lots of interest in the focused factory approach for the simple reason that 80 per cent of health care costs are consumed by sick people, so it's where the money is. But the overall system isn't conducive to entrepreneurial thinking. Many providers have lots of ideas about how to treat the sick, but right now in the U.S. they can't execute them, because they can only get paid for certain activities for which there is an official 'code' that has been approved by the **American**

people's health, because it gets paid for hospital admissions – not for making people healthier. So let's change the paradigm: let's say you have congestive heart failure, and you live in the North Carolina area, and Duke is one of a number of providers offering you a 'total package' for your condition, for which you will pay a fixed price. This would be great for you, and great for them. I think this is the innovation that's going to happen, and it will be driven by two things: first, after a while, the benefits of the high-deductible approach will stabilize, because it doesn't change the economic incentives of the very sick. And secondly, so many doctors say, 'I wish I could do xyz, but I can't get a code for it'. These two pressures will push the innovation along, enabling entrepreneurial providers who want to change the whole service delivery system.

KC: Your vision heralds the emergence of 'new kinds' of entrepreneurs. What types of work might they do?

RH: The first wave will involve the innovative insurance policies we've discussed. The firms that started the inaugural consumer-driven policies have already been purchased by **United Health Insurance** and **Wellpoint**, but there will be a lot more policy innovation to come. The second wave, which is much more important, is in how health services are actually delivered. The current system is not consumer focused, it's provider focused – organized by hospital, by nursing home, by dialysis centre; but if you have diabetes, what you really want is an integrated team that cares for all aspects of your condition. So the second wave of innovation will be carried out by providers who understand this. And an additional kind of entrepreneur, who is already emerging, is the information entrepreneur, who will give people the kind of information that they trust and find relevant to their decision making. There are already about 20 or so firms doing this, and as the consumer-driven market heats up, they will become substantial entities, just like **Bloomberg** for financial info, or **J.D. Power and Associates** and **Consumer Reports** for automobile information, or **Zagat Survey** for restaurant info, etc.

There will be lots of interest in the 'focused factory' approach for the simple reason that 80 per cent of health care costs are consumed by sick people, so it's where the money is.

says, 'we are controlling costs!', but the real costs lie with the sick, and no matter what the plan is, these people are typically fully insured, even with a high deductible. A \$2,000 deductible is nothing for somebody who spends \$30,000 per year; they're going to blow through that in no time, and then we're back where we started. So I think we're going to see another type of innovation occurring, and that is that the providers themselves will reorganize and start offering insurance packages for specific diseases, or disabili-

Medical Association. I'll give you a prime example of how entrepreneurially-defeating the current situation is: Duke University developed a treatment package for congestive heart failure. In one year, it reduced costs by 40 per cent, and it did so by making people healthier – not by denying care. Quite the contrary – these patients got such good care that they got healthier. And as they got healthier, they went to the hospital much less frequently. But under the present payment system, Duke actually lost money by improving

KC: Talk a bit about 'integrated health information records'.

RH: These are complete chronological records of an individual's health history, and we need them. The question is, who is going to provide them? In my view, the focused factory is a natural place in which to integrate information. And for people who aren't sick, it's very likely that a Quicken-style clone for health care will emerge. If you look at the whole system of

physicians have far less freedom than enrollees. It's not that they can't innovate, but the barriers to doing so are high. My co-author and I looked at what happens when you liberate the consumer, but not the provider. One thing that happens is that health care costs in Switzerland are 10 per cent of GDP, vs. 15 per cent in the U.S. [and 12 per cent in Canada]. We compared it not to the U.S. as a whole – which almost anyone can better because of the heterogeneity of the population and many other

ways: quality of care, outcomes, equality of care – and at a third less cost. How is this? One reason is that they have many more insurance plans than we do, so there is competition amongst insurers, which provides a measure of cost control. And secondly, they have a lot of health insurance companies. One of the big tenets in socialized health care (as in Canada), or in the consolidation of health insurers (as in the U.S.) is that there are huge economies of scale to be had in health insuring – so there is a reason to make the buyer very big. But in Switzerland, there are hundreds of insurers, and while it's a tiny country, they are all profitable – which belies the view that you need one big buyer, or just a couple of big buyers to make a system efficient. ■

The Swiss system belies the view that you need one big buyer, or just a couple of big buyers to make a system efficient.

stakeholders, and ask, 'who has the greatest incentive to have integrated information?', it is the patient. So this in itself represents a huge entrepreneurial opportunity. I can't tell you how many of my friends have stolen their X-rays, because they knew the hospital would lose them. Hospitals now have computer archive systems, so they are less likely to lose things, but people are starting to say, 'download that information and e-mail it to me, so I can keep it on record in case I have an accident or move'. We should have access to all of our health information. We have it for our finances – nobody manages that for us, we do it ourselves!

KC: Are there countries or systems out there that just seem to 'get it'?

RH: In the September *Journal of the American Medical Association*, I co-wrote an article about Switzerland's universal-coverage health care system, which achieves universal insurance and high quality of care at significantly lower costs than the employer-based U.S. system and without the constrained resources that can characterize government-controlled systems. The Swiss system is consumer driven in the sense that consumers buy their own health insurance – there is no third party acting on their behalf; but it's not consumer driven in that providers are as handcuffed from innovating procedures as they are in the U.S. and Canada. Insurance companies, hospitals and

reasons – but to three American states [Connecticut, Maryland and Massachusetts] that are very much like Switzerland demographically: very white, highly educated, and highly urban. We found that Swiss health care is much better in all sorts of

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Point of View: **Joseph D’Cruz**

Finding a Delicate Balance: Design Principles for Ontario’s Health System Transformation



Succeeding in today’s turbulent global environment entails learning how to embrace and exploit competitive forces that sometimes lead firms in conflicting directions. The ‘transnational model’ has been developed to address this. Essentially, the model is an evolutionary response to the conflicting challenges of developing tightly-coordinated global strategies for scale efficiency and the need to remain responsive to the many local (national) environments in which a firm operates.

There are important lessons from this model that Ontario can apply to the transformation it is attempting in its health care system, at the heart of which lies the creation of ‘Local Health Integration Networks’ (LHINs). In October 2004, Health Minister **George Smitherman** announced the creation of 14 of these community-based organizations, whose mandate is to plan, coordinate, integrate, manage, and fund care at the local level within their defined geographic areas. Smitherman’s announcement emphasized that this change to the architectural design of Ontario’s system was aimed at making it “more patient-centered and responsive to local needs.”

The troubled system that the Minister spoke of transforming consisted of a set of direct relations between the **Ministry of Health and Long Term Care** (MOHLTC) and each of the 2,080-plus organizations that deliver publicly-funded care in the province – hospitals, Community Care Access Centres, etc. Each organization received its operating and capital budgets from the Ministry, provided services, and reported regularly on its performance. The

Figure One: Ontario’s Local Health Integration Networks



Ministry was itself a complicated bureaucracy that experienced considerable difficulty in maintaining operating and strategic control over the many diverse organizations on which it has to rely for delivery. The provincial health care system was plagued by persistent, chronic problems: recurring budget deficits in many hospitals, crowded emergency rooms, long wait times for certain services, and the need to make ever-increasing demands for funds from an already fiscally-strapped government.

In the months after the Minister's announcement, a Health Results Team established within MOHLTC proceeded to elaborate on the LHIN proposal after rounds of consultation with stakeholders. The plan was for LHINs to eventually take over the purchaser-provider relationship between the MOHLTC and organizations within its territory. The architectural design of the proposed system consists of the following elements:

- A strategic apex consisting of the Premier, the Minister responsible for the MOHLTC, their senior policy advisors and the senior-most bureaucrats of the Ministry;
- A central administrative hub – the command and control apparatus of the MOHLTC;
- LHINs – 14 regionally-based organizations that represent the new element in the architecture;
- Operational organizations – 2,000-plus, allocated regionally to the 14 LHINs; and
- Health care professionals that work through and for the operational organizations and the other staff that support them.

LHINs were thus designed as a vehicle for integrating health services at a local level, reflecting an essentially 'bottom-up' approach to planning and allocating resources. At the same time, they are the instrument for the MOHLTC to impose 'top-down' strategic direction and control over the organizations under its jurisdiction. The inevitable conflicts between bottom-up demands for resources and services and the centre's need for fiscal responsibility will be internalized within each LHIN, placing a number of conflicting pressures on leadership. In particular,

three contradictions will have to be balanced simultaneously.

Challenge #1: Overall Strategy vs. Local Responsiveness

The transformation of such a large system never starts with a blank slate. The starting point is the current strategy, resource allocations, organizational capacities and stakeholder alignments. Much like the Titanic, this system can only slowly be made to turn in a direction different from the course it is currently following. At any given time, leadership at the apex has to choose a very limited number of strategic priorities, initiatives that they will under-

Without a well-articulated overall strategy, the system will lurch from crisis to crisis, incurring wasteful spending and failing to respond effectively to the demands placed on it.

take to change part of the system while allowing the rest of it to proceed more or less on a 'business as usual' basis.

Strategic priorities for the publicly-funded, universal components of the provincial health system should be grounded in an overarching strategy to be effective. Effective strategic management is essentially a top-down process, whereby the strategic apex crafts a vision and strategy that specifies the goals and objectives for the system as a whole, indicates the strategic priorities that will be undertaken to accomplish them, and allocates resources to various parts of the system to allow them to play their part in implementation.

Almost on a daily basis, the MOHLTC is required to cope with decisions and choices that affect the system as a whole, whether it be responding to the challenges of SARS or the decision to fund a new cancer treatment. Without a well-articulated overall strategy, the system will lurch from crisis to crisis, incurring wasteful spending and failing to respond effectively to the demands placed on it.

On the other hand, both patients and providers are highly decentralized, and in

decentralized system, needs differ along many dimensions. For example, among patients, there are clear differences between urban and rural areas, between various genetic pools and ethnicities, and between demographic mixes. Not only would it be inefficient to try to apply a rigidly-uniform approach across this spectrum, it would be politically unacceptable.

Similarly, providers are frequently independent agents or employees of local hospitals, community care centres, and other institutions with local stakeholders. Providers will only be actively engaged in implementing the Ministry's strategy if they are involved at the local level in developing

and rolling out local implementation plans. Their local knowledge is of critical importance in adapting and adjusting any global strategy to local needs and conditions, and the feeling of empowerment that comes from involvement in the shaping of programs is itself a highly motivating factor, encouraging them to take ownership of the strategies.

Tensions between overall strategies emanating from the strategic apex and local responsiveness will intensify whenever the balance between them is shifted towards one or the other. Significant structural discontinuities, such as the SARS epidemic, may from time to time tilt the balance in favor of a centrally-directed approach. As long as there is a clearly recognizable crisis, health care providers will respond positively to a temporary imbalance and, in general, tend to look for leadership from the centre. However, once the changed environment is better understood and programs are in place to cope with it, the desire for local responsiveness reasserts itself. Should the centre resist, unproductive tensions will surface.

Equally unproductive are tensions that arise when the balance shifts too heavily in

favor of local responsiveness. Decentralized determination of strategic priorities and allocation of resources results in a fragmented, balkanized system that is excessively committed to the status quo and resistant to change. In particular, when local self interest dominates strategic decision making, it is extremely difficult to execute strategies to the benefit of the whole community.

Challenge #2: Big vs. Small

Size confers some obvious benefits in managing a health system, including bargaining power with drug companies and equipment suppliers, and the economies of scale in delivering specialized services that are fixed-cost intensive. For example, the **Veterans Administration** (VA) health system in the U.S. has effectively used its bargaining power with drug companies through a tender process, and as a consequence, the prices it pays for drugs are the lowest in the country. Similarly, costly procedures like heart and lung transplantation can be delivered more cost effectively when they are performed at a limited number of locations.

Other benefits of size are less obvious, such as the ability to attract and retain world-class talent for teaching and research. The **Beth Israel Deaconess Hospital Complex**, associated with Harvard Medical School, or the **University Health Network**, associated with the University of Toronto, both rely on their size and global impact in recruiting and retaining world-class researchers and teachers. Ontario has one of the larger health systems under single management, and can therefore benefit from its size, should it choose to do so, and if it is organized to exploit these advantages.

However, sheer size also has detriments, for with it comes distance and impersonality between central decision makers and the front line. Not only can this lead to a feeling of disempowerment among front-line providers, but it also provides spawning grounds for bureaucratic politics. To avoid these problems, large organizations must find ways to appear 'small' to their members. They can accomplish this by creating sub-units that are small enough to feel personal and immediate to those who work in them. More importantly, management at the front

line usually needs frequent personal contact with the employees under their supervision, and this places limits on the size of the front line units that constitute the building blocks of the health system. Managers have to know each employee they supervise and deal with them as individuals. Further, these managers must be given sufficient autonomy in local decision making so that they feel empowered to run their units effectively.

Organizations that combine the benefits of being simultaneously 'big' and 'small' are known as 'integrated networks'. Top management recognizes that there are many activities where both scale and specialized knowledge are critically important. Appearing and behaving as a big organization is the only way to leverage size in some cases; but management must also secure the cooperation and involvement of members at the front line of the network, as the human aspects of small scale are equally important.

Accomplishing this calls for complex processes of coordination and cooperation. Each front line unit must simultaneously operate effectively as a unit and coordinate with other units to secure the advantages of size. Coordination becomes extremely complex when these units are diverse in the services they offer; treating each the same way does not serve the goal of local responsiveness. Furthermore, this coordination needs to change over time. When new practices are introduced, significant efforts at coordination are needed. Once established, the level of coordination activity can decrease, without compromising effectiveness.

Secondly, it requires large flows of information, knowledge and people between the interdependent units. The time and energy devoted to coordination take away from resources that are devoted to the business of the front-line units. This is part of the price that the network has to pay to be effective as a big organization. Coordination is a people-intensive activity that demands great skill and sensitivity on the part of middle and upper management, as well as sophistication in front-line managers, who need to see the benefits of cooperation even when it may not serve their immediate local interests.

As new technologies change the possibilities and costs of delivering health care, the province's health care system must constantly adjust its command, control and coordina-

tion processes. Rather than regarding this system as one that is generally in balance but is occasionally thrown off-balance by external discontinuities, we need to think of it as one that is constantly being swung out of balance, in need of constant rebalancing.

Challenge #3: Radically Decentralized vs. Central Control

Classical approaches to the design of large, complex organizations involve architectural choices about levels of decentralization. Organization theory suggests that, on the one hand, a choice can be made to centralize authority and decision rights, so that decisions and resource allocation are made in a central command-and-control unit and sent down to the front lines for implementation. Alternately, that theory suggests that a choice can also be made to devolve decision rights to those lower down in the hierarchy. The extent of such 'devolvement' is said to determine the degree of decentralization.

This conceptualization is inadequate for addressing the structural issues in complex, knowledge-intensive organizations. Such organizations require both radical decentralization – devolving decision rights as close to the front lines as possible – and a high degree of central control. This fine balance is achieved by overlaying on the basic structure a number of supporting structures and processes that serve to supplement and counterbalance the innate tendency of a line management structure towards central control.

Radical decentralization is essential to sustaining local responsiveness. A central management group will not be able to act in an effective and timely manner to address the opportunities and challenges that confront the front line on a daily basis. Recourse to traditional central control techniques, such as standardized procedures and policies, only creates the illusion of control, because those who desire to circumvent central control become adept at work-arounds and finding loopholes. The centre stands a better chance of accomplishing its strategic intent by sharing decision rights rather than hoarding them. To do this, the organization must put into place strong local management and create a culture of individual accountability.

Simultaneously, the centre must concern itself with the stewardship of resources and the system's overall effectiveness. Since health care represents the largest component of the provincial budget, inappropriate use of resources carries a potential political cost, creating a sense of urgency for the centre's motivations to ensure that all parts of the organization are using resources wisely. Without confidence in the ability of the system to demonstrate probity in this regard, the centre will be reluctant to make the appropriate level of devolution.

Most critical in this regard is the 'infostructure' of the organization: the systems for collection, processing and analyzing resource utilization and operating performance, including the financial, physical and human resources devoted to information management. Without a high level of standardization, it is impossible for any large organization to develop an effective infostructure. For decentralization to work properly in combination with central control, the architecture of the infostructure must imitate closely the architecture

of the structure of the organization. This is a fundamental design principle that is hazardous to violate.

Standardization of the infostructure facilitates analysis with and between the micro, meso and macro levels; such analysis should inform negotiations between the levels about budgets and performance expectations. More importantly, it supports the development of a culture of individual accountability for results and stewardship. Only when they have current and accurate information can front-line managers be expected to act effectively within a centrally-coordinated strategy framework where they are given control over key resources.

When the infostructure 'democratizes' performance data by making it feasible to compare the performance of comparable units, the social control of these units can supplement managerial control by the line hierarchy. Publishing 'performance league' tables that show outcome and efficiency data can generate a healthy spirit of competition. Used judiciously, this spirit of peer competition can be harnessed as a manage-

rial tool that is often more powerful than reward and punishment mechanisms.

Conclusion

The success of the transformation of Ontario's health system will depend critically on the adoption of management structures that foster a fine balance between the three contradictions discussed here. These are precisely the contradictions that large transnational organizations – the biggest and most complex firms in the world – have learned to internalize. Ontario should adapt many of the management practices these firms use to maintain their ability to adapt to external shocks and develop strategic management capabilities. These management tools will only become effective when the health system deploys an infostructure that makes budget and performance data transparently available to the new LHIN leadership and management of the individual hospitals and health care provider organizations as well as the Ministry. □

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Questions for: Debra Lerner

The Gap in the Safety Net

Chronic health conditions (CHCs) are projected to be the leading cause of disability throughout the world by 2020.

An expert on the social and economic consequences of CHCs talks about ‘presenteeism’, depression in the workplace, and how companies can lower their health-related costs.

Karen Christensen: You and your colleagues at the Tufts-New England Medical Center developed a questionnaire that measures the impact of chronic health problems on job performance. What findings has it led to?

Debra Lerner: The Work Limitations Questionnaire illustrates how different chronic conditions impact people’s lives while they’re at work. These conditions – which include musculoskeletal pain (including arthritis), depression, allergies and obesity-related problems – can be very difficult to cope with, and they affect working people in a variety of ways. For instance, a condition like musculoskeletal pain can affect a person’s ability to do physical job tasks, but it may also impact their ability to perform time management tasks, such as follow a regular routine, or their ability to perform cognitive and interpersonal tasks. A chronic psychiatric problem like depression can have an impact on a person’s ability to manage mental and other aspects of the job. Each particular condition leaves its own ‘footprint’, and the impact tends to be multi-dimensional, across several aspects of the job. There are really very few services out there for employed people with chronic conditions, to help them handle the limitations they might be experiencing or to prevent new ones from occurring. There’s a big gap in the safety net right now.

KC: Can workplace programs sustain the productivity of employees with chronic health conditions?

DL: In the U.S., a diverse range of programs is being attempted. However, because many

are proprietary, data concerning their use and effectiveness may never see the light of day, so it’s very hard to track whether they are having any sustained impact. Employers are trying a number of approaches – either through vendors of specific services (e.g., disease management firms), or through arrangements with their health plans – and in many cases, these programs attempt to have an impact on employee health status, and the ability to function at work and in other domains of life. There’s a lot of optimism amongst employers and scientists for the idea that these programs will develop over time, and that with more and more information, we will learn what works and what doesn’t.

KC: Employers worry about absenteeism, but your research shows that an even bigger threat to productivity is ‘presenteeism’, which costs billions annually. Describe presenteeism, and what can be done to combat its effects.

DL: Presenteeism is what the Workplace Limitations Questionnaire primarily measures. Absenteeism has been measured for years – it’s pretty easy to figure out whether someone is physically present at work or not; but presenteeism is a little more elusive and difficult to measure, because it refers to how well a person is functioning on the job – whether they are performing job tasks effectively and being productive. Just showing up at work doesn’t make you productive; presenteeism refers to productivity issues that are explicitly health related. From an employer’s perspective, if an employee isn’t performing well, it’s very difficult to know whether the source of the problem is poor



health or some other factor; with new tools like the WLQ, organizations can begin to get some sense of the magnitude of the presenteeism problem, and the nature of it. From the studies we and others have done, in companies and in the U.S. population, the implication seems to be that presenteeism is an enormous issue that is worth addressing. We’re talking about people who are still coming to work, so preventing a decline in their ability to function and maintain their participation in the labour market for as long possible is important – not only for the population’s health and quality of life, but for the overall economy.

KC: You recently completed a four-year study of employees who suffer from depression. What were some of your key findings?

DL: We did a unique study where we enrolled people who came into primary-care physicians’ offices for any reason – not specifically for depression; we screened about 17,000 people, identifying those who had symptoms of depression, and eventually confirming which ones actually had depression. Additionally, we identified healthy employees who had no major medical conditions, and a comparison group with rheumatoid arthritis. So we had three groups, all of which were actively working at the start of the study, with no intention of leaving the workplace. Within six months, the job-loss rate among the depressed group was roughly 15 per cent, whereas in the two comparison groups, it was about two per cent. We also found that people with depression had much higher absentee rates while they were employed,

and that among employees, presenteeism levels were very high. There was another discouraging finding from our research: when we looked at employees who had a clinically significant improvement in their depression over time, their ability to perform on the job never fully recovered in an 18-month period of observation. It's important to state that in our study, we weren't testing a treatment for depression; this was purely an observational study, so in our 'depression group', some people weren't getting any care, and some were getting good care, but overall it was the 'usual' care that people get. We know from other studies that when you improve the quality of care, you do see an impact: people do get better in terms of their depression, and they are also able to stay employed, have less absenteeism, etc. This research has challenged us to develop new services to help people with depression sustain their ability to function at work. We believe that programs must combine high-quality medical care, vocationally-oriented services, and work redesign interventions.

One of the purposes of our study was to look at whether there are certain characteristics of work that make it harder (or easier) for workers to 'hang in there' when they became depressed. We found that certain aspects of a job are very difficult to manage for a person who is depressed – like decision making, using judgment, and providing customer-service. These results further suggest that a range of services will be needed to reduce depression's negative work impact.

KC: Do you advocate employers getting to know the personal health issues facing their employees, and in some cases, offering treatment for them?

DL: That's a tricky question. Above all else, privacy is paramount: people have the right to maintain their privacy, especially in the workplace, where performance is being judged on a routine basis, and bringing health issues into the equation can lead to discrimination and other forms of bias. At the same time, employers have a real opportunity here to think about the workplace as a unique community where they can have a positive impact on employee health. Philosophically, many companies

are on board with this idea. Some have already developed 'shadow health care systems', in which employers sponsor a variety of activities aimed at improving employee health, lowering costs, and improving functioning at work.

KC: Many MBAs work in cultures that equate long working hours with commitment and high performance. But long hours contribute to stress, depression, and a variety of other illnesses. What is your message to business leaders who actively participate in such a culture?

DL: There are tools out there to help them evaluate whether these practices are really consistent with employee health, well-being and productivity. It's worth it for them to stand back and think about these practices in a scientific way, to measure whether or not those long hours – which they regard as conducive to good performance – are actually paying off in terms of job satisfaction, employee health, and quality of working life, and also in terms of productivity. There is emerging evidence suggesting that job stress is not conducive to health and well-being, and may actually be counter-productive.

KC: What key steps can companies take to lower their direct and indirect medical costs?

DL: It all starts with collecting information, and trying to understand what your employees' health issues are and how they affect their ability to be productive. There are tools that can help employers easily get their arms around these issues – things that can easily be incorporated into the routine data collection that goes on in companies all the time. Once a 'workforce profile' is created, employers can go about looking for the appropriate interventions to address some of the problems. A range of interventions is available; there are tools in the realm of wellness and risk reduction/prevention; disease management programs; case management programs for people who face a period of absence from work or a hospitalization that requires reintegration into the workplace. Employee Assistance Programs can be important for employees

with mental health issues. There are many options, but unfortunately, the marketplace is not very well organized, so it's difficult for employers to figure out which program is best for them. A first step is to figure out who works for you and what their particular health issues are – both now and five or ten years down the road. After choosing a program, an important piece is evaluation: feedback and evaluation are critical to success, because programs that may be effective in one setting may not be as effective in others. Overall, I think we are at the beginning of a 'win-win' time, both for employees and employers, but we are still a little bit in the dark about what works best. I believe this will evolve over a short period of time.

KC: You participated in the White House's Conference on Aging in July of 2005. What was your biggest 'take-away' from the conference?

DL: With the looming demographic changes we face [due to the retirement of Baby Boomers], many people may need – and want – to participate in the labour market for a longer period of time. So some very important social forces are drawing our attention to the issues of aging, chronic disease and work. But the national agencies that support biomedical research and employment research are totally separate – they aren't integrated at all. We need new ways of supporting research that can address the specific needs of older workers. Right now, the support for research on work and health (other than occupational health research) isn't formulated into a coherent agenda and set of priorities. The funding is very fragmented, and there is no one agency overseeing it. One of the Conference's key recommendations involved supporting a research agenda that can provide answers not only to the scientific community, but to employers – who want to know what they should be doing – and to the working population. Hopefully we [at NEMC] can have some impact on the way this research is organized. □

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Point of View: David Dunne

Improving Health Care Through Deep Learning



The ‘educational model’ of health care assumes that patients want to learn how to be healthy, and are willing to take the initiative on their own behalf. Are patients up to the challenge?

Imagine that you have just visited your family doctor for your annual checkup. She finds some suspicious symptoms, and suggests to you that you may be developing Type 2 diabetes. She requisitions some tests and tells you not to worry too much; but as you carry your form to the lab, you are filled with concern. You don’t know much about diabetes, but you know it is a serious condition.

Twenty years ago, that would have been that. You would have waited for the test results, and when you received the call from your doctor, scheduled a return visit without delay. When the doctor provided the bad news, you would trustingly place yourself in her hands and comply with her directions.

But times have changed; this evening, you decide to research type 2 diabetes on the Internet. You log on to **Google**, perform a search, and you are presented with tens of thousands of sites, everything from discussions of diabetes complications to homeopathic treatments. You print out the most interesting pages. Later, as you watch television, you see a commercial for a diabetes drug called Avandia; in spite of all the warnings about side effects, the happy faces of the people in the ad give you hope.

When you visit your doctor to discuss your results, you are armed with sheaves of downloaded information. As you suspected, the tests were positive. When the doctor suggests a treatment, you mention one of the studies you downloaded. She raises her eyebrows, and mumbles something; clearly she is not familiar with this particular study. You then suggest that Avandia might be an appropriate treatment, but she suggests an alternative for your particular case. You don’t know this

drug, but for now you defer, resolving to look it up later on the Internet.

The massive amount of health care information available on the Internet has made it possible for patients to become partners in health care as never before. Concurrently, the aging of the Baby Boom generation will result in a much higher proportion of the population in the 65+ age range, just when they have a greatest need for health care services. These patients are expected to be much more discriminating, ‘activist’ health care consumers than their counterparts in previous generations.

This ‘double whammy’ creates both a major challenge and a major opportunity for health care. The challenge is to the old way of doing things: a mechanistic, depersonalized approach to medicine that centred around the health care provider. The opportunity is to embrace the new: to take the educated patient as a model and encourage all patients to move in this direction. To do so, health care providers need to think of patients differently: not as customers who want to be pampered, but as students who want to learn.

Not everyone sees the emergence of the educated patient as a good thing. Many in the health care professions argue that a patient armed with sheaves of information from the Internet is a danger to herself and a menace to those entrusted with her care. Without the training to interpret the flood of available information, patients are likely to veer towards apparently easy answers – ‘silver bullets’ that have little scientific validity – or worse, towards unsafe therapies. A little knowledge, say the proponents of this view, can be a dangerous thing.

Moreover, such patients can put pressure on health care providers to provide treatments that are not appropriate: several studies show that physicians are influenced by patients who have seen drug company advertising to prescribe the drugs they ask for.

Yet educated patients could hold the key to the future of health care. Consider the benefits they present:

Targeted treatments: educated patients will have a keener sense of which symptoms are most significant, and whether a drug is working as it should. As a result, they will be more able to work with their physician to develop the most appropriate therapies.

Compliance: a common problem in health care is patients’ unwillingness to comply with drug regimes. Many, for example, require the patient to continue taking the drug after she feels better, which can create difficulties in getting patients to comply. Yet educated patients who understand the importance of continued compliance are more likely to follow the regime.

Prevention: educated patients are more likely to adopt preventative measures to avoid the illness in the first place, or at least mitigate its effects.

Fewer Adverse Drug Interactions (ADIs): current information systems, largely because of privacy requirements, are not integrated at the patient level. As a result, the physician may not know if a patient is taking two drugs that interact. However, ADIs are less likely to happen with educated patients who understand the drugs they are taking.

Reduced costs: educated patients can reduce health care costs at many levels. For example, studies have shown that encouraging self-medication through switching of

prescription drugs to over-the-counter formats can result in massive savings to the health care system.

Freed up resources: although physicians will need to spend time with educated patients to give them guidance, properly-educated patients should need to visit the doctor less often. Knowledgeable patients are also less likely to waste a doctor's time with trivial or irrelevant symptoms.

As desirable as educated patients are, there are significant obstacles to developing them. For one thing, physicians are rewarded for treating diseases, not for educating patients; and because the incentive system rewards the treatment of diseases, it does little to discourage the emergence of these diseases in the first place.

While the highly-motivated patient is currently a minority, there are unquestionably others who, with some encouragement, would be ready to take responsibility and learn about their own health. How can these patients be encouraged?

Researchers in education distinguish between 'surface' and 'deep' learning: while surface learning is concerned with learning just enough to survive (e.g. to pass the exam), the emphasis in deep learning is on integrating knowledge with real-life experience. In deep learning, the motivation comes from within the student, while external factors such as fear motivate the surface learner. We all use these different strategies at different times.

Deep learners, driven by their innate curiosity, are more prone to taking responsibility for their own learning than surface learners. In effect, surface learners are 'consumers' of knowledge, expecting to be 'taught', while deep learners are engaged in the process of learning.

Existing methods of imparting health care information to patients tend to encourage surface learning. Through short briefings from physicians or pharmacists, we provide patients with just enough information to survive, but do not engage their natural curiosity. Yet the benefits to the system of educated patients rely on patients truly understanding their condition through deep learning, and taking responsibility for it. The need is therefore to develop approaches that will encourage

patients to become deep learners.

In this 'educational model' of health care, the pharmaceutical industry can play an important role – but only if it makes some changes of its own. It's not easy to find fans of the pharmaceutical industry these days. In a recent survey conducted by **Harris International**, the industry ranked third from the bottom of a league table of industries based on how well they serve their customers – just slightly ahead of the oil and tobacco industries.

Yet drug companies have much to contribute in helping patients become deep learners. In addition to much-needed resources, the industry offers in-depth knowledge of drugs, an understanding of medical education and individuals with a strong commitment to health care.

Patients have not historically been at the centre of drug companies' efforts, and have only recently gained a higher profile – mostly in the form of a 'hard sell' approach. Direct-to-consumer (DTC) advertising has dramatically increased in recent years in the U.S. In Canada, where DTC is illegal, less direct (but just as aggressive) means of persuasion have been used. Instead of seeing patients as curious individuals who want to learn about their health, the industry has chosen to see them as pawns – a route to persuading doctors to prescribe their drugs.

The educational model of health care is not about persuasion, but relationships. By working with patients to provide them with useful information, the industry can develop discerning customers who, with the guidance of their physicians, will accept only appropriate treatments. Over time, this will improve both the health of patients and the reputation of the industry. This is not a 'soft-sell' approach, but in effect a 'no sell' approach, in which patients are treated as learners rather than consumers.

A skeptical reader might ask 'what's in this for the industry?' The answer: everything. This is an enormous opportunity for pharmaceutical companies to redeem their tarnished reputation. Specific strategies for an educational approach could include working closely with health care practitioners to develop standards for 'approved' Web sites and even a comprehensive health care search engine – perhaps a 'Google Health', for example. Each patient who is diagnosed

with a condition could receive a book, a CD, web links that encourage him or her to do comprehensive research.

The pharmaceutical industry could also co-sponsor courses for motivated patients. These courses could be offered in hospitals or universities, or online, and would help patients develop a comprehensive understanding of the research about their condition. Patients would pay for the courses, which would ensure that they take them seriously. Importantly, such courses would be taught using interactive teaching methods known to foster deep learning.

Technical tools could include simulations for patients to help them understand the treatments they will be experiencing (for example, simulating an MRI before the event could help reduce the anxiety many patients feel during the procedure), or interactive self-diagnosis tools that direct the patient towards appropriate sources of advice. At a broader level, much research is needed into developing deep learning in patients, and the industry could contribute by sponsoring this research.

While patients are central in the educational model, health care practitioners are instrumental in delivering education: efforts at the level of health care practitioners would be needed too. Educated patients tend to have high levels of general education and be computer-savvy; doctors could provide one-on-one guidance to patients on searching out health information. Yet many health care practitioners are significantly behind in computer technology. The industry can play an important role here in helping doctors develop their own Web sites, e-mail links with patients, and self-diagnostic tools.

The educational model of health care implies a different way of thinking for both the health care system and the industry, one that assumes patients want to learn how to be healthy and are willing to take the initiative on their own behalf. In the current system, this is unquestionably a leap of faith. It remains to be seen whether patients are up to the challenge – but it will certainly not happen unless regulators, providers and the industry are. □

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David Dunne is an adjunct professor of Marketing at the Rotman School and co-director of the School's Teaching Effectiveness Centre. He is a regular columnist in *Marketing Magazine*.

Questions for: **Marion Nestle**

Fighting the Battle of the Bulge



New York University Professor of Nutrition and ‘Obesity Warrior’ **Marion Nestle** talks about food politics, and how we can ‘vote’ with our food dollars for a healthier society.

Karen Christensen: The subtitle of your book, *Food Politics, is How the Food Industry Influences Nutrition and Health*. What are some key ways the food industry influences our eating habits?

Marion Nestle: The book is about the influence of food marketing on obesity and other aspects of health. I’m not saying that food company executives are deliberately trying to make people fat; they are just trying to sell their products in an enormously competitive environment. Advertising is only the tip of the iceberg; food marketing has changed social norms. For example, when did it become OK to eat in formerly-forbidden places like bookstores and libraries? And when did it become OK for kids to drink soft drinks at school?

KC: In your view, food, heart disease and cancer are not just personal issues, but “bona fide social and political problems.” How so?

MN: People do not make food choices in a vacuum: social norms greatly affect what is considered socially acceptable. Research demonstrates, beyond question, that people will eat more if more food is put in front of them. So larger portions encourage people to eat more. Changing social norms to make enormous portions socially acceptable has had a major effect on calorie intake.

KC: Talk a bit about the public health stakes involved.

MN: Well, we know what causes diet-related illnesses – dietary factors that raise blood cholesterol, blood pressure and blood sugar levels, leading to conditions like obesity, heart disease, stroke and cancer. If we look at obesity alone, the costs to society are estimated to be in the range of hundreds of billions of dollars in health care costs and personal problems. We’re now seeing type 2 diabetes – which used to be called ‘adult-

Changing social norms to make enormous portions socially acceptable has had a major effect on calorie intake.

onset diabetes’ – in very young children. This will be a life-long problem for them to manage, and very expensive for all involved – individuals, families and the entire system – because people with diabetes generate health care costs that are two to three times those without the condition. And it’s not just in North America – it’s happening everywhere in the world where people are starting to have a little money.

KC: After 50 years of nutritional advice, the public is more confused than ever about what to eat. Why is this?

MN: You have to ask the question, ‘to whose benefit is it to keep the public confused about nutrition?’ I can think of a long list, but one answer that pops to mind is certainly the food industry. Its mantra is that ‘there’s no such thing as a good or a bad

food’, that all foods are part of a healthful diet, and that the keys to healthy eating are balance, variety and moderation – all true, of course, in theory. But in practice, \$36 billion worth of advertising and marketing in the U.S. goes into directly selling what you might call ‘top of the old pyramid’ foods – foods that are high in fat, sugars, and calories, much of them from corn sweeteners and hydrogenated fats.

KC: How does promoting eating translate into promoting overeating?

MN: It’s simple: the big dark secret of the American food system is that there is far too much food. The U.S. food system makes available 3,900 calories per day for every man, woman and child in the country – roughly twice the average need. In this hugely competitive situation, food companies have only two choices: they can either get people to eat their food instead of someone else’s, or they can get people to eat more food, in general. They are skilled at doing both.

KC: You have said that “fat people are good for business,” and if people ate less, it would be very bad for business. Is there a way out of this conundrum?

MN: Obviously yes, or I wouldn't bother saying such things. The investment analyses – and there have been three that I'm aware of (from **UBS Warburg, J.P. Morgan** and **Morgan Stanley**) all say the same thing: that if people want to lose weight, they're going to have to eat less; that eating less is going to be bad for business; and that it will be much worse for some businesses than others. So if food companies don't fix their product mixes to make healthier food products, and market them in a way that emphasizes their healthfulness – especially those that are lower in calories – they're going to be left behind in what is becoming a mass movement towards more healthful eating. They also are going to have to stop marketing foods directly to children, and other borderline unethical practices. Once people realize the connection between food marketing and eating habits, they become empowered to think differently about what to choose. People can (and will, I hope) vote with their forks, but differently than they have in the past.

KC: People in the food industry deflect blame for poor eating habits by arguing that 'no one forces people to eat junk food' – that we are all personally responsible for our choices. What is your stance on this?

MN: Obviously, we vote with our forks. But unless we really understand how the food system works, we won't know how to vote wisely. I think food choices are about democracy, so the voting analogy is very apt.

KC: You have been battling soft drink contracts with schools since 1998. Are things getting any better?

MN: All you have to do is look around you. I think what's happening with food is a national movement to take back real personal choice. Schools across the country are saying they will not sell out children's health to junk food and soft drink companies. Legislatures throughout the country are introducing bills to try to control food company marketing practices. This is grass roots democracy in action.

KC: You believe the food industry takes advantage of the vulnerability of young children: for instance, McDonalds advertises on Teletubbies. Should this be outlawed? Are there any examples of food companies 'doing the right thing' with respect to children?

MN: Food companies have an inherent conflict of interest. They have to sell more food, not less. They have to report corporate growth to Wall Street, every quarter. Junk foods are highly profitable and hard to give up or replace. And kids are an important market for lots of products, especially if they can be induced to pester their parents for them. Several companies (**Kraft**, for example) have announced self-regulation strategies, but it remains to be seen how they will play out. Kraft, of course, is owned by **Altria**, which owns **Philip Morris** – not exactly a company famous for its concern for children's health or following rules against marketing to children.

We vote with our forks; but unless we really understand how the food system works, we won't know how to vote wisely.

If anything, Philip Morris is famous for clever ways to get around those rules. Will Altria allow Kraft to become a more ethical company if people buy fewer boxes of Kool Aid, macaroni and cheese, or Lunchables? History is not reassuring on that point.

KC: McDonald's now sells a leaner version of Chicken McNuggets, and Kraft is working on a 'healthier' Oreo. Are these the types of decisions that will make a difference to society overall?

MN: You are asking a philosophical question: is a better junk food a better choice? The companies would like you to think so, but I am skeptical. Look at artificial sweeteners, for example. Their use has risen exactly in parallel with rising rates of obesity. And much of what companies are doing goes under the heading of what I call 'calorie distracters': they take the trans fats out or put some whole grain in so you forget about the calories.

KC: In a nutshell, what is your advice to people who want eat more healthfully?

MN: A great way to improve diets quickly is to stop drinking soft drinks and juice drinks. These are a no brainer – they contain calories and nothing else. Also, stop snacking, or reduce your number of snacks, and eat foods in smaller portions. Overall, the concept is simple: eat less, move more, and eat more fruits and vegetables.

KC: Looking ahead 20 years, are you hopeful that people will become as savvy about the hazards of overeating as they are about the hazards of smoking?

MN: But I see so much change taking place in society right now, and so much public awareness of what a serious problem food marketing has become – and why we need to do something about it – that I can't help but be optimistic.

KC: What are you working on at the moment?

MN: Everywhere I go, people ask me, 'What should I eat? How can I lose weight?' I have a new book coming out in May 2006 (from Farrar, Straus & Giroux), tentatively titled, *What to Eat*. It's about how to make intelligent choices in supermarkets. In it, I go through supermarkets aisle-by-aisle and discuss every issue I can think of that comes up in that context, from nutrition to politics. I had a lot of fun doing it, and I hope readers will find it useful. □

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Marion Nestle is the Paulette Goddard Professor of Nutrition, Food Studies, and Public Health at New York University, in the department that she chaired from 1988 through 2003. The author of *Food Politics: How the Food Industry Influences Nutrition and Health* and *Safe Food: Bacteria, Biotechnology, and Bioterrorism* (University of California Press, 2002 and 2004, respectively), she has been a member of the Food and Drug Administration's Food Advisory Committee and Science Board, the 1995 Dietary Guidelines Advisory Committee and the American Cancer Society committee that issues dietary guidelines for cancer prevention. She appeared in the 2004 film *Super Size Me*, playing herself.

Questions for: **Mark Pauly**

A Health Care Economist's 'Dirty Work'



Wharton Professor Mark Pauly talks about the diverse challenges Canada, the U.S., and developing countries face in accessing quality health care.

Matthew Fox: Your recent research has focused on barriers to health insurance in developing countries. Can you talk a bit about these barriers?

Mark Pauly: The main approach these countries have tried involves individual communities putting together a health insurance plan – similar to the way health insurance emerged in the United States, with **Blue Cross**. But they've had problems, largely because small communities have a hard time dealing with high-cost cases while charging everybody the same premium. This has often meant that the healthier, younger people don't want to belong to the plan, so they end up with an adverse-selection problem. Some governments have stood in the way of the emergence of any kind of private insurance alternative, because there is almost always a government health plan of some sort; it's often terrible, but they don't want competition, so they dissuade the emergence of private alternatives, either through regulation or outright prohibition.

MF: What can the corporate community do to help address these challenges?

MP: Private insurance, at least in many former British colonies in Africa, is often associated with employers – usually large, western-owned corporations. If they could open up enrollment to people who aren't their workers, it would be easier than starting from scratch. But they are reluctant to stick their necks out. It's complicated; most of them aren't in the business of running insurance companies, and there's the issue of, 'will we get in trouble with the minister of health?' The parallel in the United States

were the so-called the Kaiser health plans, the first HMO's [health maintenance organizations]. They were started by **Henry Kaiser**, who ran steel and aluminum companies on the west coast during World War II, to provide health insurance to his workers. Then they opened up membership to

Moral hazard examines the reality that people may use more health care once they have generous insurance, ultimately increasing costs and expenses.

the community. That could happen in South Africa or Nigeria, countries where they have some private employment-based insurance.

MF: Another area you've researched exposes 'moral hazard' in the insurance industry. Can you explain this?

MP: Moral hazard examines the reality that people may use more health care once they have generous insurance, ultimately increasing costs and expenses. It occurs when people change their behaviour because of the presence of insurance. The health insurance application is, 'Yes doctor, I want that MRI scan because my insurance will pay for it, even though I'd never pay for it on my own.' Insurers call this 'moral hazard' because they think people who behave this way are somehow being immoral. I've argued that it doesn't have much to do with morality – it has to do with the simple fact that as the out-of-pocket payment for something decreases, people want more of it. For very low-income people in the

United States and in many developing countries, you may actually want to create moral hazard by insuring people, causing them to consume more medical care than they otherwise would. My work in Africa showed that people who were paying out of their own pockets were often not getting

effective health care – and they were using the money they needed to buy seeds for their crops or send their children to school, causing enormous problems elsewhere in the family.

MF: What do you see as the biggest challenge facing the American health care system today?

MP: The biggest one, in dollar terms, affects the great majority of us who are not poor and are insured: insurance premiums are growing much more rapidly than our incomes, primarily because we have access to new technology that is beneficial, but costs a lot. The question of how to redesign insurance to get cost increases under control – without doing too much harm to the rate of diffusion of beneficial new technology – is the biggest challenge. As an economist, I believe in trade-offs, but what we want to do is give up as little as possible. A second problem is at the other end of income distribution – the 15 per cent or so

of the population without health insurance. There, the solution is simple enough: let's help them buy health insurance. The problem is convincing taxpayers to pay the extra taxes to do it. So in the case of the uninsured, we know the solution; we just can't persuade anybody to do it. In the case of the insured, we don't know the solution, but it's bound to be painful.

MF: What are your observations on the Canadian health care system?

MP: It probably provides better value for money in primary care and relatively low-tech care, but less value for new technology and people with really serious illnesses. In some ways it's rational not to spend as much if you're raising your money through taxes, because tax is an inefficient way to raise money. It's obviously a trade-off Canadians are willing to make to give low-income people better access to primary care. If I woke up tomorrow and found that the U.S. suddenly had the Canadian system, I'd think it was better than what we currently have, but I would prefer alternatives to either of those systems.

MF: What would your optimal health care system look like?

MP: The simplest explanation falls back on the fundamental mantra of economics: get health care to people where the marginal benefit is greater than the marginal cost, and not any more than that. In the U.S., the problem for low-income people is that the marginal benefit is often greater than the marginal cost, but they don't get care. I receive care where the marginal benefit is less than the marginal cost, and that's not efficient either. Knowing exactly the location of that point of equality is hard enough – much less designing a system that will consistently get you there.

MF: Do you think there's a role for private insurers in the Canadian system?


MP: I don't see how letting people spend their own money on their family's health care does any harm. At the moment, Canadians make that difficult for each other. Not that you should take my advice,

but I think you shouldn't make it so hard. There may be some benefit in allowing people to supplement what the government is willing to provide.

MF: Do you see a growing interest among business students to work in health care management?

MP: The dilemma is that if we want to get health care costs under control, it makes a career in health care less attractive. But it's still true that the average person's willingness to spend money on improving the quantity and quality of their life is high, so it seems to be the quintessential growth industry, even before you start factoring in demographics. In the 20 years I've been at Wharton, we've seen a doubling in the number of the MBA students who take a health care major, and I don't foresee that slowing down. Most students don't want to run a hospital; they are much more interested in the pharma and biotech industries. Drug companies, **Vioxx** notwithstanding, tend to be pretty well-managed. But profit opportunities are not always lined up with social needs here. Our students could add more value in the management of hospitals and health insurers, which tend to be rather poorly-managed. It's dirty work, but somebody's got to do it.

MF: What other health issues are on your radar?

MP: I was just on a panel looking at the future of **Medicare**, the one form of national health insurance we do have, which I will be eligible for when I'm 65. Fortunately, we almost always met on sunny days, because the future is really bleak. To some extent that's because Medicare has traditionally paid for the same technology that everybody gets. Looking at the trends in income and spending growth, it's clear it can't go on like that. It's also clear that nobody has a ghost of an idea of how to make the transition. It's a challenge that's going to be true around the world: the mismatch between what we'd like to be able to do and the resources generated by that portion of the population that's working to pay for it is going to get worse, rather than better, for almost every developed country. Some hard choices are going to have to be made. 

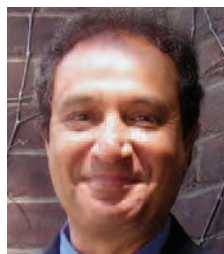
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One of the leading health care economists in the U.S., Mark Pauly is the Bendheim Professor of Health Care Systems, Business and Public Policy, Insurance and Risk Management, and Economics at the Wharton School, where he has twice chaired the Health Care Systems Department. He is the co-author of *Pooling Health Insurance Risks and Responsible Tax Credits for Health Insurance* (American Enterprise Institute Press, 1999).



Strengthening the Role of Genomics in Global Health



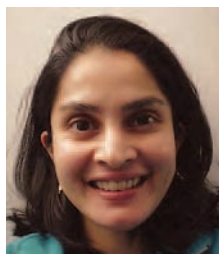
Peter Singer



Abdallah Daar



Halla Thorsteinsdóttir



Tara Acharya



Elizabeth Dowdeswell

The genomics revolution holds tremendous potential to improve health in developing countries and could help to reduce the developmental divide.

Development experts and policy makers agree that investment in science and technology is important for economic growth and development. A May 2004 report to **United Nations** Secretary-General **Kofi Annan** from the **InterAcademy Council on Science and Technology Capacity** supports the view that mobilization of sound scientific knowledge and evidence-based principles is needed to address critical world issues such as poverty, disease, and the effects of globalization and economic transformation. Annan himself has drawn attention to the importance of science capacity for global development, observing that, “no nation can afford to be without its own [science and technology] capacity.”

This capacity is essential if the world is to achieve the UN Millennium Development Goals (MDGs), which were adopted by all UN members in 2000 in a commitment to promote sustainable development and eliminate poverty in the world. As part of the Millennium Project, the UN established task forces to come up with strategies to help developing countries achieve the MDGs. One of these – the Task Force on Science, Technology, and Innovation – was created in recognition of the fact that many of the goals, especially those related to health and the environment, cannot be realized without a strong contribution from science and technology.

In a report titled *Genomics and Global Health*, we addressed how genomics and

related health biotechnologies can improve global health and contribute towards meeting the MDGs. The report shows how the world can unite in a global approach to meet these objectives and what steps developing countries themselves are taking to harness these technologies.

Genomics refers to the powerful new wave of health-related life sciences energized by the human genome project and the knowledge and tools it is spawning. It is a relatively new science that has tremendous potential to address health problems in developing countries.

The role of genomics in global health has been highlighted previously in the **World Health Organization’s** 2002 report, and explored further in a technology foresight exercise by the University of Toronto’s **Joint Centre for Bioethics**. Genomics-related technologies, including DNA sequencing and bioinformatics, were once considered expensive, exotic, and applicable only to wealthy nations, but this perception has been changing over the past few years. Through the efforts of companies and institutions worldwide, certain applications have become simpler and cheaper, to the point that they can start replacing older technologies that are currently used for health care in poorer nations. Such simple and easy-to-use tests are being developed for tuberculosis, hepatitis C, HIV, malaria, and other diseases (e.g., the OptiMAL

rapid malaria test.) Recombinant vaccines, a result of genetic engineering, promise to be safer, cheaper, and possibly easier to store and transport than traditional vaccines. Microorganisms with remarkable biochemical properties show promise of being able to reduce pollution, making water safer to drink.

In *Genomics and Global Health*, we argue that genomics knowledge should be considered a global public good. We need to establish a governance mechanism that fosters a balance between genomics knowledge as a public good and the application of this knowledge to foster private-sector interests. We propose the creation of a global partnership, the **Global Genomics Initiative (GGI)**, to promote genomics for health. We see this as a network of industry leaders, academics, concerned citizens, non-governmental organizations, and government officials, with strong representation from the developing world. The proposed GGI would highlight broad actions that should be taken at the global level to apply genomics to development issues in this new era of globalization. Participation in the GGI would strengthen capacity in biotechnology worldwide by increasing international and intersectoral exchange of know-how, and encouraging partnerships between countries.

The GGI could also facilitate the sharing of good practices. For example, Prime Minister **Paul Martin**, in his February

2004 reply to the Speech from the Throne, set a long-term target for Canada to devote five per cent of its research and development spending to the challenges of developing countries. If successfully implemented and replicated by other industrialized countries, this target could make a real difference to global health.

Our report concludes that the key actors are developing countries themselves. We explore how to put genomics and related technologies to work in developing countries within the next five to 10 years. Developing countries with the scientific capacity and institutional arrangements that allow creation, utilization, adaptation, and diffusion of genomics are well positioned to harness this new science for development. Learning is important for building genomics capacity, and is central to the creation of national systems of innovation (NSIs) in biotechnology in developing countries.

Today there are examples of strategies that some developing countries, including China, Cuba, Brazil, India, and South Africa, have followed to institute learning processes that are helping them to build NSIs in biotechnology. China seized the opportunity to take part in the **Human Genome Project** and quickly set up major institutions in genomics, such as the **Beijing Genomics Institute**, equipped with state-of-the-art sequencing facilities and computers. It has also followed a strategy of private-sector development in line with the NSI framework. Because of a government policy encouraging their return, Chinese expatriates are increasingly active in setting up small health biotechnology firms, bringing to the country knowledge from the world's major centres for genomics and related technologies.

The government in Cuba became interested in biotechnology in the early 1980s when the field was still in its infancy and created an interdisciplinary group, the **Biological Front**, to explore the possibilities of the technology for Cuba. It has continued to support biotechnology even during periods of economic hardship, set up institutions with research, development, and manufacturing facilities, and encouraged linkages between these institutions by setting up a biotechnology cluster, the **West Havana Scientific Pole**. Encouraging linkages has been a core policy of the govern-

ment in Cuba, and its health biotechnology development has benefited from the ties with a strong public health system.

Brazil has a relatively long history of supporting science and technology, and the country is increasingly focusing on genomics and related technologies. The lack of commercialization of its cutting-edge science and technology has been a weakness of the system in Brazil, but the country is now trying to overcome this by proposing an 'Innovation Law' that encourages cooperation between universities and the private sector.

Since its independence in 1947, India has followed a vision to improve the quality of life of its people by emphasizing science and technology. Limited resources and a patenting system that did not allow patenting of pharmaceutical products but only patenting of processes encouraged firms to come up with low-cost process innovation. This has resulted in health products such as the Shanvac-B hepatitis B vaccine, which is produced in India for a fraction of the cost in developed countries.

The South African government's **Biotechnology Advisory Committee** recognizes that successful commercialization of public-sector-supported research and development requires strong linkages within the NSI. The committee has recommended the creation of several Regional Innovation Centres to act as nuclei for the development of biotechnology platforms that can effectively launch new products and services. These strategies will provide important lessons for many other developing nations as they begin participating in the genomics revolution.

We came to six conclusions in our report. First, the development gap between developing countries and the industrialized world continues to grow. The international community is beginning to promote science and technology to reduce this gap. The genomics revolution holds tremendous potential to improve health in developing countries and, if harnessed appropriately, could help to reduce the development divide.

Second, genomics and related biotechnologies can help to achieve the UN MDGs. Fast, accurate molecular diagnostic devices, safer recombinant vaccines, and low-cost bioremediation tools are some examples of biotechnologies that can have an impact.

Third, genomics knowledge has the characteristics of a global public good. In order to harness the benefits of genomics for development, the developing world needs, above all, access to genomics knowledge. Fourth, the promotion of the science of genomics as a global public good and the encouragement of global knowledge flows could best be achieved through international partnerships. A GGI involving an international partnership of public and private entities from both developed and developing countries could catalyze genomics knowledge and learning worldwide.

Fifth, countries that have genomics capacity are best positioned to take advantage of the genomics revolution to meet their health needs. For the transfer of technologies to be effective and sustainable, it must be accompanied by transfer of science and knowledge. As well, receiving countries must have the capacity to absorb and use the technology.

And sixth, learning is important for building genomics capacity, and is central to the creation of NSIs in biotechnology in developing countries. These countries can strengthen the building blocks of the NSI framework by doing the following: re-energizing academic institutions and public-sector research to strengthen their science base; training people and building human capital to use, adapt, and innovate biotechnologies; encouraging regional and international cooperation to create new channels for knowledge exchange and trade; improving the policy environment (including intellectual property laws and regulation) to encourage the building of capacity; and fostering the growth of the private sector, encouraging it to address local health needs, and strengthening linkages between public and private sectors to create new biotechnology goods and services. ■

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Genomics and Global Health, a report of the Science and Technology Task Force of the United Nations Millennium Project, was written by **Peter Singer**, the Sun Life Financial chair and director of the Joint Centre for Bioethics and professor of medicine; **Abdallah Daar**, director of ethics and policy at the McLaughlin Centre for Molecular Medicine and professor of public health sciences and surgery; **Halla Thorsteinsdóttir**, assistant professor, Canadian Program on Genomics and Global Health; **Elizabeth Dowdeswell**, visiting professor in the Joint Centre for Bioethics and the Department of Public Health Sciences; and research associate **Tara Acharya**, all at the University of Toronto. The full report is available online at www.unesco.org/wfeo/genomics.pdf

Questions for: **Brian Golden**

Front and Centre on the Health Sector's Radar Screen



Rotman Professor Brian Golden talks about an emerging area of study at the Rotman School and the opportunities it is creating for the next generation of MBA students.

Matthew Fox: How did you become focused on the health care sector?

Brian Golden: I began my graduate work in 1984 at Northwestern's Kellogg School of Management. I was doing well, but dropped out at the end of the first year, coming to the conclusion that there was a lot of well-regarded academic research that had virtually no impact on any real organization or anyone's life. I vowed that I wouldn't come back to graduate school unless I felt that I could do something that was going to have an impact. Purely by chance, I learned that a newly-recruited senior faculty member at Kellogg, **Steve Shortell** [now dean of UC Berkeley's School of Public Health], was one of the world's leading health service researchers. It was an area I knew little about, but was obviously one in which good research could have a great impact. So, I called Steve and he agreed to be my supervisor in the summer of 1985. Since then virtually all of my research has been in the health sector. I spent the first ten years of my career doing research in the U.S. and came to Canada in 1996, with a great deal of optimism about the Canadian health care system.

MF: Was your optimism well-founded?

BG: I learned quickly to distinguish between what is possible and what simply is. One advantage in the Canadian health care system – and I should be clear there is no 'Canadian' system, but ten provinces, all with very different systems – is that every province has the ability to coordinate care. One reason the U.S. has such excessive costs and excess capacity of health care professionals is

because they don't have the ability, in part because of anti-trust laws, to coordinate the allocation of resources to where they could best be used. Each province has the obligation to do that. For example, in the last year and a half, the Ontario government has supported the creation of Local Health Integration Networks [LHINs], variants of which are called 'health regions' in other provinces. The Rotman School was involved in the early leadership development of the 14 LHIN CEOs. The Province now has the ability to allocate resources, measure performance and plan human resources within identifiable regions, all of which was very difficult before the creation of LHIN model, because there were too many organizations reporting directly to the **Ontario Ministry of Health and Long-Term Care**. I believe that the Ontario government is doing the courageous thing by investing in LHINs, even when the full benefits of the transformation won't be realized for five or ten years. At Rotman, with our research and teaching, we need to help educate voters and constituents to see the value of these long-term investments.

MF: Why has the Rotman School committed itself so strongly to the health sector?

BG: It's the biggest industry in North America, representing \$130-billion in expenditures in Canada: \$45-billion from the private sector, the remainder from the public. We've got hospitals a kilometre from here with annual budgets of \$500-million to nearly \$1-billion. Certainly, they have different objectives than traditional private sector commercial enterprises, but virtually all the business principles that we

teach our students apply to those organizations. Secondly, we are nearing a point where costs will far outstrip our ability to provide health care for Canadians. We also hear from alums and friends of the School that we need to introduce new ideas into the leadership of health care organizations.

MF: What is the focus of the School's Centre for Health Sector Strategy, and as its inaugural director, what are your aspirations for it?

BG: The focus is to conduct actionable knowledge that can be used by policy-makers and health care leaders in the public and private sectors. More specifically, there are a variety of research areas that faculty are interested in: how do we help create a sense of accountability in the health care system? How do we help organizations develop and share new knowledge? How do we help support the culture of acknowledgement and respect for consumer preferences? What is the effect of the increasing private sector on access to health care services for Canadians? Is the health care system a competitive advantage for Canada? We can't look entirely to other jurisdictions, because there are no jurisdictions in the world that are organized the way we are. Ideology doesn't answer these questions, high-quality research does. We need to equip our leaders of organizations and government with the evidence so they can stand up, say and do what's right, and keep their jobs.

MF: Earlier this year the Rotman School announced a \$500,000 gift from MDS Inc. to fund research, in conjunction with

Princess Margaret Hospital, on a patient-centred health care delivery model for cancer patients. Can you briefly describe this project?

BG: It is an illustration of the kind of work that the Centre was created to do. One of my goals is to bring faculty together from different disciplines. In this case, we have faculty from operations research, marketing, and strategic management working on the question of how do we improve the cancer patient's experience? It's an illustration of integrative thinking. We know that the patient experience in virtually every health care organization can be a higher quality experience, less costly, or both. We also know that this kind of problem can't be analysed through a marketing lens or a management lens. I think we'll look back on this project as a model for the kind of work that can emerge from a school of management that might not come from anywhere else.

MF: The Rotman School's MBA program recently launched a major in health sector management. Do you sense a growing interest in the field among students?

BG: We announced the major last spring and we were pleasantly shocked by the interest. What's important is that these students chose to come to Rotman even before we announced our health care major, so we know with certainty that next year's class will have even greater interest. We just introduced a core course in health sector strategy and organization [see below for a partial list of guest speakers], which also accepts students from the Faculty of Medicine and the Faculty of Applied Science and Engineering. We have more than 70 students in the student-organized Health Care and Biotechnology Association. Our strong hope is that many will take leadership positions in health care and the life sciences, and students are now realizing that there are many ways they can contribute to these industries including consulting, marketing, government, venture capital, and investment banking.

MF: With few exceptions, the financial rewards aren't as great for those seeking a

career in public health care delivery. Is it a barrier for MBA graduates because it doesn't match private sector compensation?


BG: There are some short-term obstacles for graduates who are considering a career in the public system. They make a substantial investment in their education and, in the short-term, some have debt obligations that are very front and centre. I'd love to see the kind of [scholarships and awards] support found in the U.S. health system which makes it easier for recent medical school graduates to work in rural areas. We have an analogous situation with business students who would like to be leaders in the public sector, whether on the delivery side or in government, and we need to get the same high-calibre graduates entering the public sector that we do entering the private sector.

MF: How does your involvement in the Rotman School's custom programs for health executives inform your teaching at the MBA level?

BG: The vast majority of textbooks and cases come out of the U.S and our health system is vastly different, so our challenge was to develop a Canadian-based health sector MBA major. Our industry contacts were instrumental in accessing a lot of this material. They've also been exceptionally generous with their time and are involved in our courses. **Ron Yamada** [co-founder of **MDS Inc.**] and **John Abele** [co-founder of **Boston Scientific**] are part of Rotman Professor **Maryann Feldman's** course ["Strategic Issues in Life Sciences Commercialization"]. In my class, "Health Sector Strategy and Organization", I have **Joe Mapa** (MBA '00), president and CEO of Mount Sinai Hospital, **Hugh MacLeod**, Ontario's associate deputy minister of health, and **Shelly Jamieson**, president of **Extendicare Canada**, among others, as guest speakers. All these individuals are becoming very good friends of the School. Industry leaders also help us to identify research opportunities, real questions that they need help answering.

MF: What synergies are created with your cross-appointment to the Faculty of

Medicine's Department of Health Policy, Management and Evaluation [HPME], and your involvement [as board chair] in the Institute for Clinical Evaluative Sciences [ICES]?

BG: The relationship with HPME is very important because of the collaborative research opportunities. I am currently working with three of their faculty on different projects. Secondly, we've recently started to take advantage of being at a great University that for too many years was siloed. Rotman students are now able to take courses in the Faculty of Medicine, particularly a wonderful course on health policy; and some students in my course come from the Masters and PhD programs at HPME. We are partners on an executive program for **Sunnybrook and Women's College Health Sciences Centre**, and we believe it's a far stronger program because we are able to take advantage of the University's collective resources. The relationship with the **Institute for Clinical Evaluative Sciences**, a world-class research institute, is also important. Our faculty, in part because of my connection with ICES, have started collaborating with their researchers. [Professor of Operations Management and Statistics] **Uli Menzefricke**, [Assistant Professor of Marketing] **Andrew Ching** and I are working with one of their senior researchers, looking at the effect of marketing expenditures on physician decisions to prescribe a particular medication when several are pharmacologically equivalent – but not equally expensive. The opportunities to expose my Rotman colleagues to ICES' world-class research advance the mission of the Centre very quickly. Because ICES gets substantial funding from the government and helps inform policy, our research has another way of being impactful. To be honest, ten years ago we weren't on the health sector radar screen: but we are front and centre in everyone's mind now. 

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Brian Golden holds the Sandra Rotman Chair in Health Sector Strategy at the University of Toronto and the University Health Network (UHN), and is founding director of the Centre for Health Sector Strategy at the Rotman School. He is a professor of Strategic Management at the Rotman School, with a joint appointment in the Faculty of Medicine's Department of Health Policy, Management and Evaluation. He is board chair of the Institute of Clinical Evaluative Sciences.

2005 Rotman Distinguished Business Alumni Award: **John Watson (MBA '67)**

Founding Partner,
Sprucegrove Investment Management Ltd.



The Rotman School's Distinguished Business Alumni Award recognizes outstanding achievements of alumni who have impacted their industry and the wider community. This year's winner is no exception: **John Watson**, born in 1943 in Toronto, graduated from Victoria College (BCom '66). A year later, having completed his MBA at the University of Toronto's then-named School of Business, he joined **Confederation Life**, assuming roles of increasing responsibility until his departure in 1993 when he was president and CEO of **Confed Investment Counselling Limited**. Later that year, Watson co-founded **Sprucegrove Investment Management Ltd.** Today, the firm is a top global equity manager focusing on managing foreign equities for institutional clients throughout North America.

A generous philanthropist, John Watson's first major gift to the Rotman School in 1996 established the **Gordon McKay Watson Entrance Award**, honouring his father. In 2003, a \$3-million donation created the **John H. Watson Chair in Value Investing**, currently held by **Prof. Eric Kirzner**.

As told to Matthew Fox.

My dad played a significant role in my investment thinking, because he was a value investor long before I heard of the term. He invested in **TransCanada Pipelines Limited**, the **Toronto-Dominion Bank**, **Consumers' Gas**, and **Bell Canada**, solid businesses at a time when the country was just beginning to expand again after World War II. He hung on for the long term, he did really well, and he impressed me. When I was a kid, he gave me a few share certificates and, even then, I used to track the stock prices in the daily newspaper. Dad was a lumber man. He along with my grandfather started **Fairbank Lumber and Coal Co.** He was 'Mr. Integrity'. Business discussion was part of our daily menu at home. Dad made a very material impression on my business and investing philosophy.

I also had an uncle named **Crawford Gould**, who wasn't a blood uncle, but he and his wife were my mother and father's best friends. He ran **Gould's Drug Store** near Dufferin and Eglinton, in the village of Fairbank, where I grew up. Doc Gould had a great head for business and he ended up as president of **Drug Trading**, a large umbrella buying group for independent drug stores. He was always very interested in what I was doing and that is important to

a young man. He talked business with me a lot and next to my father he had the most material impact on my business career. The other individual who had a big influence on me was **Warren Hurst**. A Harvard MBA graduate and executive vice president of **Consumers' Gas**, he was on the board of directors of my father's company. His father had been auditor of Fairbank Lumber in the early part of the last century. Back in those

old building called Baldwin House [since restored and renamed Cumberland House, at 33 St. George St.]. It was a small, intimate school. We wrote our exams in the Drill Hall [today part of Woodsworth College]. Because I already had my BCom, I was able to obtain my MBA in one year. Being a young man and wanting to get out into the working world in an urgent way, I thought it was a great option. But lo and behold, when

While I'm here on this earth and of sound mind, I want to help others to further the education of young people. Money for money's sake is not a particularly noble goal.

days, you could be an auditor of a company and own shares. When his father died, he passed his shares onto his kids. Warren had a terrific interest in and excitement about business, and he ended up on my dad's board of directors. We became great friends over the years, and he was a wonderful mentor.

My MBA days were terrific. I remember the business school was in a wonderful,

I actually got into the program, I loved it. I distinctly remember having two great profs: **Jamie Poapst** who taught finance and **Bill Waters** in investments. Without question, they had a material impact on my career. It turned out Jamie Poapst lived in Willowdale and I lived in Thornhill, but I had a car and he took public transportation, so quite often I gave him a ride home. Some of my good

friends suggested that was how I got my 'A'.

I had a 26-year career with **Confederation Life Insurance Company**, and those years were terrific. In the early days, I was fortunate to work with **Ron Malone**, who was the **Ben Graham** of Confederation Life, and he brought home the importance of sound security analysis. During the second year of my CFA program in 1971, I had the good fortune to study the 1962 version (original version 1934) of the wonderful text *Security Analysis – Principles and Techniques* by Benjamin Graham and co-authors **David Dodd**, **Sidney Cottle** and **Charles Tatham**. It was the best book on investing that I have ever read and coupled with Ron's teachings it cemented these wonderful investment principles most solidly in my mind. Confederation Life gave us great training and allowed us to hone our investment management skills. They also provided the financial support to undertake the development of a global product, back in the early 1980s, when few others were doing it. That very credible international product later became the basis of our success at Sprucegrove, so we owe Confed a tremendous amount: we had the training, the resources, the people, and the product.

I never thought I'd retire from any other place, but there was a change in senior management at Confederation Life and the new CEO and I were not comfortable with each other, so I quit. Leaving was the saddest day of my business life up to that point. Two of my colleagues, **Peter Clark** and **Ian Fyfe** (both of whom also left shortly thereafter), and I started **Sprucegrove Investment Management Ltd.** in 1993 because we were too young and too poor to retire. I've been absolutely blessed in having two of the most terrific partners you could ever have in Clark and Fyfe. If you're going to start a business, make sure you go into business with the right people. Not only do I go back with these guys a long time, but they are incredibly capable.

At Sprucegrove, Confed quickly became our number one client. In August 1994, Confed went out of business and that created its own set of challenges because whenever your biggest client goes out of business, it's not a good thing. One of the luckiest things we did at Sprucegrove was

we hired **KPMG** as our auditor. KPMG, as it turned out, became the liquidator of Confederation Life and because of our relationship, we were able to meet with the liquidator earlier than would otherwise have been the case. KPMG agreed to recommend Sprucegrove to clients in Confed's International pool (which we managed) and we paid a certain number of basis points for the next couple of years, assuming the client came over and stayed. Every client except one came over. We started with about \$900 million and we've built that up to \$19 billion over the subsequent 12 years. We were very fortunate. It was a time when global investing was being seriously considered after being constrained within Canada for many years. We were also fortunate that we were able to build half of our business in the United States, where they don't have any foreign constraints; they don't ask you where you've come from, they just ask you what you can do. Sprucegrove has been a great love, and I can't imagine doing anything other than coming here to work each day.

While I'm here on this earth and of sound mind, I want to help others to further the education of young people. Money for money's sake is not a particularly noble goal. It has never been the money that's motivated me; it has always been the process. I've been blessed because Sprucegrove has been the great enabler; the company's success has allowed me to have excess capital. It's some of that excess capital that I was absolutely delighted to reinvest in the Rotman

School. I cannot think of a better way to contribute to society than to provide young people with an education in the world of investing. I was trying to instill some of those great principles of investing with that chair [in value investing].

Four years ago, I indicated to my partners that I'd retire at age 65 in November 2008 and step down from my titles when I hit 61 in 2004, which I did. I remain very involved in the research process and working with clients. Our big challenge will be to successfully pass the firm to the next generation. We have just taken a giant first step in this direction. One of my clients said recently, 'This is the longest goodbye I've ever seen', but it's really good, long-range, succession planning.

Dead or alive, who would be in my ultimate golf foursome? That's an interesting question. It isn't anybody famous, I'll tell you that. It would be my good friend **Jeffrey Maybee** with whom I have played hockey since age 10 and golf since age 13, my good friend **Jim Dadson** (MBA '67), with whom I graduated from Rotman, and **Dave Clark**, with whom I've been playing golf for 25 years and who is also my legal counsel. An honourable mention must go to my wife **Josie**, who's a very enthusiastic golfer, and not particularly modest about her game, and my son **Andrew**, who is always keen to lay a licking on the old man. We'd play at **Thornhill Country Club**. We just moved within three minutes of the first tee. [Pointing to his temple] Thinking ahead! ☐



Photo: Matthew Fox

Corporate Governance Expert Appointed to Lead MBA Programs at the Rotman School

An expert in corporate governance and sports marketing was recently appointed assistant dean and executive director of MBA programs at the Rotman School of Management. **Richard Powers** will oversee all student recruitment, administration, and career services for the School's Full-Time, Part-Time, and combined MBA programs.

"Richard brings over 12 years of teaching and administrative experience at the University to his new position, as well as a wealth of experience in the not-for-profit sector," says Prof. **Jim Fisher**, associate dean, MBA Programs. "I look forward to working with him to ensure that our MBA programs continue to grow and prosper."

Powers is currently a senior lecturer teaching in the Rotman School's MBA,

EMBA and Executive Programs and in the University's undergraduate Commerce and Management programs. He serves as the academic director of the Toronto offering of the **Directors Education Program** presented in partnership with the **ICD Corporate Governance College**. Previously, he was the vice chair of the Division of Management at the University of Toronto at Scarborough. A recipient of numerous teaching awards, his areas of expertise include business and corporate law, corporate governance, and sports marketing. He also currently serves on the Board of Directors of **Rugby Canada** and has volunteered for several other non-profit organizations.

by Ken McGuffin



Richard Powers

Systems Need Refreshing: Welch

The School year kicked off on a high note when 900 Rotman students and guests crammed into the Fleck Atrium and adjacent classrooms to listen to **Jack Welch**, legendary former chairman and CEO of **General Electric Co.**, in conversation with Dean **Roger Martin** in the ongoing *Rotman Integrative Thinking Seminar Series* on September 12.

Welch told the crowd that when he became GE's eighth chairman and CEO in 1981, "it was time to change gears, because the Japanese were eating our lunch." In the beginning, he only had about a third of the company supporting him, he said. "Less than that," shouted one of his GE colleagues from the audience.

Welch implemented systems that were vastly different from industry standards of the time. "The annual budget review process is the worst thing that happens in the modern organization," he says. "It's nothing but an internal negotiation – it has nothing to do with competitiveness." Under Welch, each GE business had to measure itself against just two things: the previous year's results, and performance against its competitors. "Our meetings went from ten-hour negotiating sessions to 'dreaming sessions', where innovative ideas could be exchanged."

Bonuses were also approached differently. "In 1996, our plastics business had a booming year; they were up 24 per cent – less than their competitors, but still a good



Photo: Ken McGuffin

Roger Martin and Jack Welch

year." Meanwhile, the appliance business had a flat year, "but performed better than its competition, and held its own against the previous year. We gave out bigger bonuses to our appliance people, and we announced this at our annual executive conference in

International Centre for Pension Management Launched at Rotman

A new research centre at the Rotman School will delve into the timely issue of pension funds. The **Rotman International Centre for Pension Management** (ICPM) will raise the School's profile in the pension fund community by becoming a leading exchange of best practices in global pension management as well as a source of dialogue in pension fund legislation and regulation. In addition, ICPM will look for opportunities to raise pensions-related content in undergraduate, graduate, and executive programs at the Rotman School and other education-oriented forums.

Keith Ambachtsheer, a pension fund industry veteran based in Toronto, is the founding director of ICPM and has also been appointed as an adjunct professor of Finance at the Rotman School.

"The Rotman ICPM is an international and multidisciplinary entity that will bring real-world pension experts together with leading academics," says Prof. Ambachtsheer,

who notes ICPM is already working with pension funds and research centres from Canada, the U.S., the Netherlands, Norway, the United Kingdom, Australia, and New Zealand.

The Centre's advisory board of professionals from the academic and pension fund worlds will be chaired by Rotman Adjunct Professor **Brendan Calder**. Other board members include:

- **Rob Bauer**, professor of Finance, University of Maastricht, and director of research, ABP Investments (The Netherlands);
- **Robert Bertram**, executive vice president of investments, Ontario Teachers' Pension Plan;
- **Laurence Booth**, CIT Chair in Structured Finance, and professor of Finance, Rotman School;
- **Richard Guay**, executive vice president, risk management and depositors' accounts management, Caisse de dépôt et placement du Québec; and



Keith Ambachtsheer

- **Donald Raymond**, vice president, public market investments, Canada Pension Plan Investment Board.

Further details are available online at: www.rotman.utoronto.ca/icpm.

by Ken McGuffin

Boca Raton. Once you set an example like that, it's very clear what's important."

Early on, Welch divested any GE business that wasn't number one or two in its industry. "In the beginning, it was helpful to give people a roadmap," he says. "We were carrying some businesses that had been losing money for 20 years, and the message was clear: fix it, or it's gone." GE was soon transformed from 350 companies into an agile giant with only 12 core businesses. But like many good ideas, it was carried too far, he says.

"Bureaucracy beats every system. If you tell people, 'you've got to be number one or two' long enough, here's what happens: the market for that business just

keeps getting narrower. Soon everybody had a 40 per cent share – of nothing, basically. In the end, we had people saying they were number one or two 'in the market for brown chairs with curved arms that were this big'." Welch shifted gears drastically, making 15 per cent the maximum share any business could have. "All these businesses had to redefine their markets; and suddenly, they saw opportunities everywhere." Constantly refreshing like this is key, says Welch, because "systems get tired."

During his 20-year reign – during which GE's market capitalization increased by an astounding \$400 billion – Welch's core competence was developing people, not products, he says, adding that the idea

of a CEO single-handedly running a company is "a joke."

"Many MBAs think they have all the answers," he says, "but the truth is, it's not about you: it's about the team you build once you get promoted in two or three years." Build a great team, and you will succeed, he says. As for career advice, Welch told the crowd that consulting is "a great place to go to see the world, learn about a variety of businesses and leverage that into a damn good position with one of your clients. I'd never say, 'don't go into consulting': just don't stay there." Biotech is the field to get into, he says. "If I were a young person, I would get as close to it as possible."

by Karen Christensen



Taddy Blecher

Photo: Ken McGuffin

Designing South Africa's Future

The lingering after-effects of Apartheid were laid bare by **Taddy Blecher** in the seventh installment of the *Rotman Corporate Citizenship Speaker Series* in September. It's no surprise that South Africa is rife with unemployment and wasted potential, he says. "No one is going to start a tech company if they've never touched a computer." Blecher is CEO of **CIDA City Campus** in Johannesburg – Africa's first tuition-free university-level institution.

"[Before Apartheid ended], Math had been removed entirely from the school curriculum, so it was virtually impossible for anyone to become a scientist or an engineer." This environment created a 'lost generation', he says, but if Blecher has anything to do with it, today's African youth will turn the pattern on its head.

Prior to joining the **Community and Individual Development Association** (CIDA) in 1997, Blecher worked as a highly-successful consultant with **Monitor Company**. When his father passed away suddenly, he had an epiphany, and decided to change his professional focus. Along with three CIDA colleagues, he ran a project training school children in self-development. "Their grades improved dramatically – but they were still stuck in a poverty spiral, with no money to further their education and no way to find work." That's when the idea for CIDA City Campus was born.

CIDA selects top pupils from throughout Africa to complete a virtually free, four-year accredited business degree in Johannesburg. Taught mostly by local business people, the school offers 'market-

Why Companies Don't Do What They Know

Today's business landscape is cluttered with organizations that lack an action orientation, according to Stanford's Dee Professor of Organizational Behaviour **Jeffrey Pfeffer**. "There seems to be a belief that – with enough effort – planning, analysis and meetings can actually solve problems. But in most cases, very little actually gets implemented," says the author of *The Knowing-Doing Gap: How Smart Companies Turn Knowledge Into Action*. Pfeffer spoke in the 45th installment of the *Rotman Integrative Thinking Seminar Series* on October 24.

"Strategy is important, of course – but execution is what's critical," says Pfeffer. Why don't companies do what they know? "Many things get in the way," says Pfeffer: "A lack of courage or a fear of being different; pressure from the financial community; and pressure from peers in the industry, to name a few."

There are too many measures out there, and most are measuring the wrong things, he says. "True focus requires very few, key measures; but organizations often measure what is easy rather than what is

important. They measure outcomes instead of processes." Too many organizations are committed to the past, he says, and doing things 'the way they've always been done' seems safer. "For instance, if a product isn't selling well? Well, we must just need more advertising!"

Having things get worse before better is the only path to real change, says Pfeffer, but most firms choose better before worse. How to overcome all this? "Promote action. Put people in senior positions who actually know and do the organization's work. Be a culture that values simplicity and common sense." In many cases, he says, the answer is sitting right in front of people, but it looks way too easy – so they say to themselves, 'it can't possibly be that easy'. "For instance, I have some ideas for the airline industry, and they are pretty simple: fly your planes on time, and stop abusing your customers." But simplicity is feared, says Pfeffer.

"To have different results, you have to do different things; and to do different things, you have to *think* differently." Pfeffer encouraged the crowd to "challenge your

mental models, and your assumptions about why things are the way they are. And refuse to accept trade offs."

"The only way you get much better (or worse) is by finding your own path, and that takes courage," he says. "It's the same in the business school marketplace. The Rotman school has taken a huge leap by choosing to do something different, and carrying it out." In his presentation, Pfeffer was highly complimentary to the School. "What [Dean] Roger [Martin] has done at the Rotman School is both exceptional and extraordinary," he said.

by Karen Christensen



Photo: Ken McGuffin

Jeffrey Pfeffer

driven learning'. "We get the top accounting, consulting and law firms to teach our students what they need to know at that moment. If IT companies need people with JAVA skills, we teach JAVA." CIDA accepted its first cohort of students in 2000. CIDA receives so many applications that they have to turn away more than 80 per cent of applicants, he says.

Students pay a nominal fee – about CAD \$70 per year – in return for their education; but they must return to their villages on school breaks to share their learnings about everything from money management to AIDS prevention. "They become role models in their society," says Blecher.

A random sampling of CIDA students showed 75 per cent were HIV-positive. "AIDS is a disease of poverty," says Blecher, "and Sub-

Saharan Africa has 24 of the 26 poorest countries in the world. The facts speak for themselves: people who are employed are eight times less likely to have HIV."

CIDA is no 'free ride' for students. "Our day begins at 8 am with quiet meditation, and then our students attend classes for eight or nine hours, including weekends." They also work hard, running virtually all aspects of the campus, from administrative work to computer maintenance and cooking. "This gives them a sense of ownership of the place, while also lowering the costs of running it."

CIDA runs on virtually no money, says Blecher. **Investec**, the pivotal founding partner, donated its former head office building in Johannesburg and contributes to operating costs. Other significant

sponsors include Monitor, **KPMG**, **PricewaterhouseCoopers**, **Microsoft** (which donated much-needed computers) and **Deutsche Bank**.

Blecher believes that "there is hope for Africa's economy, in areas like tourism and agriculture – mass-scale organic farming, for instance." CIDA graduates – 1,800 since 2000 – are now collectively earning more than \$80 million per year, he says proudly. Blecher hopes to expand into Uganda, Zambia, and Mozambique in the next four or five years. "Our goal is to build a 'perpetual motion machine' – a learning collective where costs are removed completely. That's what we're working towards." The *Rotman Corporate Citizenship Speaker Series* is presented by the Rotman School's **AIC Institute for Corporate Citizenship**.

by Karen Christensen

Rotman Economist Appointed to Order of Canada



Edward Safarian and wife Joan

Professor Emeritus **Edward Safarian** has been appointed a member of the Order of Canada. His appointment was announced in September by Her Excellency the Right Honourable **Adrienne Clarkson**, then-Governor General of Canada, in recognition of Prof. Safarian's contributions to the social sciences, which include research on multinational enterprises, international trade and investment, Canadian federalism, the Great Depression of the 1930s, and public policy.

"Ed Safarian is a Canadian icon. He is an accomplished scholar with international recognition and a wonderful human being," says Rotman Prof. **Peter Pauly**, associate dean, research and academic resources. "He truly is one of the few renaissance men among us, and the Rotman School is extremely proud of his long affiliation with our School."

The Order of Canada was established in 1967 to recognize outstanding achieve-

ment and service in various fields of human endeavour. It is Canada's highest honour for lifetime achievement. Three different levels of membership honour people whose accomplishments vary in degree and scope. Appointments are made on the recommendation of an advisory council, chaired by the Chief Justice of Canada.

Prof. Safarian received his BA in Political Economy from UofT in 1946 and a PhD in Economics from the University of California, Berkeley, in 1956. He has served as president of the **Canadian Economics Association** (1977-78) and has been a Fellow of the **Royal Society of Canada** since 1973. He was a professor of Economics at the University of Saskatchewan from 1956 to 1966; an Economics professor at the University of Toronto since 1966 and of Business Economics since 1989; and was also Dean of the University's School of Graduate Studies from 1971 to 1976.

The Future is Struggling to be Born: Webber

A growing gap exists between ‘official reality’ – what we see in the newspapers – and the reality that’s struggling to be born, says **Alan Webber**, co-founder of *Fast Company* magazine. “There is a ‘foot race to the future’ being waged between those holding onto status quo and those who are innovating,” he says. Weber was featured in the *Rotman Business Design Speaker Series* on September 29.

“Increasingly, we are seeing people like **Taddy Blecher** (see his story, page 84) reinventing a sense of what is possible. They are pushing the envelope of possibility, and reinventing their fields.” At the same time, there is an enormous installed base of institutional structures. “It’s a struggle between the people shattering assumptions and those whose job it is to keep things the way they are.”

Webber left *Fast Company* two years ago and moved to Santa Fe, New Mexico, where he has been pursuing “a personal learning journey,” travelling to places like Brazil, Japan, Austria, Sweden, and Copenhagen to meet with innovators and thought leaders. There are five important revolutions going on in the world, he says, and the future lies in their interactions.

The first is a combination of politics, religion and culture. “The battle lies in how we engage these three things, and how they blend together” says Weber. The second is scientific advances in biotechnology and nanotechnology, “which are altering our sense of how nature works. For instance, what does it mean when we can start life from scratch?” Third is art and freedom of expression. “Today, everyone can be an artist: you can compose your own music and distribute it on the Web; want to be a writer? Start a blog.” When the opportunities for self-expression are that huge, he says, “art becomes an innate right.” The fourth revolution is a democratization of the search for meaning. “Everybody is asking, ‘what can I do with my life that has meaning?’” The fifth is a mass focus on sustainability; “How do you create value in today’s world, and a sustainable future?”

One hundred years ago, Weber says, “we had **Picasso, Matisse, Freud** and **James Joyce** doing seemingly ‘crazy’ things – teaching people to see with new eyes. These kinds of people are still walking the earth – I’ve met some of them.” There is an emergence of people who see the world with very different eyes, says

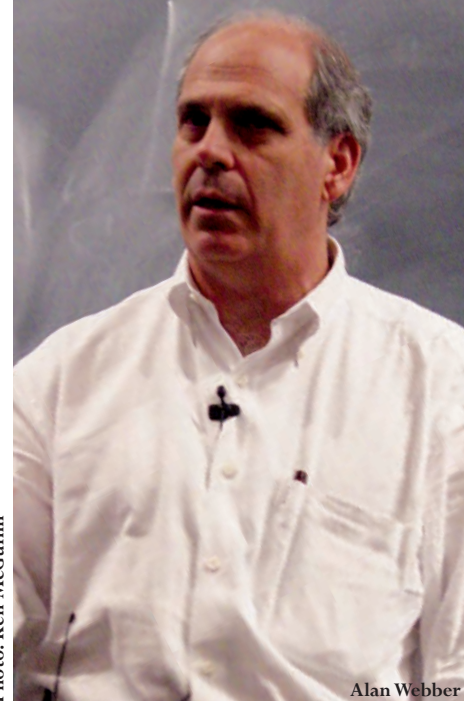


Photo: Ken McGuffin

Alan Webber

Weber, and their sense of how reality can be formed and shaped is entirely new. “As a smart person once said, ‘the questions you ask determine the answers you get’. Asking the right questions is key. And as the Internet proves, none of us is as smart as all of us.”

Key skills to succeed in the future? “Social intelligence – a capacity to know more than anyone else about what’s happening in the world; and speed is still a ‘killer app’. Hook these two up, and you’ve got a phenomenal opportunity to create the future.”

by Karen Christensen

Tapscott and Carr Duke IT Out

When *Harvard Business Review* published an article by former editor **Nicholas Carr** titled, “Information Technology (‘IT’) Doesn’t Matter,” it triggered a heated debate over the role of IT in business and led to a best-selling book for Carr. On October 31, the Rotman School hosted a lively debate and Webcast, sponsored by **Hewlett-Packard (Canada) Co.** and **Canadian Business**, on the future role of information technology as a tool for competitive advantage. Countering Carr with the perspective that IT very much does matter was Rotman Adjunct Professor **Don Tapscott**, the president of **New Paradigm Learning Corp.** and a best-

selling author in his own right (Digital Capital, The Naked Corporation). A sampling of the debate – Carr: “Companies tend to invest much more than they have to on IT, and take on much more risk, only to find ultimately, that they’re disappointed in the ability of IT to give them a competitive advantage and in the returns they get from their investment.” Tapscott: “If you look at the 43 industries [I have] studied, the revenue and competitiveness leaders in each of those sectors tend to be the ones known for their effective use of superior technology and technology-enabled business design.” And the debate continues.

by Matthew Fox



Photo: Matthew Fox

Nicholas Carr and Don Tapscott

Bringing Science to Life@Rotman

Universities and firms are working together more closely than ever before to transform biomedical research into products and practices that benefit human health,” says Rotman Professor **Maryann Feldman**, the Jeffrey S. Skoll Chair in Technical Innovation and Entrepreneurship. “These relationships are mediated by a variety of knowledge transfer mechanisms, including partnership agreements, technology transfer offices, incubator facilities, and licensing agreements. Individual countries, regions, and even universities have employed some or all of these mechanisms with varying degrees of success.”

Prof. Feldman organized a conference last spring to compare international strategies to promote effective knowledge transfer between universities and firms and prompt an informed discussion of available policy options. Featuring leading academics from around the world, **Bringing Science to Life** examined the new legal,

economic, and social challenges that policy makers and administrators face when implementing these strategies.

“We chose to focus on biomedical research for three reasons,” says Prof. Feldman. “First, biomedical and bioscience research is the single-largest funding recipient of government worldwide.” This raises questions about the returns to public funding and the ways of capturing downstream value from commercialization, she says. “Second, as universities have been called on to change their traditional focus of creating and disseminating knowledge through research and teaching to commercializing research, there has been the greatest potential and the most directed focus on the biomedical field.”

The conference featured participants from Harvard, Duke, the University of Technology in Sydney, United Nations University (The Netherlands), Universidad de la Republica (Uruguay), University of Cape

Photo: John Hryniuk



Maryann Feldman

Town, Lund University (Sweden), National University of Singapore, University of Tokyo, and the Indian Institute of Foreign Trade.

With so much experimentation going on around the globe, effectively disseminating new information is valuable for all nations, says Feldman. “Biomedical research and the resulting products are important to the health of the world’s population. There are myriad diseases for which drug development is not being funded by the pharmaceutical industry, but which have great possibility for improving health and well-being; this could form the basis for viable commercialization by small local companies.”

by Karen Christensen

In Memoriam – Warren Main (1916-2005)

Oscar Warren Main, Professor of Economics and Director of the University of Toronto’s School of Business from 1960 to 1971, passed away on June 26, 2005.

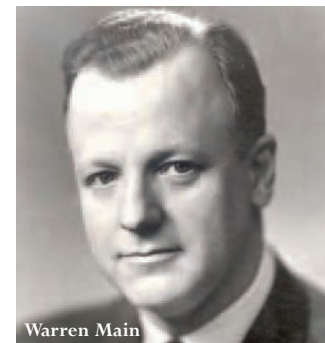
Dr. Main joined UofT’s Institute of Business Administration in 1953 from the University of Saskatchewan. In 1960, the year he was appointed its director, the Institute was renamed the School of Business, evening part-time classes were eliminated (due to a lack of resources), and for the first time, graduate students earned MBA degrees, rather than masters of commerce degrees.

“One of the things most interesting about Dr. Main’s involvement was his dedication to making the School of Business a meaningful part of the University,” said Professor Emeritus **William Waters**, who joined the faculty in 1964 and taught finance and business economics for 35 years. “The University as a body was indifferent at best, and subtly hostile at worst, to having a professional faculty like the School of Business in its midst. To enable the School to grow in that context meant that Dr. Main was always pushing the stone uphill to get the necessary budget and make the place viable.”

In his annual reports to the University’s president, Main referred to his resource challenges with candour. “Again, ad hoc arrangements saved the School from the acute embarrassment of providing third-rate computer-based education,” he wrote in his submission for 1969-70. “It is to be hoped that more permanent arrangements can be made in the future to meet these needs. The enrolment of 250 full-time and 300 part-time graduate students demands more than the meagre budget provides.”

Main said “the amount of research and the amount of writing was abysmally low” in his early years at the School of Business. In the 1950s, Main was one of only two Institute faculty members with a doctorate. During his term as director, he increased the number of full-time academic staff to 27 from 12. “He was a very, very effective proponent of business education and I think he simply, through careful persuasion, got the University onside,” said Waters.

Main also succeeded in convincing the University’s administration to support the establishment of the first Ph.D. program in business in Canada. “The idea that business



Warren Main

was an academic subject that should be taught at the graduate level was hard enough to get into the mainstream of university thought,” said Waters, “and it was very rewarding for Warren to be able to launch a program which would create teachers of business students.”

Main was an alumnus of the University of Toronto, having obtained an MA (1943) and Ph.D. (1953). He had completed undergraduate studies at McMaster University in 1938. Following his term as Director of the School, he continued to teach and even returned to an administrative role as an associate dean for a period, before fully retiring in the mid-1980s. Dr. Main resided in Aurora, Ontario. He was predeceased by his wife, **Marion**, in May 2004.

by Matthew Fox

MBA in Scrubs

It's a normal Friday morning in the OR of **Toronto General Hospital (TGH)**, located on 'hospital row' in downtown Toronto. Surgeries are underway in most of the 19 surgical suites on the second floor of the building. The hospital, one of three which form the **University Health Network (UHN)**, is a leader in cardiac care, organ transplants and the treatment of complex patient needs.

In one of the suites, amid the hi-tech medical equipment, video screens and computers, a student group is learning about the OR's procedures and operations. But it's not medical students getting this unique behind-the-scenes look at the hospital but rather a class of Rotman MBA students. The students are on a field trip as part of their Health Sector Strategy and Organization course taught by Professor **Brian Golden**. This new second-year elective is part of the Health Sector Management major in the Rotman MBA program, which was launched last year by Prof. Golden, who also holds the Sandra Rotman Chair in Health Sector Strategy at the University of Toronto and University Health Network.

The visit, which included a look at TGH's emergency room, laboratory, and operating rooms, revealed many previously unknown aspects of the health care system

to the students, many of whom are interested in pursuing careers in hospital and health care, pharmaceutical, consulting and financial services industries. "As common users of health services, we never realize how much thought and management effort goes into providing a quality health care to patients," says **Avi Sohal** (MBA'06). "The trip provided that insight of how a Health Sector Manager can make a real difference in the lives of patients."

Prof. Golden hopes the mid-October visit contributes to his students understanding about the health care system in Canada and issues in the management of health care organizations. "While classroom instruction is important, this visit gave students a first-hand look inside a working health organization and helped them develop insight and questions that they wouldn't have thought about previously. One thing many of the students commented on was the paradox of the extreme complexity of a major hospital, where it is impossible to fully plan or predict what may come in the door next, and the apparent calm and orderliness of activities. These people are masters at managing the most complex organizations in the world."

"As an academic health sciences centre, education is an integral part of



Photo: Ken McGuffin

everything we do at UHN. We're investing in future health care leaders and providers," said Dr. **Bob Bell**, president and CEO of University Health Network. Even students with work experience in the health care sector found the visit beneficial. **Eileen Chung** (MBA'06), previously worked at TGH and is currently a clinical education coordinator with **St. Michael's Hospital** in Toronto. "Although I've been to the ORs and pre-admit units before, I've never seen the kinds of metrics/performance evaluation systems that are incorporated to track and improve patients flow and operational efficiencies," says Chung.

With positive feedback from both students and the hospital, a visit for Prof. Golden's class next year is already being planned. "The enthusiasm of the staff in showing us a glimpse of the hospital's operations was unexpected," says **Neel Venugopal** (MBA'06). "As MBA students, we're learning how to make good decisions. This visit to the hospital helped us picture the effect of decision making from a patient's perspective."

by Ken McGuffin

Ambassador Addresses a Nation's Crisis, Trade

Daniel Jouanneau, the French Ambassador to Canada, met with more than 60 students for the Rotman MBA European Business Association's Speaker Series on November 9. He had planned to speak on "Canada, France and Europe: Old Partners, New Challenges", but the ongoing drama produced by the nightly riots in Parisian suburbs and elsewhere in France instead compelled Jouanneau to simply open the floor to questions, sparking a wide-ranging socio-political discussion. MBA students peppered the ambassador with queries on the country's unemployment and immigration policies, avian flu, and the French

population's resistance to Turkey's admission to the European Union.

"In spite of all the recent dramatic events in France, we must not forget the fundamentals of the French economy. As Canadians you should look at Europe more and more. Not, of course, as a substitute to the United States, but you share a lot of values with Europe which you do not share with the United States. It is natural that 85 per cent of your exports go to the United States, the market is there, so do it. I understand your fascination with Asia, because we share it, so you are right when you expand your links with China and India,



Photo: Matthew Fox

Daniel Jouanneau

and we are doing the same, but look at Europe as an interesting partner, as an additional partner. Canada's image in Europe is fantastic. You are extremely popular in France, you are considered a success story, you are very attractive."

by Matthew Fox

Alumni Profile: Rick Blickstead (MBA '76) *By Mary Ann Gratton*

Business executives must become “servant-leaders,” says graduate



Photo: Mary Ann Gratton

Rick Blickstead

Create an environment where people feel free to challenge you and ask questions.

That's the advice that **Rick Blickstead** gives managers as they navigate the difficulties of business today. Rick is the president and CEO of **Wellesley Central Health Corporation** (WCHC) in Toronto, the successor organization to Wellesley Central Hospital.

During his career, Rick has transformed various public and private organizations, and is known for his ability to turn organizations around to bring about successful change. He has revitalized companies, or specific departments in organizations such as **Rona, Wal-Mart, Holt Renfrew** and **The City of Toronto**.

Business leaders must be flexible and open to challenges and questions, he says. “As you gain more responsibility, you should work very hard to serve those who elected you to be CEO. I hope I have become a better ‘servant leader’ over the years. Sometimes leaders fall into traps where they want sycophantic teams, as opposed to hiring people who really challenge them with facts, solid opinions and options. These people allow you to be a great leader, because positive conflict can be good for an organization, as long as it's properly managed.”

The WCHC is a not-for-profit, private, self-funding urban health organization. It does not deliver health services directly, following the hospital closure in 2002. The revitalized organization's mission is to promote the health of urban communities. It is a catalyst for change, supporting community-based research, offering educational workshops, building alliances and organizational capacity, informing public policy and championing supportive housing options.

Rick describes his management style as empowering. “I don't believe in command and control. The CEO's role is to provide strategic direction, remove the barriers to peoples' success, ensure they're going in that direction, but give them a lot of leeway to attain those goals. Hire good people and let them do their jobs.”

“Hopefully the CEO creates a culture of dignity and respect, where peoples' contributions are valued, appreciated and recognized. People then feel comfortable asking questions and challenging the leader. Those are moments of truth; if you claim to have an open environment where people feel free to challenge the status quo, and then you come down on them like a ton of bricks when they ask questions, they learn you're just feeding them baloney.”

Rick believes Canada's health care system is undergoing a major transformation, and will face greater challenges as Baby Boomers approach their senior years. “Universal health care is absolutely critical to our country's future,” he says. “People of all incomes need access to excellent, affordable care. We often look at health care from a service delivery viewpoint, but it's also important to look at social determinants of health: income distribution, homelessness, social exclusion, and other issues. Some health care is being delivered privately, and private corporations can make public institutions more efficient and help with infrastructure; but, if your child is sick, you must be able to go to the hospital or other public health care provider to have that child dealt with. The day we stop

that, we'll see a substantial deterioration in the social safety net. Societies that have not spent on health disintegrate quickly, and that creates instability between haves and have-nots. I don't want to live in that kind of society.”

Rick loves “dealing with complex issues.” His greatest career satisfaction comes from “taking an organization with potential, working with the team, partners, and stakeholders, and creating a vision and strategy that people buy into. At the end, you have a great organization.” For instance, when he was President of Rona Retail in 2000-2001, it was a \$900-million local distribution company in Quebec. “Now it's a \$3.5-billion home improvement company across Canada, one of the best in North America.”

He belongs to many organizations and boards, including the **Children's Aid Foundation, World President's Organization, and Toronto Symphony Orchestra**. An adjunct professor at UofT, he helped create the Centre for Urban Health Initiatives at University College. Rick occasionally guest lectures in the University's Health Studies program, serves on the advisory board of Rotman's **Integrative Management Challenge**, and enjoys mentoring students.

It's important for MBA grads to give back to society, he adds. “To whom much is given, much is expected. MBA students have been given a great gift, and they should give back. No one should see an MBA as an entitlement. I don't believe in entitlements. Even if you join a small community board, it's important that leaders help out and give back to society any way they can, not just professionally.”

Rick's wife, **Martha Lee-Blickstead**, is director of Family Support Studies in the School of Early Childhood Education at Ryerson University. They have two sons, Michael, 23, a recent Harvard grad, and John, 22, a senior at Harvard. □

Alumni Profile: Joseph Mapa (MBA '00) by Matthew Fox

Joseph Mapa tells Matthew Fox about his plans for renewal at Mount Sinai Hospital and his thoughts on business schools training future health care leaders.



Joseph Mapa

Matthew Fox: Briefly describe your career and your role at Mount Sinai Hospital.

Joseph Mapa: As a young guy, I did my graduate work in health administration at the University of Toronto [in the Faculty of Medicine's Department of Health Policy, Management and Evaluation], and went directly from school to **Mount Sinai Hospital** as an administrative resident. I've had a linear career within the hospital, but I've always been sensitive to the risk of myopia and, therefore, I've immersed myself in other opportunities throughout my career. The Rotman Executive MBA was clearly one of those milestones that broadened my knowledge base. I graduated in 2000, at a time when there was a transition going on within the hospital, and I was given the opportunity to be CEO. I'm delighted that I took it, because leading an organization like this is not only an opportunity, it's also a professional and intellectual challenge. It's a very exciting time to be in health care, and timely for me personally because I can address change with a convergence of experience, credentials, networking contacts, maturity and education, including the MBA, to move the hospital forward as best I can.

MF: What are some of those challenges?

JM: One of the most important challenges is ensuring that, as part of the University of Toronto system and in serving our community, we are a world-class academic health centre. That has a number of subset challenges at the corporate and operational levels. Funding is a perennial challenge of all publicly regulated non-profit systems. So when I think about challenges, I think of them in the form of these questions: Are we a superb academic health centre in relation to other world class centres? Have we ensured proper succession and are we mentoring our leadership team to perform at the highest level? Is our organizational sociology conducive to excellence? Do we have excellent relationships with government and other stakeholders? Are we looking at all the alliances and collaboration opportunities? Can we close the gap between science and clinical care for the betterment of patient care? Is our perspective forward-looking and open to change? As CEO, these are the questions I have to ask myself to make a difference in the future of the organization.

MF: What are some long-term organizational goals you've set?


JM: Mount Sinai is in the process of renewing itself on a number of dimensions. As an academic health centre, we want to clearly demonstrate that we are world-class, applying innovative technology, research findings and best practices in our niche areas. We have to be competitive, retain and attract students and faculty, and exploit our tremendous scientific and clinical assets. We want to serve our community in the best possible way. A second form of renewal is operational excellence, particularly capital re-development. We are 30 years old, and in hospital terms we have an aging facility. We also want to move into a stronger culture of discipline around metrics, accountability, and process review systems. In terms of revenues, we have to look at the

business opportunities and be more entrepreneurial in our approach with government and the private sector. A third form of renewal is expanding our network of partnerships in an emerging, integrated health care environment. Five years from now, I want to see a renewed organization operationally, academically, physically, and entrepreneurially. If we knock each of those down, I'll be satisfied.

MF: What are you most proud of, personally or professionally?

JM: I'm proud of the fact that we are moving on these goals already. I'm proud that our philanthropy is so successful, particularly the engagement of our trustees. We have superb governance leadership and community support, and our chair of the board, **Lawrence Bloomberg**, serves as both a mentor and a change agent – indispensable attributes for a renewal strategy. My biggest high is that we are on track for renewal, and it is affecting everything from the board room to the patient's room.

MF: You mentioned succession earlier. What are your thoughts on business schools training future health leaders?

JM: Health care leadership is a spectacular profession. The highs are tremendous, and the lows are challenging, but when you get it together, it's a very satisfying career, and a great laboratory to apply your MBA skills. Health care is going through a transformation, and part of that is looking for diverse leadership. MBA graduates will be one of the answers. There are effective leadership training venues, such as a faculty of medicine's health administration program, but I think each can carve out a niche in advancing the education of the health care executive. Competition will lead to excellence. There is room for a lot of players, each with their own expertise. Cumulatively, you're creating the talent pool of future Canadian health care executives. 

Alumni Capsules *Compiled by Matthew Fox*

Daniel Germain (MBA '92)

*Vice President and CFO,
The Credit Valley Hospital
Lives in: Georgetown
Works in: Mississauga*

Best thing about my job: I like the ability to make changes in how health care is delivered in our community.

Biggest challenge of my job: Working with government to plan and execute new hospital construction and financing.

Most important skill(s) for my job: Communication and relationship building to instill trust in management's ability to deliver high-quality and low-cost health care service.

What I consider to be my country's biggest health-related challenge: Canadians have high expectations from our publicly-funded health care system. Many commission

reports have suggested increased investments in health care and likely the only source of revenue is higher taxation – but the public doesn't want the pay for it.

The word that best describes me: Dynamic and full of energy. I tell it like it is.

The one item I couldn't live without: My family, because they are the most important things in my life.

How I relax: Sometimes I wish I could relax more, but I love to enjoy our backyard by the poolside.

Most important thing my MBA taught me: Judgment and the ability to simplify complex issues are key to a successful career. My degree also taught me that there are many people that view complex issues from their own perspective, so the MBA experience helps to focus my thoughts on the most correct solution.

Words of Wisdom: Love life while you have it, life is precious.



Lisa Mitmaker (MBA '04)

*Coordinator, Operations,
Research and Indicator Development,
Canadian Institute for Health Information (CIHI)
Lives and works in: Toronto*

Best things about my job: CIHI is a perfect mix between academia, business and health care. In my position, I get to study and research the biggest challenges in Canadian health care today and work on important and innovative projects that address public needs.

Biggest challenge of my job: Responding to and equally satisfying the varying perspectives of policy-makers, researchers, health care professionals and other stakeholders.

Most important skill(s) for my job: Time management and prioritization, because my days are filled with exposure to a broad range of projects and operational activities.

What I consider to be my country's biggest health-related challenge: There are so many health-related challenges today, for example, wait times, obesity, and access to physicians and care. I believe that the first step to solving these issues is uniting Canadians in the pursuit of improving the public health care system, ensuring that all Canadians have equal access to free health care.

The word that best describes me: Optimistic.

The one item I couldn't live without: My Palm.

How I relax: Enjoying a delicious meal with my fiancé, best prepared by the two of us.

Most important thing my MBA taught me: 3Ns: Networking, Negotiating, iNvesting.

Words of Wisdom: All I can say about life is, Oh God, enjoy it! (Bob Newhart)

Eric Hanna (MBA '92)

*Vice President Corporate Services,
Queensway Carleton Hospital
Lives in: Stittsville
Works in: Ottawa*



Best thing about my job: Effectively responding to community health care needs.

Biggest challenge of my job: Managing the expectations of our many stakeholders.

Most important skill(s) for my job: Setting and transforming a vision for the hospital in an evolving health care system.

What I consider to be my country's biggest health-related challenge: Limited resources with increasing demands and related expectations.

The word that best describes me: Accountable for results.

The one item I couldn't live without: Family support.

How I relax: Furniture making and time at the cottage.

Most important thing my MBA taught me: Applying a broad range of skills and knowledge to complex problems.

Words of Wisdom: Take risks and celebrate successes.

John M. Maxted (MD, MBA '95, CCFP, FCFP)

*Director of Health Policy & Communications,
The College of Family Physicians of Canada
Lives in: Markham
Works in: Markham and Mississauga*



Best things about my job: For almost 30 years I've been a family physician/health care provider to my patients. Increasingly over time, I've worked with health care leaders and managers in a variety of organizations and settings. I never cease to be impressed with the complexity of health care and the multitude of systems that must interface to deliver care. I have been – and continue to be – very privileged to work with numerous dedicated and committed leaders in trying to make our health system better and better. It is these opportunities that re-energize me and keep me involved. **Biggest challenge of my job:** Finding the appropriate balance between the conscientious efforts of many organizations and individuals devoted to health system improvements for all Canadians, with the equally dedicated efforts of others to make

the health system a better place to work for practitioners, including family physicians – regionally or nationally. This involves leveraging opportunities, but it cannot be likened to dealing with commodity markets because health system improvements deal with outcomes that affect the lives of individuals for whom the system provides cares, as well as the professional careers of individuals who are the care providers.

Most important skill(s) for my job: Facilitation, which contrary to some, is a rare skill. It is much more than simply helping others arrive at a destination: it involves negotiating the route; it requires tolerance for those occasions when the destination is not apparent but there are many drivers; it is consultation with superb listening skills, and it means being able to replace the clarity that comes with knowing where you're going and how to get there, with less certainty and the risk that you may never arrive.

What I consider to be my country's biggest health-related challenge: How we will continue to meet and afford the health needs of Canadians without the health system consuming more and more of our public resources (financial and otherwise) and ultimately threatening every other publicly-funded service in Canada. The appetite for good health is insatiable, so where's the breaking point and what happens when we reach it?

The word that best describes me: Introspective.

The one item I couldn't live without: My car – a 2005 Cadillac STS. I usually find it relaxing when I drive. This habit was nurtured

during my earlier career as a rural family doctor when I had to drive many miles every day to reach the sick, dying and dead.

How I relax: Aside from driving, I enjoy gardening and puttering around outside the house in the summer. I relax by designing and creating stained glass art while listening to jazz in the winter. And I can very easily succumb to a good bottle of French wine in one of my favorite local bistros at any time of the year!

Most important thing my MBA taught me: The model we learned in strategic analysis – goal and vision setting while considering the internal competencies and external environment of a situation before moving on to formulate gaps, strategies and action plans – has served me in countless situations. Sometimes I teach the model to others and sometimes I only apply it as my internal resource in helping others. Sometimes I use only parts of the model. I have discovered this model has numerous applications that often contribute to my own sense of purpose and direction in my work – while also giving others a sense that maybe I know what I'm doing!

Words of Wisdom: You should always do what you think is best, even if the consequences appear uncertain. Life is full of risks. If you're afraid to take risks and avoid them, you may lose out on many of life's most enjoyable experiences. Granted, some risks are not worth taking – and some risks taken, end in undesirable outcomes. But Pierre Elliott Trudeau summarized it best in his now infamous line: 'Just watch me!' And Paul Anka sang it best in: 'I did it my way!'

Susanne Justen (MBA '03)

Head of Customer Service EMEA,
Abbott Diabetes Care, Abbott GmbH & Co. KG

Lives in: Wiesbaden, Germany

Works in: Germany, but I travel a lot. I particularly enjoy traveling to our U.S. headquarters in Alameda, CA



Best thing about my job: Coming from a complete different industry (internet) I have learned a lot about the health care industry since I joined Abbott. Additionally, I acquired

experience in the area of marketing. I particularly enjoy creating a customer magazine for our patients.

Biggest challenge of my job: The industry is changing from a focus on health care professionals towards consumers. So the biggest challenge for me is convincing senior management that the things I am doing require their utmost attention and add value to the business.

Most important skill(s) for my job: Analytical skills along with perseverance and creativity.

What I consider to be my country's biggest health-related challenge: Germany faces challenges similar to those of many other European countries. The biggest challenge here is the aging society and the respective

increase in health care spending. On top of that, health insurance revenues are tied to employment, and therefore decrease with raising unemployment levels.

The word that best describes me: I am too versatile to be described with one word :-)

The one item I couldn't live without: Access to the Web.

How I relax: Traveling, scuba diving and in everyday life good food, wine and good company.

Most important thing my MBA taught me: My MBA allows me to speak the language of finance, which helps me get budgets approved.

Philosophy of life/Words of Wisdom: I don't know the key to success, but the key to failure is trying to please everybody. (Bill Cosby)

Shannon Griffin (MBA '03)

Senior Project Planner,
Vancouver Coastal Health Authority

Lives and works in: Vancouver, British Columbia



Best things about my job: The variability of the work and the quick pace.

Biggest challenge of my job: The stop and start nature of strategic health care initiatives. They seem to have a rhythm all their own. The pace of change is dependent on so many variables; it is important to keep a client-centred focus.

Most important skill(s) for my job: Flexibility and systems thinking.

What I consider to be my country's biggest health-related challenge: The demographic shift in our aging population and its effect on both the demand for health care programs,

as well as the pool of working individuals contributing to these same programs.

The word that best describes me: Inquisitive.

The one item I couldn't live without: My notebook.

How I relax: Skiing anywhere in British Columbia, hiking through the various provincial parks around Vancouver and the Island and reading.

Most important thing my MBA taught me: Connectivity between diverse objects, thoughts.

Words of Wisdom: Speak up – express your opinions and be heard.

Patricia Everitt (MBA '87)

Independent Consultant, currently working on an operational review of the Ontario Public Health Laboratories with Deloitte/THiiNC

Lives in: Mississauga

Works in: Canada (at the moment)



Best things about my job: The opportunity to make a difference. We learned from SARS that a strong public health system is a key component of our ability to quickly and effectively deal with infectious diseases.

Biggest challenge of my job: Satisfying multiple, complex, and often competing priorities.

Most important skill(s) for my job: Understanding the technical aspects of the laboratory industry, as well as the business drivers.

What I consider to be my country's biggest health-related challenge: Health care is a Canadian core competency; we need to build and expand on that capability. Innovation in health care is an obvious example. One less obvious example would be to reposition and

focus our armed forces on the provision of health care.

The word that best describes me: Catalyst.

The one item I couldn't live without: Asking questions.

How I relax: Yacht racing.

Most important thing my MBA taught me: Communication - language. Each profession (finance, marketing, human resources) has its own language. Knowing those languages has been very helpful in communicating quickly and effectively with diverse groups.

Words of Wisdom: Appreciate what you have and, each day, look for ways to make the world a little bit better.

Rotman Alumni in the Boardroom



It's no secret that many MBAs aspire to the boardroom – either as senior executives or independent directors. Here, we highlight just a few remarkable Rotman alumni who've made it to corporate, association and non-profit boards.

Corporate governance has been an important issue in recent years, particularly among publicly-traded firms. But corporate boards are just one way Rotman alumni get involved in the governance of organizations; they also often help to steer leading associations and not-for-profits. By doing so, they guide the evolution of their industry and give back to the society they've flourished within.

Here are just a few great examples of Rotman alumni who serve on boards.

First, the Goodman dynasty. **Ned Goodman**, (MBA '62, also B.Sc., CFA, and LL.D.), is president and CEO of **Dundee Corporation**, president and CEO of **Dundee Wealth Management Inc.**, chairman of **Goodman & Company, Investment Counsel Ltd.** and a member of the Board of Trustees of **Dundee REIT**. He is chairman emeritus of the **Canadian Council of Christians and Jews** and a governor of **Junior Achievement of Canada**. Ned is also a director of **Dundee Precious Metals Inc.** and **Eurogas Corporation**.

His son **Jonathan Goodman** (MBA '90, also PEng, CFA) is not to be outdone. Currently, he is president and CEO of **Dundee Precious Metals Inc.** and a director of **Dundee Corporation**. Jonathan is also a director of **Breakwater Resources Ltd.**, **Diagem International Resource Corp.**, **Dundee Resources Limited**, **Eurogas Corporation**, **Major Drilling Group International Inc.**, **Tahera Diamond Corporation**, **Odyssey Resources Ltd.** and **Woodruff Capital Management Inc.** He also recently joined

the Rotman School's Value Investing Advisory Board.

Of course, many Rotman alumni are senior corporate executives who are also on their companies' boards. For example, **Paul Smith** (MBA '77) has been a director of **Imperial Oil** since 2002. He is currently controller and senior vice-president, finance and administration.

Among industry associations, one of our newest board chairs is **Harvey Botting** (MBA '85), senior vice president of **Rogers Media Business Information Group**. Harvey, who has served at Rotman as a senior volunteer for many years, recently became the new chairman of the **Canadian Business Press**. A future note about Harvey – his son, Kevin (MBA candidate 2006) is due to graduate soon and may contribute to establishing a Botting dynasty, too.

Rotman alumni are also involved in many worthy non-profit organizations and charities – from universities, to hospitals, to arts and culture organizations and community service agencies. For example, Dr. **Alfio Meschino**, (MD, FRCP(C), and MBA '98), is a member of the board of directors and chief of staff at **Toronto East General Hospital**.

The Rev. **Deborah** (Nelson) **Kraft** (MBA '76) is the rector of **St. Paul's Anglican Church** in Thunder Bay, Ontario. She has served as president of the **Thunder Bay Community Foundation** and as a member of the board of directors for **Thorneloe University** at **Laurentian University** in Sudbury (see her class note in this issue).

Bruce Lawson (MBA '00), until recently a board member at **Casey House Hospice** in Toronto, recently became its executive director. He's also served on the board of the **Counseling Foundation** and is an intrepid Rotman Class Champion.

Joining a board, whether it's a corporate, association or non-profit board, brings senior connections, opportunities to learn a broad set of governance and management skills, and the chance to lead. Are you on a board? Let us know in your next Class Note at www.rotman.utoronto.ca/alumni/forms_changeaddress.asp.

If you're interested in becoming involved in boards, check out the following resources:

Corporate boards

For board training, see the Rotman ICD Director's Education Program, offered across Canada at www.icdcollege.ca/.

Industry boards

Contact your industry association

Nonprofit board opportunities

Contact your local Volunteer Centre – in Canada, try www.volunteer.ca/volcan/eng/content/vol-centres/locations_new.php or Altruvest Boardmatch at www.boardmatch.org/homepage.html.

This issue of the Class Notes highlights the Class of 2002. Special thanks go to **Jennifer Hildebrandt** for relentlessly pursuing the class and compiling the news. Once a year we feature a whole class, so – 2003ers, here’s a heads-up – same time, next year! We also asked you about your volunteer activities, and many of you responded with stories of your involvement. Keep up the great work, and share the news with your classmates. Don’t be shy!

Our next issue is titled *The Creative Age* – a good excuse to make the Class Notes a bit more creative, too. Don’t hold back. Tell us about anything newsworthy - bonus marks for artistic impression. Certainly the easiest way to make the section more artistic is to add a photograph. Let’s see if we can get a photograph for every note. Hey – it could happen.

So – how about your contribution? Next issue? Send in a Class Note right now, while you’re thinking of it. The quick way: www.rotman.utoronto.ca/alumni/forms_classnotes.asp. It includes a place for uploading your photos. Deadline for the next issue is Friday, March 10, 2006. And remember – Class Notes are viewable on the Alumni Portal. Contact us if you need access (alumni@rotman.utoronto.ca).

Thank you, and keep them coming! – Jack

MBA/MCom Full & Part-Time

1946

Don Chutter of Ottawa writes: “As a past-president of the Rotary Club of Ottawa, I am still involved in fundraising activities, many of which fall into the health sector. For example, Rotary International is the prime mover in the ‘Polio Plus’ campaign to eradicate polio worldwide by the end of 2006. Rotarians have contributed US\$600 million to this end. Individually, Ottawa Rotarians have pledged another \$300 each in an effort to bring the campaign to a successful conclusion. Our Rotary Club is raising \$3.2 million to build an expanded Rotary Home in a new location. This is a facility for short-time stays for the severely handicapped, thereby providing their families with a respite from the provision of round-the-clock care.”

1959

The career of **Peter Williams** spanned nine years at Westinghouse, 23 years at Ryerson, and 10 years consulting in the information systems arena. Peter enjoys his extended family, which now splits its time between Oakville and Florida. “We are avid hurricane watchers.”

1965

MBA Class Champion:

Cam Fellman

Cam.Fellman65@rotman.utoronto.ca

1966

MBA Class Champion

Gary Halpenny

Gary.Halpenny66@rotman.utoronto.ca

1967

MBA Class Champion:

Len Brooks

Len.Brooks@rotman.utoronto.ca

Jim Dadson is a principal in LLS/DVR Market Research, a marketing research company based in the Toronto region that specializes in market-structure analysis and marketing-tracking programs for major Canadian business-to-business and business-to-consumer marketing companies. Jim is a Certified Marketing Research Professional (CMRP) and an active member of the Marketing Research and Intelligence Association (MRIA), where he has served as president of the local Toronto Chapter. He lives with his wife Anne and their three sons in Richmond Hill, Ontario, where he is active in the local chapter of Scouts Canada.

1968

MBA Class Champion:

George Hayhurst

George.Hayhurst68@rotman.utoronto.ca

1970

MBA Class Champion:

Charles Johnston

Charles.Johnston70@rotman.utoronto.ca

1971

Brian Clark joined Euro Brokers in Toronto in 1973 as its tenth employee. In 1974, the company moved to New York City and grew internationally to over 600 employees. Brian served as executive vice president of the inter-dealer brokerage firm (www.ebi.com) until after September 11, 2001, when he was appointed president of the Euro Brokers Relief Fund Inc. Brian is married to his Thornhill High School sweetheart, and they have four children and five grandchildren.

1973

MBA Class Champion:

George Parker

George.Parker73@rotman.utoronto.ca

1974

MBA Class Champion:

Hank Bulmash

Hank.Bulmash74@rotman.utoronto.ca

1975

MBA Co-Class Champions:

Susan Frank

Susan.Frank75@rotman.utoronto.ca

Robert Johnston

Robert.Johnston75@rotman.utoronto.ca

1976

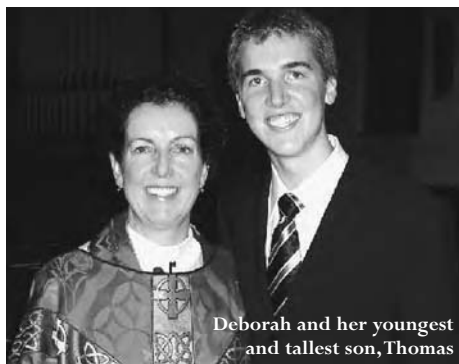
MBA Class Champion:

Jane Gertner

Jane.Gertner76@rotman.utoronto.ca

Gordon Currie was appointed senior vice-president, finance and administration and CFO at Gennum Corporation. He previously worked for Wescast Industries Inc., where he was VP and CFO; and prior to that, he was with EMCO Ltd. Gordon has extensive experience in the financial management of large multinational corporations, as well as with mergers and acquisitions and the growing regulatory requirements applicable to public companies. In addition to his MBA, he has a BA from Western and is a CGA. Gennum Corporation is a leading producer of hybrid and silicon integrated circuits, electrical components, and sub-systems for the video and audio markets, and a new provider to the data communications market.

As of August 2005, the Rev. **Deborah (Nelson) Kraft** is the rector of St. Paul's Anglican Church in Thunder Bay. Deborah's community involvement includes past president of the Thunder Bay Community Foundation and member of the board of directors for Thorneloe University at Laurentian University in Sudbury. She also interviews candidates for the new medical school in Thunder Bay. Deborah has been married for 28 years to Dr. Jouni Kraft, and they have four children. She enjoys Pilates, running, and cottage life. "Warm greetings to everyone in my class!"



Deborah and her youngest and tallest son, Thomas

1977
MBA Class Champion
Judy McCreery
 Judy.McCreery77@rotman.utoronto.ca

1978
 After a career spanning the corporate world and the publishing industry (as founder of Pearl Publishing Inc.), **Sybil**

Levine has taken a quantum leap into Web publishing. She has gone from being the events centre for Toronto event planners (www.torcalendar.com) to launching eventscentral.ca, a one-stop site for information about events all over Ontario (and how to get there) that plans to cover all of Canada in the coming year. "This will be the most comprehensive listing of Canadian events, with over 100 categories. Check it out in 2006!"

1979
MBA Class Champion
Lorn Kutner

Lorn.Kutner79@rotman.utoronto.ca

Peter Brennan is a financial consultant with expertise in business cases, financial modelling, projects, budgets, forecasts and acquisitions with contracts at Laura Secord, Cott Beverages, van Houtte Fine Coffees, CanWest and Aramark. He would love to hear from any Rotman alums, and can be reached via www.financefocus.com.

Trevor Moniz (DBA 1979) was only at UofT for one year, "but thoroughly enjoyed it. I have tried to keep myself busy over the years leading a high profile life in politics including being suspended from my party for three years but I guess I'm a survivor. The Portuguese President was kind enough to award me an order of merit for my efforts over the years on behalf of the Portuguese community in Bermuda. I have twins Alice and Sophie (8), daughter Gabrielle (9) and son Thomas (10)." Trevor also sent a long this photo greeting Prince Andrew to the Old Royal Navy Dockyard in November, in his capacity of chairman of the Bermuda Maritime Museum. Son Thomas is next to him. They escorted the prince to the restored Commissioner's House for which they had previously won a Royal Institution of Chartered Surveyors Award.



Mike Stiege is managing director of Manitoulin Holdings LLC, which invests in and facilitates the strategic development of second and third round technology startups with a 'sweet spot' in wireless/wifi Internet and IP-based content distribution. In the near future, Mike will be winding down his involvement with Sun, Nokia, Sybase and majors and will work more extensively with startups. Mike and Suzie celebrated their 30th wedding anniversary in Sept. '05. Their eldest son Tyson is in graduate (Law) school, and their youngest is in undergraduate business school. Mike and Suzie continue to enjoy diving and world heritage archeological sites; in the past few years they have visited Copain, Tikal, Delphi, Machu Picchu, and the Great Wall. "All the best wishes to our Toronto friends from VIC, SKULE, and of course ROTMAN."

1980
MBA Full-Time Class Champion:
Frank Hall
 Frank.Hall80@rotman.utoronto.ca

Peter Hickman spent his career in the financial services industry. After an initial career start with Nesbitt Thompson (now Nesbitt Burns) from 1969 to 1973, he was a founding employee of MasterCard at Bank of Montreal (1973-1983.) Later he was one of the youngest-ever nominated VP's at Bank of Montreal and later the founding president and CEO of Bank of Montreal Investorline (1988-1995.) Recruited by HSBC Bank he became the founding president and CEO of HSBC InvestDirect (1995-2002.) During his tenure at HSBC he did consulting for brokerage services in New York, Sydney and Athens. Peter has two children, Sarah and Andrew, and while retired from the corporate world, he and his partner Simon own and operate a large Internet-based art gallery (inuit.net). Peter and Simon have recently moved to their dream home in Lions Bay, B.C., high up the mountain, overlooking Howe Sound.

1982
MBA Full-Time Class Champion:
Danny Chau
 Danny.Chau82@rotman.utoronto.ca

MBA Part-Time Class Champion:**Michael Hale**

Michael.Hale82@rotman.utoronto.ca

Katja Buchsbaum is currently establishing a new media/lifestyle global community, using all devices of broadcasting. The community serves “the high income/time constraint/preserving authenticity audience.” Given that the community will serve all three global theatres, Katja is aiming to hire a variety of nationalities for the executive and governance board. Until 2004, Katja was with ADC Telecommunications software division as VP sales and alliances, responsible for 65 per cent of all third-generation telephony in EMEA. Prior to that, she served in the leadership team of Origin (by then a Royal Philips affiliate) for the global media and high tech practice. In 2003 she ran for leadership of the Pan European Liberal Party (right wing), the third largest party in Europe (see photo).

**1983**

RSM EquiCo, a global investment bank, has named **Bruce Manchester** senior managing director of RSM EquiCo Capital Markets LLC, the firm’s broker-dealer subsidiary. Based in the firm’s Costa Mesa corporate headquarters, Bruce will provide M&A and capital-raising advisory services to the firm’s investment banking clients. Prior to joining RSM EquiCo, he spent three years as a founding supervising principal for GFP Advisors, a San Francisco-based boutique investment bank. He has held a variety of roles throughout his career, including managing director and industry manager in the Natural Resources Group for Bank of America Securities. Before that, he was a regional director of investment banking and vice president of capital markets for Bank of America in Canada. Additionally, he has led teams in completing a wide range of private capital-raising transactions totaling more than \$4 billion. RSM EquiCo ([\[quico.com\]\(http://quico.com\)\) is a global provider of investment banking services, primarily to private companies with annual revenues of up to \\$500 million. The firm brings together companies, capital and creativity on a national and international scale to help clients achieve their personal and strategic objectives.](http://www.rsme-</p>
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Keith O’Rourke has spent the last 20 years working in clinical research as a statistical collaborator in Toronto and Ottawa. He first experienced the challenges and rewards of empirical research at the Faculty of Management, working with Professors James Fleck and Joseph D’Cruz on statistical analyses for their book, *Canada Can Compete: Strategic Management of the Canadian Industrial Portfolio*. He soon after migrated to the clinical research community and began working with some of the promising clinical research fellows at the UofT. His first published paper included co-author Dr. Vivek Goel (now UofT vice president and provost) and a year later, another paper included co-author Dr. David Naylor (UofT’s new president). Keith recently completed a two-year stint at Oxford University, working in medical statistics in the Centre for Statistics in Medicine while appointed as a research associate in the Senior Common Room of Worcester College. While there, he also studied as a D-Phil student in the Department of Statistics. Keith participated in ‘full blue’ student sports at Oxford as the secretary (assistant captain) of the university’s Amateur Boxing Club. Keith is currently appointed as a scientist at the Ottawa Health Research Institute and lives in Ottawa with his wife, Marlene Hoff, 13-year-old daughter Evelyn, and 11-year-old son Ryan.

1985**MBA Full-Time Class Champion:****Gerald Legrove**

Gerald.Legrove85@rotman.utoronto.ca

MBA Part-Time Class Champion:**Daniel Eng**

Daniel.Eng85@rotman.utoronto.ca

After 20 years in the property and casualty insurance business, Rotman Alumni Board Member **Gerald Legrove** left Markel Insurance to become president of BSI Management Systems, Canada.

Founded in 1901, the BSI Group is a leading business services provider to organizations worldwide, with over 5,700 employees in 110 countries.

Bruno Maruzzo is involved with an early-stage biotech company, ChondroGene Limited, that was co-founded by a professor from UofT in Medical Genetics and an orthopaedic surgeon from Toronto Western Hospital and UofT. The company has developed a novel blood-based diagnostic technology, The Sentinel Principle, which can detect virtually any disease or medical condition from a simple blood sample. The company has applied The Sentinel Principle to a wide range of diseases, including cancers, arthritis, cardiovascular disease and central nervous system disorders. Of particular interest to older graduates is the company’s first product in development, a blood-based colon cancer test that could replace the dreaded colonoscopy as the initial screening tool for colon cancer. This technology could potentially revolutionize how medicine is practiced, says Bruce. See www.chondrogene.com for additional info. “I attended the class 20th reunion this past summer and saw some old faces and reminisced about the wonderful facilities we had at the corner of Bedford and Bloor, and the fact that Golf 101 wasn’t on the curriculum when we were there! See you at the 25th.”

Doug Robertson owns two related integration and automation enterprises that focus on design and implementation of performance improvements and turn-key facility implementations within North American distribution centers: AS/R Systems Inc., founded 1991, and JHThomas Inc., founded 1964 (see jthomas.com and arsystems.com for more details.) Doug was married to Lynn Mitchell in 1986, and the Robertson family includes two sons: Jaeger (born in 1989) and Miles (born in 1995). Managing operations in Illinois and Toronto has provided the opportunity for migration back to the family roots in Ontario, now including a condo in Mimico as a base while working in Toronto. “It would be fun to track down and hang with some of my old MBA and Industrial Engineering (7T8) classmates.” Besides frequent travel between Chicago and Toronto, the Robertson family

has recently spent some time in England, France and Hawaii and was to spend Christmas 2005 on a 45' Cat, island hopping through the British Virgin Islands.

1986

On July 1, 2005, **Chris Clark** was named CEO and senior partner of PricewaterhouseCoopers LLP, Canada, leading a firm of over 4,200 partners and staff. His election to the CEO's office follows a successful career with the firm that began in 1978. After several years in the Assurance practice, Chris joined the Financial Advisory Services practice, which is now a part of the Canadian firm's Advisory group. Since then, he has practised in the areas of valuations, corporate finance and large corporate restructurings. Chris was admitted to the partnership in 1987, and appointed national managing partner of the Financial Advisory Services practice in 1995 – a position he carried through the landmark merger of legacy firms Coopers & Lybrand and Price Waterhouse in 1998. He also held the roles of chairman and president of PricewaterhouseCoopers Inc. Chris most recently served as national managing partner and a member of PricewaterhouseCoopers' national executive team. Born in Toronto, he holds an honours degree in Commerce from Queen's University along with his MBA. He is a fellow of the Ontario Institute of Chartered Accountants and has also been active in the community through participation on various club and not-for-profit boards. An avid runner, skier and sports enthusiast, Chris played two years of professional hockey in Europe prior to joining PwC. He lives in Toronto with his wife and two daughters.

1988

MBA Class Champion:

Grace Cheung

Grace.Cheung88@rotman.utoronto.ca

1989

MBA Full-Time Co-Class Champions:

David Pyper

David.Pyper89@rotman.utoronto.ca

Maria Milanetti

Maria.Milanetti89@rotman.utoronto.ca

MBA Part-Time Class Champion:

John Harris

John.Harris89@rotman.utoronto.ca

1990

Northern Financial Corporation recently announced the appointment of **Douglas Harris** as vice president, merchant banking. He will also join the Investment Banking team at Northern Securities Inc. Douglas has been vice president at a private equity firm for the past six years. In addition to his MBA, he has a Bachelor of Science degree from the University of Guelph, is a Chartered Accountant, and has his Chartered Business Valuators designation. Northern Financial Corporation wholly owns Northern Securities, a full service brokerage firm that provides financial advisory services to retail and institutional clients and investment banking services to small capitalization companies.

1991

MBA Full-Time Class Champion:

David Littlejohn

David.Littlejohn91@rotman.utoronto.ca

MBA Part-Time Class Champion:

Pamela Kanter

Pamela.Kanter91@rotman.utoronto.ca

Stephen Dulong is a principal and CEO of CiF Solutions, a manufacturer and project manager for custom laboratory installations throughout North America. He is also a large Valvoline franchise operator in the mid-west U.S. and retains an interest in MPI, a custom plastic bottle manufacturer. More importantly perhaps, Stephen remains an active member of the infamous Bigger Fools Investment Club from the class of '91 along with **Peter Paul Bloemen, Scott Colbourne, Michael Leblanc, David McWilliams** and **Rob Rutledge**. Stephen lives in Toronto with his two daughters, Nicole and Nathalie and the three of them are enjoying lots of travel together.



Jamie Gerson is an area account manager with Alpha Controls and Instrumentation in Markham. Alpha is an established master distributor/representative for a range of Canadian, American and European manufactured industrial, process, heating ventilating and air conditioning (HVAC) controls and calibration equipment. Jamie has been with Alpha for 10+ years working in their sales, marketing and manufacturing departments. The Gerson's have three boys, aged two, four and six, which keep them very busy. "Hockey, gymnastics, scouting, and music outings keep us hopping!" Jamie wishes all his fellow 1991 graduates the very best.

Nancy Zhou has been named vice president of operations for The9 Limited, a leading online game operator and developer in China, where she will oversee The9's operational activities, including sales, business development, public relations and technical matters. She assumed her post last September. Prior to joining The9, Nancy served as VP, operations for UT Starcom in China for two years. She has also served in various capacities at Nortel Networks in Canada from 1993 to 2003, last serving as VP of global marketing and director of global customer research. Nancy is a graduate of the Beijing University of Aeronautics & Astronautics, where she received a Masters degree in Electrical Engineering in addition to her Rotman MBA. Currently, The9 is primarily focused on operating and developing MMORPGs (massive multi-player online role playing games). The9 operates licensed MMORPGs such as MU, WoW and Mystina Online in China. It has also obtained exclusive licenses to operate additional games in China, including ZhiZun and Granado Espada. In addition, The9 has developed its first proprietary games titled 'Joyful Journey West' ('JJW'), which entered all-access public open beta testing in August 2005.

1992

MBA Class Champion:

Blair Kingsland

Blair.Kingsland92@rotman.utoronto.ca

Patricia Ghany is the finance director of Esau Oilfield Supplies, a family business that has been in existence over 40 years. Patricia is one of eleven Caribbean business leaders chosen to spearhead UNESCO's 'Leadership and Advocacy Campaign to Strengthen the Education Sector Response to HIV and AIDS in the Caribbean Region'. She also sits on the board of directors of the American Chamber of Commerce and The South Cancer Society. Her greatest passion is improving the education system in Trinidad & Tobago. Her 11-year-old daughter Victoria is also an ardent and active supporter of her mother's volunteer projects.

1993

MBA Full-Time Class Champion:

Daniel Lin

Daniel.Lin93@rotman.utoronto.ca

MBA Part-Time Class Champion:

Kathryn Beaton

Kathryn.Beaton93@rotman.utoronto.ca

1994

MBA Full-Time Class Champion:

Glenn Asano

Glenn.Asano94@rotman.utoronto.ca

MBA Part-Time Class Champion:

Cheryl Young

Cheryl.Young94@rotman.utoronto.ca

Liang-Hsuan Chen is a lecturer of accounting in the department of management at the University of Toronto at Scarborough (UTSC). Prior to her current appointment at UTSC, she was an accounting professor at Humber College. On June 1, 2005, she received her PhD from the Ontario Institute for Studies in Education, and she was elected to the Board of Governors of the Certified General Accountants Association of Ontario. She was profiled in a North American Chinese newspaper, the *World Journal*, on August 31, 2005.



Stewart Hui has set up a business consulting company in Hong Kong called Macausmart International Limited. The main focus of the business will be in Macau. During the last 10 years, Stewart has developed his career in research and management consulting in Hong Kong, working as an analyst in an investment bank and a publicly-listed company, and a consultant in a private financial enterprise. In 2002 and 2003, he was invited by The Hong Kong Polytechnic University to be a visiting lecturer, teaching the undergraduate course "Research Methods". Macau "is a fantastic city of casinos in Mainland China and is well-known as 'the Las Vegas of the East'. It has been entering a new generation and the SAR Government is facing tough challenges with the dramatic changes and rapid development of its business community. Want to invest or develop your business in Macau? Visit the Company portal at www.macausmart.com." Stewart attended the China Alumni Dinner in November and he sends best wishes to all Rotman MBA colleagues and look forwards to alumni gatherings in the future.



Chris Van Buskirk continues to develop his online application service, Nucleus, for marketing resource management and other project-based collaborative environments. He launched the 2006 version this past October. After deploying Nestle Waters Canada for all brands, in addition to M&M's Brand Candies (worldwide), Fiat International, and Commonwealth Bank, he spent the summer with his family and numerous friends at the cottage in Nova Scotia. They were delighted when **Jenn McGill** (EMBA 2000) and her husband Cedric joined them from Paris, France before moving off to South Africa. Chris and Chantal are also proud to announce the birth of Catherine, on January 1, 2005. She

joins her sister, Elisabeth as a matching New Year's pair: "E was born on December 31, Y2K-1 – yes, 1999!... what are the odds?" And it wasn't planned – Catherine surprised them by arriving 3 months too early! "All is well after a bumpy ride. Chantal has returned to work as director of parliamentary affairs for the Liberal's Government House Leader in Ottawa... so never a dull moment on the home, business, and political fronts!"



1995

MBA Full-Time Class Champion:

Nick Strube

Nick.Strube95@rotman.utoronto.ca

MBA Part-Time Class Champion:

Darlene Varaleau

Darlene.Varaleau95@rotman.utoronto.ca

Julie Kristof reports, "Great to see all of you at our reunion! What an amazing time and we all look HOT! Anyways, after a wonderful year at home with my son Alex, I am returning to work as a strategic planner at Cossette Atlantic here in Halifax. I've been busy during mat leave with a number of fun projects including producing a live auction for a wonderful fundraiser for the Northwood Foundation, a seniors care facility. I also completed my first Sprint triathlon last spring. Class of 1995, I wish you and your families all the best!"



Megan Peart, Christianne Moretti
and Julie Kristof

Kevin Lobo has been promoted to the position of president at Johnson & Johnson Medical Products, Canada (see story, page 30). Kevin was previously the vice president of finance and chief financial officer for McNeil Consumer & Specialty Pharmaceuticals and Ortho Women's Health & Urology. Kevin brings more than 18 years of finance and management experience to his new role. Prior to joining McNeil, he served as vice president and general manager for Rhodia's Specialty Phosphates division in Europe, where he led a turnaround and restructuring of the business which resulted in a return to top-line growth. Prior to that, he progressed through a series of leadership positions of

increasing responsibility at Kraft Foods and Unilever in Canada.

1996

10YEARS – Can you believe it??

Don't miss our 10th Reunion Dinner – June 1, 2006, at the Rotman School
More details coming soon.

Watch here for more info on a pre-Reunions Thirsty Thursday this winter.

MBA Part-Time Class Champion:

Daisy Azer

Daisy.Azer96@rotman.utoronto.ca

Mark Wiseman was appointed vice president, private investments at CPP

Investment Board. Mark will direct the team managing the private equity and infrastructure investments of the Board. He was most recently responsible for the private equity fund and co-investment program at the Ontario Teachers' Pension Plan. In addition to his Rotman MBA, Mark has a BA from Queen's and a Law degree from the University of Toronto. He was also a Fulbright Scholar at Yale University where he obtained a masters degree in law.

1997

MBA Full-Time Class Champion:

Burke Malin

Burke.Malin97@rotman.utoronto.ca

MBA Part-Time Class Champion:

Rotman Graduate Shares Technological Innovation Award in Pharmacy Practice



Pharmacy Practice Magazine recently awarded its Commitment to Care Award for Technological Innovation to the **Drug Information and Research Centre (DIRC)**. Leading DIRC is director, pharmacist and Rotman alumnus **Scott Gavura** (BScPhm '93, MBA '98). The award, open to pharmacists across Canada, was awarded for the multiple innovative uses of technology in a drug information setting to improve medication use and patient care.

As director of North America's largest pharmacist-operated drug information centre, Gavura leads a team of 20 pharmacists and support staff to respond to over 70,000 inquiries per year from health professionals and

the public. DIRC's services include an inbound call centre, several drug review publications, educational programs, services for the pharmaceutical industry, and education of graduate pharmacists in drug information provision.

DIRC started as a small drug information service serving Ontario pharmacists at the (now **Leslie Dan**) Faculty of Pharmacy in the mid-eighties. After moving to the **Ontario College of Pharmacists**, the service moved to the **Ontario Pharmacists' Association**, the not-for-profit group representing pharmacists in the province. Since moving to the OPA, DIRC has grown steadily in both capacity and scope as it has continued to respond to the need for unbiased, evidence-based advice on medication use.

"Extracting useful information from the medical literature is an important part of decision making for health professionals. However, this process can be compromised by the time restraints faced in busy practices. We offer a call centre to support the decision-making process and enhance the appropriate use of medications," notes Gavura. DIRC's focus is what it characterizes as point-of-care knowledge translation: effectively identifying and translating evidence from research into something useful to the recipient, and delivering it on demand – typically at the point of care.

The awards committee recognized DIRC's numerous technological innovations, including its innovative call documentation software, its in-house knowledge databases, unique call handling algorithms, and sophisticated call

management software. "We provide solutions to improve medication use" said Gavura. "As the largest service of its kind, but operating a unique service, we couldn't rely on external vendors to deliver solutions to meet our needs – so we developed them in-house."

"Our clients want information urgently, so we've developed our service to respond far faster than any other research service that exists. And our pharmacist drug information specialists can link information to a caller's need, often faster than the caller can find it themselves."

One of DIRC's largest clients is now the Ontario Government, where DIRC provides pharmacist support directly to the public as part of the **Telehealth Ontario** service. Callers with medication-related questions are seamlessly transferred to a DIRC pharmacist by the Telehealth nurse.

"DIRC is a truly innovative organization that helps improve patient care by enhancing access to evidence-based information on medications," says pharmacist and Rotman alumnus **Zubin Austin** (MBA '94), Assistant Professor at the Leslie Dan Faculty of Pharmacy.

Gavura joined DIRC in 2003, after four years with the **Ontario Ministry of Health and Long-Term Care**, where he managed the Ontario Drug Benefit drug submission and review process. His background includes work in both hospital and community pharmacy, and he continues to maintain an active practice at his local pharmacy.

Nancy Crump

Nancy.Crump97@rotman.utoronto.ca

After three years as a consultant with Towers Perrin in Toronto and New York, **Clayton Claveau** joined German automotive engineering company **Hygrex-Spher Industries** in 2000, heading the supply chain efficiency team. He was named COO in 2001/2002 and is currently a member of the board of directors. Clayton and his partner of 15 years reside in Toronto and enjoy a winter home in Brazil. Clayton would like to say hello to all Rotman Alumni and faculty, especially **Trevor Rodriguez** and his wife Tomoko. "Cheers!"

1998**MBA Class Champion:****Mari Iromoto**

Mari.Iromoto98@rotman.utoronto.ca

Sanjay Dhar is a consultant in the New York offices of Deloitte Consulting, specializing in new product development and various areas of supply chain management. He lives here in Toronto with his wife, Monica, and 6-year old Rhea, and sent along a family picture from a trip to the



Kawarthas in the fall.

Molline Green is vice president, corporate communications for Sweetpea Baby Food, a company recently launched by her daughter, Eryn Green and business partner, Tamar Wagman. Sweetpea is an organic frozen baby food company selling frozen baby food in major grocery stores and health food stores throughout the GTA and Eastern Canada. Eryn is married to another Rotman graduate, **Adam Bekhor** (MBA '01). When not working, Molline and her husband of 36 years, David, take bicycle trips to far off places. They spent a month in the saddle cycling from Hanoi to Ho Chi Minh City and most recently cycled for a month seeing the back roads of Japan. They are creatively

planning their next adventure, although Sweetpea is making life very busy.



Andrew (Drew) Ness has recently relocated from Guelph to the U.A.E. He has joined the Higher Colleges of Technology as a campus registrar in the emirate of Fujairah. Drew, Lorraine and their three young children are busy planning travel throughout the region during the semester and summer breaks, including a trip to Thailand in January.

1999**MBA Full-Time Co-Class Champions:****Lenore Macadam**

Lenore.Macadam99@rotman.utoronto.ca

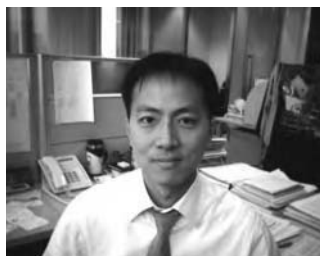
Aran Hamilton

Aran.Hamilton99@rotman.utoronto.ca

MBA Part-Time Class Champion:**Louisa Yue-Chan**

Louisa.Yue-Chan99@rotman.utoronto.ca

Eddie Chan is a manager at Sumitomo Corporation Equity Asia in Hong Kong.



Scott Hickey and his wife Camille celebrated the birth of their second son, Matthew, on May 27th. Professionally, Scott was recently promoted to the position of associate vice president, corporate planning and strategic initiatives at Gamma-Dynacare Medical Laboratories, where he has worked for the past five years, most recently as director of marketing and sales. He's also actively involved as a member of the Board of Directors of the Guelph Community Health Centre.

Lenore MacAdam is completing her second year as controller and director of human resources at Retail Ready Foods Inc. in Mississauga. Outside of work, Lenore is pursuing a CHRP designation, and volunteers at several community organizations, including the North York Women's Centre, the 519 Community Centre and Pride Toronto. Lenore has also accepted a position on the Rotman Alumni Board of Directors. Rather than wait until 2009, Lenore has decided to organize a 7 1/2 year reunion for the full-time class of 1999, in either October or November of 2006. If anyone has any suggestions or ideas for the date/location of the reunion, please send her an email.

2000**MBA Class Champion:****Mitchell Radowitz**

Mitchell.Radowitz00@rotman.utoronto.ca

Patrick Chang is a senior product line manager at Wily Technology, a privately-funded enterprise software company based in Silicon Valley. The company has grown from a startup with less than 20 customers to more than 400 customers worldwide, and its revenue has jumped 10-fold during the last four years. Patrick currently manages a team of product managers and is responsible for defining the future product strategy of the company. He and his wife recently moved into their first home in Sunnyvale, CA and were expecting their first child in November 2005.

Henry Kwok is the analyst responsible for the health care sector within the Global Equity Research Team of RBC Asset Management. He also works as a part-time pharmacist at Shoppers Drug Mart. Henry lives in Mississauga with his lovely wife, Anne, and his "trouble-making but very cute" one-and-a-half year-old daughter, Carissa.

Jonathan Lister was recently appointed vice president, audience at AOL Canada Inc. Audience is a newly formed team combining media sales and publishing into a division focused on offering interactive tools and timely Canadian content to consumers while delivering higher advertising

returns. Having previously served as senior director, media sales, Jonathan now oversees strategy for web audience expansion, advertising sales, and Canadian online publishing across the AOL properties.

Meredith Low has been at CIBC since 2002, starting out in commercial banking and now in retail markets. She is currently a director in the strategic planning and initiatives group for the retail side of the business. She and **Adam Sadowski** have bought a house in downtown Toronto and are still painting after the first five months of home ownership. Meredith continues as a Board member of Canadian Crossroads International (www.cciorg.ca), an innovative international development organization which facilitates partnerships between non-governmental organizations in Canada and in the developing world to advance human rights, eliminate poverty, and reduce the impact of HIV/AIDS.

2001

MBA Full-Time Class Champion:

Daniel Zinman

Daniel.Zinman01@rotman.utoronto.ca

MBA Part-Time Co-Class Champions:

Lisa Sansom

Lisa.Sansom01@rotman.utoronto.ca

Walter Sophia

Walter.Sophia01@rotman.utoronto.ca

Tracey Black works at RBC as head of applied innovation and research. If you have an innovative product that is relevant to financial services, give her a call. She has been in this role since January 2005. Her three children who are growing like weeds and making her feel like a real grown up. The baby she had while doing her MBA turned five on Thanksgiving this year! Tracey is a board member (volunteer) of Colorectal Cancer Screening Initiative Foundation. Colorectal Cancer (CRC) is the second most deadly form of cancer among men and women, second to lung cancer. "The good news is that colorectal cancer is highly treatable if caught early: 95 per cent of colorectal cancer deaths are thought to be preventable. CCSIF's mandate is to increase awareness of the preventability of colon cancer and to encourage people to get screened. If there is no history of colon cancer in the family, any-

one turning 50 should give themselves an appointment for a colonoscopy as a birthday gift." For more information on CRC and CCSIF, please visit www.screencolons.ca.

Leslie Gage was recently promoted to director of marketing at Smucker Foods of Canada Co. Smucker manufactures and markets several well-known food brands such as Smucker's Jam, Bick's pickles, Robin Hood flour and Crisco oil and shortening. When not working, Leslie and her husband Rick are both avid travellers and are looking forward to visiting Greece on their next vacation. "A big hello to Group 4 and the class of 2001. Best wishes to all."

Belinda Labatte is working as an independent consultant, having left CIBC World Markets after her maternity leave 18 months ago. She develops investor presentations and other financial documents and also does speechwriting for CEOs for both public companies and start-ups, and is also working on other business development projects. When not busy with one of her clients, Belinda is actively working with an investment partner on acquiring a spa business for her to run – a long term objective of hers. If anyone is interested in a start-up, let her know! Belinda's flexible work schedule allows for lots of time with her 18-month old daughter, Dahlia. Husband Neil is doing well. "Please feel free to get back in touch, especially those in career transition, new MBA mums and anyone else I went to school with. Best to everyone."



Since graduating from Rotman, **David Rudnick** has been working in Toronto as an associate director in Bell Canada's System and Technology organization. David and his wife Stephanie, and big

brother Ryan welcomed their second boy, Jeremy Martin Rudnick into their family on August 23, 2005.

2002

MBA Full-Time Class Champion:

Rizwan Suleiman

Rizwan.Suleiman02@rotman.utoronto.ca

MBA Part-Time Class Champion:

Jay Nicholson

Jay.Nicholson02@rotman.utoronto.ca

A Spotlight on the Class of 2002

Once a year we focus on updates for a particular graduating class. This time we are pleased to feature the class of 2002.

Lekan Adetunji – "Soks and I were blessed with a beautiful baby girl, Mayo (means Joy) on December 23, 2004. Nothing can beat the experience of watching her grow, and babies sure grow fast! Mayo's preoccupation when she started crawling was with my bookshelf and attempts to "read" my books, magazines, and notes. An aspiring future Rotman student indeed!"



David Atnip is working with an HR consulting firm in Shanghai. The firm's clients are law firms and legal divisions of commercial enterprises. All consultants are lawyers or legally trained. All are Chinese except for David. Now in its second year, the firm's core business is recruiting. As Director of Training, David develops and delivers training programs for legal staff and lawyers. With growth the firm expects to broaden its offerings to any services a law firm or legal division should consider

outsourcing. It's a niche with no competition. LawInn is the first human resource consulting firm in mainland China specializing in service to legal service providers. www.lawinn.net

Shimmy Brandes is VP finance at Master Plan Management Limited. Master Plan Management is primarily involved in land development and asset management. Shimmy continues to run ShimmyFoods, manufacturers and purveyors of fine Indian condiments – get in touch for all your pickle needs. Since graduation the Brandes family has forged ahead with an aggressive growth strategy and has welcomed two beautiful girls – Samara and Leah.

Matthew Chan, Rotman's Vancouver Regional Envoy, is operating a mortgage consulting business with Mortgage Centre Canada (MCC) in Richmond, BC. MCC is a division of CIBC Mortgages Inc. which is a member of the CIBC group of companies. See www.mortgagecentre.com for more details. When not working, Matthew is enjoying his time with his two children: Brendan and Ashley. Matthew still misses Toronto and wishes to say hello to the 2002 class. Matthew enjoys seeing Rotman friends and would love to meet up with anyone who comes by to the West Coast.

Greg Cheung is currently working in risk management at Scotiabank in Toronto. He and his wife Judith are overjoyed at the birth of their first child on August 16, 2005: Madeleine Beatrice Cheung.



Wendy Chong Edgell is a presentation skills consultant with Podium, and enjoys working with clients such as Deloitte, KPMG, various law firms and Rotman, too! Wendy and her husband Andrew were eagerly anticipating the arrival of their first child on or around New Year's Eve. It may

be time to pick up some of that Rotman baby gear, if it's still available in the shop. They are keen to get the baby into the ultimate Frisbee scene as soon as possible.

Since graduation, **Neil Danics** has been a portfolio manager at Deutsche Suisse Asset Management, a European-based hedge fund. After working in the regional office in France for two years, Neil and his family relocated to the regional office in the British West Indies.

Jean-Christophe Depraetere, aka JC, is a director in the strategic initiatives and business management, finance group at CIBC. With his wife Aurelie and son Sylvain, JC recently moved to his first house and the happy family now enjoys the pleasures of plastering and painting. Aurelie (Resch) continues to run her business, and recently published her second book of short stories in French, *Obsessions*, and her tales for children will be released this fall. Check www.livres-disques.ca/livresdisques/home/auteur_detail.cfm?id=2872 for more details.

After two years in the UK, **Julija Ezergailis** has returned to Toronto with her husband, Owen Shaw. Julija is now working at Royal Bank as a Marketing Manager for Visa cards. Both Owen and Julija are looking forward to settling down and enjoying the beautiful Canadian seasons.

Haresh Gharegrat has recently joined Sarafinchin Associates in Toronto as senior engineer, after having spent two years in beautiful Sudbury, Ontario. Haresh feels privileged to have experienced the “real” Canada, and the natural pristine beauty of Sudbury. His new role allows him to express the “nerd engineer” in him as well as get involved in marketing and business development activities.

Sarit Goldman – “Work is my Temple. Go hard, play harder. Countless promotions, too many to mention. Each week a new marathon to run and a new mountain to climb. And never without my Blackberry. My son David (6 months) and my husband Neil make it all worthwhile. We live peacefully in Toronto.”

Mason Granger is director of research in the Toronto offices of Middlefield Capital Corporation, focused on the analysis of income trusts. Middlefield is a key investor, with \$4 billion of assets under management, the majority of which is invested in income trusts. On a personal note, Mason and his wife Christine have just moved into a house in order to accommodate the additional space required by another family member: the Granger family recently celebrated the first birthday of their daughter Victoria, who was born on October 10, 2004.

Lesley Grice – “While I enjoy the challenging nature of my job, what I love most about it is it is flexible enough to allow me to do my other job – Professional Ironman Triathlete. Although I have been dealing with some lingering injuries since early 2004, I have improved enough to return to competition. I finished 9th at Ironman Brazil in May '05, far better than expected, since it was very early in the season for a Northerner. On August 28th I competed at Ironman Canada in Penticton (where '02 classmate Cara Barr did her first IM), then Ironman Florida in November. I have attached a photo from Ironman Brazil.”



David Giuffrida is founder and president of Adavius Inc. (www.Adavius.com), offering strategic computer services to professionals. He has recently completed projects with several law offices, a consulting firm, and a non-profit agency. One aspect of Adavius (www.Able.Adavius.com) helps people with disabilities to use computers. David recently equipped a young quadriplegic man with technology to let him dial a phone unassisted. An IT project in a school for autistic children was one of the most pleasant and rewarding to come his way. Drawing on his past experience in law and

mental health, David has also been appointed as a part-time legal member of the Ontario Review Board. The ORB conducts annual reviews of people who were found at trial to be not criminally responsible on account of mental disorder. David's children are grown and live on their own. His son just got a miniature pot-bellied pig to keep his pit bull company. Such developments help mitigate the sense of loss a parent feels when children leave home.

Ewald Jobst and **Sonja Hilger** got married in May 2004 and enjoyed their honeymoon in Thailand. They welcomed their daughter Lisa in April 2005. Sonja is now on maternity leave and Ewald is a corporate consultant at SPAR, which is Austria's biggest food retail chain.



This past year, **Marice Hart** married Benjamin Shinewald, also a UT alum (Law '02), in Winnipeg and moved to Ottawa.

Ben Isaacson is an associate at CIBC World Markets in Toronto, and recently completed the Chartered Financial Analyst program. With CFA studying out of the way, Ben now spends his free hours enjoying the suburban life with his wife Karen, and their son Ethan Henry, born November 30, 2004.



Gary Lew is an investment analyst (fixed income) with AIM Trimark Investments in downtown Toronto. He recently vacationed in Europe for the first time, spending two weeks in northwestern Germany and one

in Southern France. He also recently traveled to Western Canada for the umpteenth time for his annual family visits in Saskatchewan and Alberta. Earlier this year, he moved away from the Harbourfront area, where he had lived since graduation, to a new location closer to work.

Jim MacNair was recently promoted to general manager of The Home Depot location in Windsor, ON. He and Mark just moved into their new home in July. All alumni are welcome to come for a dip in the pool if ever in the neighborhood.

Dean McLarnon is a finance manager with Frito-Lay Canada. Dean and his wife Diamando are living in Georgetown, Ontario and are the proud parents of Elias Zachary McLarnon, who celebrated his first birthday in August. The McLarnon family is planning a trip to Ireland to introduce the "wee fella" to the rest of his extended family, and also to a pint of Guinness! "Warm wishes to the rest of the class of '02!"

Ed McNamee joined CIBC after graduation to participate in their Finance Management Development Program. Ed's current role as director of strategic planning and analysis with Wealth Management Finance provides an excellent opportunity to continue building his knowledge of the business. Although a proud Scot, Ed was also very pleased to recently obtain his Canadian Citizenship at a ceremony in Toronto.

Since graduating from Rotman, **Atiq Mutlib** has been working with Manulife Financial. He graduated from Manulife's Leadership Development Company Wide Rotational Program for MBA graduates in 2004 by successfully completing four six-month rotations in Manulife Capital, Corporate Treasury, Financial Strategy, and North American Fixed Income. He then joined the Investments Division as manager, financial analysis and projects. The past year has kept him busy managing several projects, involving the post-merger integration of John Hancock with Manulife Financial.

Guillermo Obregon and his wife still live in New York, where he works at Tradition North America as a manager for emerging markets derivatives. They celebrated their one-year wedding anniversary last June. To celebrate it, they are planning a trip to Egypt and Turkey next September. "No babies for the moment! Too early to get into trouble!"

Randal Slavens is currently a treasury manager in the Funds Transfer Pricing Group within TD Bank's Treasury & Balance Sheet Management Department. Randal and Shirley (whom he met out in Halifax at MBA Games, 2001) have thoroughly enjoyed their first year with little Samara Paige.

Adam Siskind is a manager in Toronto with ZS Associates, a global management consulting firm specializing in sales and marketing strategy, operations and execution. See www.zsassociates.com for more details. Sleep has become a premium for Adam and the Siskind family since they welcomed their first child, Abby, into the world in February 2005, and Adam says his golf game has suffered tremendously.

Jamie Stiff was recently promoted to principal at Genesys Capital Partners Inc., where he has been working since graduating from Rotman. Genesys Capital Partners is a Canadian venture capital firm focused on creating and building companies in the high-growth sectors of health care and biotechnology (www.genesyscapital.com). In 2005, he was appointed director to both the Matregen Corp. and Stempath Inc. boards of directors and serves as an observer on the board of NeurAxon Inc. He and his wife enjoyed a whirlwind tour of Italy this past July, and when not at work, they can be found renovating their new home.

Sheldon Szeto recently joined Retirement Residences Real Estate Investment Trust ("Retirement REIT") as a financial analyst. Retirement REIT is the largest owner and operator of retirement and long-term care homes in Canada.

Sheldon and his wife **Flora Chen** (MBA'01) settled down in Richmond Hill last December with their son William and in May, welcomed a new baby girl, Isabelle.



of TD Bank Financial Group in Toronto. In May 2005, he and his wife **Cynthia Ying Ding** (MBA 02) welcomed their first child,



Tom Varesh is an equity research associate at Canaccord Capital in Toronto – covering large cap companies in the aerospace and transportation sectors. In the spring of 2004, Tom ran as the Conservative Party candidate in the Canadian federal election in his home riding of Scarborough Guildwood. “While I will not be a candidate in the next federal election, I do want to thank everyone in the Rotman community who supported my campaign both financially and by being a volunteer. I was deeply touched ... thank you.”

Since graduating, **Gang Wei** has moved back to China to work for BMW's Beijing office as a business development manager in financial services.

Rebecca Wickens joined Axiom Law Corporation in January of 2005 after several years as a student and associate at Blake, Cassels & Graydon LLP. Axiom is a British Columbia-based law firm that advises public and private companies in the resource and technology sectors and specializes in corporate finance, mergers & acquisitions, project financing, technology and licensing and joint venture transactions. Rebecca and Mark Schmid celebrated their first anniversary on August 28, 2005.

Elena Yampolsky has been working as a consultant with Deloitte in Toronto since graduation, in their enterprise applications group.

Zhuoyu Joey Yuan is working as a manager in the Risk Analytics Corporate Office

Kristen (“= net risk” if you like anagrams”).
2003

MBA Full-Time Class Champion:
Pamela Beigel

Pamela.Beigel03@rotman.utoronto.ca

MBA Part-Time Co-Class Champions:
Jennifer Chan

Jennifer.Chan03@rotman.utoronto.ca

Rajesh Dixit

Rajesh.Dixit03@rotman.utoronto.ca

Jim Skinner is controller at EcoWater Canada Ltd., which manufactures residential and commercial water treatment equipment such as softeners, conditioners, and countertop drinking water filters.



2004

MBA Full-Time Class Champion:
Maya Lange

Maya.Lange04@rotman.utoronto.ca

MBA Part-Time Class Champion:
Steven Lane

Steven.Lane01@rotman.utoronto.ca

Lesley Beneteau and **Joshua Su** tied the knot on February 26, 2005. “This was just one of a string of events that haven't slowed us down since we graduated last

July. Joshua landed his dream job training on a 747 jet with China Airlines in March '05 and relocated to Taiwan at the end of May, only one month after moving into our new house in Markham. I was just recently offered a transfer to my company's Taiwan operations, and will be joining Joshua in Taipei at the end of October to lead a new project for a year and a half...how quickly things change when the stars align. We send our heartfelt wishes out to all our colleagues and would love to hear your news by e-mail. Please keep the updates coming. Anyone looking for a place to stay in Taipei is welcome! Please let us know how you're doing.”



Curtis Van Walleghem was married to Cara Aldred on July 9, 2005.

2005

MBA Full-Time Co-Class Champions:
Fiona Cunningham

Fiona.Cunningham05@rotman.utoronto.ca

Tanbir Grover

Tanbir.Grover05@rotman.utoronto.ca

Ted Fill is an associate research analyst in the Toronto investment banking offices of UBS, Europe's largest bank by assets. Ted uses his background in computer engineering to cover companies in the high-tech industry.

Heather Graham married Bryan McCourt on July 23, 2005 in Toronto. They had a wonderful honeymoon in Spain and France before coming back to life in Toronto. Heather joined Medtronic of Canada as a marketing manager in September.



Tanbir Grover recently joined Coca-Cola Bottling as part of their emerging leaders program. Tanbir continues to dragon boat with 25 other people; their team came in first at the Ontario Place race. Tanbir also recently joined the Family Services Association (FSA) of Toronto as a member of their Community Impact Committee, which serves to provide guidance to the FSA board with respect to effectively serving the Toronto community.

Stewart Hayes has set up his base in London, England, where he's working with HSBC in Bank Performance Analysis, "getting paid to figure out how to make the company function more efficiently." Outside of work, he's picked up running, both seriously in the London Marathon, and with some fun runs such as the recent Great Gorilla Run (www.dianfossey.org/greatgorillarun/faq.html.) He continues to play rugby for HSBC, tennis and ultimate Frisbee, and is enjoying Europe to its fullest, with golf trips to St. Andrews (Scotland) and other parts of Europe. If you are ever in London, Stewart would love to take you out for a traditional English Pint. Cheers.



Michael Holland graduated with the class of 2005 and is working in investment banking for Macquarie North America in Toronto. Mike and Eva got married in June of 2005.



Sam Kohli is an appraiser/valuation consultant who runs a small independent firm. His primary clients are the financial institutions, accounting firms and end users such as businesses and corporations. Sam has credentials such as senior appraiser with the American Society of Appraisers, and is working on completing the AACI with the Appraisal Institute. Sam is single, lives with his family, and continues keep in touch with members of the class of '05. Sam wishes everyone a wonderful time in their new careers, and hopes to keep in touch on an ongoing basis. "Drop me a line anytime!"

Chris Matthews "plays" in the global marketing department of Specialized Bicycles, in Northern California. He commonly writes about himself in the third person, and rides his bike every day at lunch. Recent (and sometimes work related) adventures include

the High Sierra Century ride at Mammoth Mountain, mountain biking in the Santa Cruz mountains, road riding along the coastline, wine tasting in Napa, a tour of the Lost Coast Brewery and surrounding cliffsides, and five days in Tuscany. Currently listening to: Death Cab for Cutie, Ozomatli, Slackstring, and Sweatshop Union.



Strahan McCarten and **Heather Sifton** are happy to announce their engagement.

Rotman Hosts First-Ever Speed Networking Event

On October 19th, close to 50 EMBA alumni from 2002 to 2005 participated in Rotman's first ever Speed Networking event. Speed Networking is a new form of networking that offers face-time with a large group in a short time. It allows a fixed structure where every participant is allotted 3 minutes with everyone in the room – which enabled participants to form a first impression of a range of business contacts they might have otherwise never met.

Maria Lundin, EMBA20, came up with the idea of 'Speed Networking' after she herself participated in a similar event last year. Lead by the Co-Class Champions of EMBA20, **Anita Windisman** and **Rob Carver**, the event was a collaborative undertaking, with the Class Champions from the various sections contributing to the planning, in particular **Ann Stafford**, EMBA23. Rotman provided the resources and played a key role in executing the event with help from **Michelle Zathureczky**. Based on the success of this event, it is anticipated that the same format will be used for networking sessions for other classes and industry segments.



Lead organizers from EMBA20: **Maria Lundin**, **Rob Carver**, **Anita Windisman**



In foreground: **Scot Hutchinson** (EMBA20) and **Matthew Glogowski** (EMBA24) network.

The proposal took place in Singapore on the last night of their three-month trip across Southeast Asia. Strahan surprised Heather with a ring he'd been carrying with them since they left. Pictures from the trip can be seen on their blog, spaces.msn.com/members/sandhasiatrip. The big day will be in September 2006.

After graduating earlier this year, **Anusha Shanmugarajah** spent the summer traveling. After wandering the jungles of South Africa, reliving grand British colonial times in Singapore, and a life-altering experience in the devastated Tamil homeland of Jaffna, Anusha returned to settle into her new job at Research in Motion in the tranquil city of Kitchener-Waterloo. While work is keeping her busy, she has maintained her commitment to volunteer activities; she is very grateful for her MBA summer internship which led to her election to the Board of the Daily Bread Food Bank last year, and was ecstatic to be recently nominated to the Executive of the Board. Anusha continues to be involved in other not-for-profit organizations and is looking forward to renewing her role as a Rotman NeXus mentor in the upcoming year. She will also be increasing her involvement in helping her father in his campaign to build a library for orphaned children in his homeland. Nush wishes the best to her classmates, and hopes that everyone is living their dreams.

Executive MBA

1985

Class Champion:

Bob White

Bob.White85@rotman.utoronto.ca

Peter Lo was recently named to the technology advisory board of Hy-Drive Technologies. Peter is the chairman of Rumble Automation Inc., and also serves on the Hy-Drive's board of directors. The Advisory Board will provide counsel and guidance to the company as it finalizes the commercialization of its proprietary, patented hydrogen-generating system for the trucking industry, and continues devel-

opment of the technology for strategic verticals. In addition to his Rotman MBA, Peter has a Bachelor of Applied Science in Engineering Physics from the University of British Columbia. He is a member of the Institute of Electrical and Electronics Engineers and the Association of Professional Engineers of Ontario.

1987

Class Champion:

Vitor Fonseca

Vitor.Fonseca87@rotman.utoronto.ca

1989

Co-Class Champions:

Peter Murphy

Peter.Murphy89@rotman.utoronto.ca

Bill Brown

Bill.Brown89@rotman.utoronto.ca

Ron Mustill recently took a leave of absence from his Canadian business, Picano and Mustill Claims Services, to do disaster relief adjusting in Florida. He is residing in Sarasota with his wife Cynthia and son Elliot, who is a national-level tennis player.

1992

Class Champion:

Chris Hill

Chris.Hill92@rotman.utoronto.ca

Scott Dudgeon is executive director of the Canadian Collaborative Mental Health Initiative – a two-year project with a goal of strengthening the delivery of mental health services in the primary health care sector through interdisciplinary collaboration (www.ccmhi.ca). He and wife **Nancy Dudgeon** (GEMBA '00) continue to live in Toronto. Sons Andrew and Geoffrey are now through university and growing careers of their own. Scott is on the Board of Trustees of Bloorview MacMillan Children's Centre – a University of Toronto affiliated childrens' rehabilitation hospital.

1993

Class Champion:

Andy Hofmann

Andy.Hofmann93@rotman.utoronto.ca

1994

Class Champion:

Andrew Stewart

Andrew.Stewart94@rotman.utoronto.ca

Larry Baldachin, e-Executive in Residence at Rotman, and a director of the School's Advancement Board, has recently taken a new position as senior manager of professional services for Dell Canada.



After eight years of building her reputation in Longevity Medicine in her practice in Mississauga, **Elaine Chin** merged her practice into Scienta Health, a company she co-founded in early 2004. Scienta Health's mission is to empower and coach its clients in taking charge of their own wellbeing by regularly benchmarking their health and actively pursuing appropriate, personalized health strategies. Co-founded with Peter Cooper, MBA (Harvard '75), Scienta Health is one the most progressive preventive health care programs in North America, offering both clinical and Web-based access to leading-edge diagnostics, including genetic testing, the latest in integrated preventive therapies, and a proprietary, branded range of customized supplements. Clients receive a comprehensive, easily understandable HEALTH SCORECARD™ and actionable HEALTH COACHING PLAN™ as tools to drive their personal health strategies. For more, visit www.scientahealth.com. Elaine is currently a member of the Trillium Health Centre medical staff and Foundation Board.

Dave Codack is on the move again, joining Strategic Vista (SVI-TSX) as president and COO in February 2005, leaving iSTARK after five years as president and

CEO. "As Anya and I do not have much to do, we decided to complicate our life with a new addition. Our little darling will be delivered by Santa Claus on December 25th. I can't wait until the 15th Anniversary Class Reunion – who is planning this?"

1995

Class Champion:**John Ramdeen**

John.Ramdeen95@rotman.utoronto.ca

Mike Groat has been a quality assurance executive for IGS Canada since August 2004. He and Cindy celebrated their 25th wedding anniversary in May of 2005, the same month that Mike celebrated his 26th anniversary with IBM. Daughter Michelle is in her fourth year at York, and Neil is in his 2nd year at Waterloo. Cindy is very busy working for Transamerica.

John Ramdeen is a unit executive, sales operations, with IBM Canada, and in 2005, celebrated his 26th year with IBM. John is on the Finance and Programs Committee of the Society of Management Accountants of Ontario (CMA) and was recently recognized by the Society as a CMA Fellow, which is a special merit award given to CMAs for their distinguished accomplishments in the field of Management Accounting, as well as for their Community service. John recently took on the role of class champion for EMBA class of 1995.



John (centre) and family

1996

Class Champion:**Jon Waisberg**

Jon.Waisberg96@rotman.utoronto.ca

Kelly Bray has produced her first feature film, *Whole New Thing*, with Camelia Frieberg. The film had its world premiere at the Toronto International Film Festival on September 12, 2005 and was the Atlantic Gala at the Atlantic Film Festival.



1997

Class Champion:**Jennifer Hill**

Jennifer.Hill97@rotman.utoronto.ca

Greg Cunningham is the director of supply chain optimization at Maple Leaf Frozen Bakery, the largest manufacturer and distributor of frozen bread in North America. The Cunningham family welcomed their second child, Matthew, into the world on August 5.

1998

Class Champion:**Ashok Sharma**

Ashok.Sharma98@rotman.utoronto.ca

1999

Co-Class Champions:**Mo Mauri**

Mo.Mauri99@rotman.utoronto.ca

Desmond Preudhomme

Desmond.Preudhomme99@rotman.utoronto.ca

2000

Co-Class Champions:**Jennifer McGill-Canu**

Jennifer.McGill00@rotman.utoronto.ca

Bruce Lawson

Bruce.Lawson00@rotman.utoronto.ca

2005 has proven to be a year of major transition for EMBA 2000's Co-Class Champ **Bruce Lawson**. "After working on a four-and-a-half year change management project at Foresters, my contract finally came to an

end, and I was ready to move on. For the past two years, I have been on the Board of Casey House Foundation. Casey House, the world's first hospice for people affected by HIV/AIDS (opened in 1988), is a 13-bed facility fully funded by the Ministry of Health & Longterm Care. The Foundation raises money to provide hospice programs in the community, as well as complementary therapies to patients in the hospice. Since arriving in mid-July, I have been putting my EMBA skills to good use, analyzing how the Foundation has been doing over time, and making recommendations on areas where we can improve our fundraising programs. Before I took on this position, I had already volunteered to co-chair Casey House's 'Art with Heart' fundraiser – a charity art auction of Canadian contemporary art. Over the years, Art with Heart has become one of the most successful charity auctions of Canadian contemporary art. Our catalogue is a useful barometer for collectors tracking art values. In the meantime, I am contending with the added stress of being 'homeless'; I have bought a new home, which is now months overdue, and I have been relying on 'the kindness of strangers' to keep a roof over my head since selling my previous home in July. I'm keeping my fingers crossed that the closing date they've given me will actually come to pass this time."

Jennifer McGill has been named director, strategy and marketing for Lafarge Gypsum South Africa. She and her husband Cedric Canu made the move to sunny South Africa in September. He is general manager business development for MTN, the local cell phone company managing acquisitions in French Africa. They expect to be in South Africa for three to five years and welcome all visitors!

Tanya van Biesen has joined the Toronto office of Spencer Stuart to co-lead the firm's Canadian Financial Services Practice. In this capacity she is also a member of the firm's North American Financial Services practice. Tanya comes to Spencer Stuart with over nine years of experience at a respected global executive search firm, where she worked extensively with asset management firms, banks and insurance companies in

both Canada and the U.S. Tanya began her career at Procter & Gamble. Working in both Toronto and Calgary, she held positions of increasing responsibility in sales management, culminating in a national role where she was responsible for several key product categories with some of the company's largest retail customers. Tanya graduated first in her class at Rotman and was nominated for the Governor General's Award. She received her BComm, with distinction, from Queen's University and speaks English, French and Dutch.

2001

Co-Class Champions:

Ken Hagerman

Ken.Hagerman01@rotman.utoronto.ca

Gary Ryan

Gary.Ryan01@rotman.utoronto.ca

Peter Aikins is managing the Neurovascular division for Boston Scientific Canada – the world's largest minimally-invasive device company, dedicated to the treatment of heart disease and brain aneurysms. Linda and Peter's family of four, which recently moved to Unionville, includes Maddie, five, and Connor, a rambunctious 3-year old. Below is a picture of the family taken recently near the cottage on Georgian Bay. "My son is quite happy the Leafs are back on the ice! Speaking of hockey, I think it's time for another EMBA hockey game! I miss watching Mike Cole skate like the wind. I wish everyone well and look forward to the next class reunion – it's been way too long!"



2002

Class Champion:

Cheryl Paradowski

Cheryl.Paradowski02@rotman.utoronto.ca

Cheryl Paradowski was named executive director of the Canadian Food Industry Council in November. The organization is responsible for addressing the human resource needs of the grocery retail and wholesale sector across Canada, including career pathing, skills shortages, recruitment and training. Cheryl would love to hear from any alumni who might have links to this sector.

2003 (EMBA19)

Class Champion:

Jennifer Figueira

Jennifer.Figueira03@rotman.utoronto.ca

Bernard Lee is an associate at Deutsche Bank in New York, working in the DB Global Real Estate Group – the largest real estate investment fund in the world, with nearly US\$60 billion in assets under management. Bernard specializes in acquisitions, advisory and valuations of global real estate assets, and infrastructure investments. He sends his "regards to the Class of 2003 from NYC with much love...especially for Beatrix Dart," his "spiritual mentor."

2003 (EMBA 20)

Co-Class Champions:

Anita Windisman

Anita.Windisman03@rotman.utoronto.ca

Rob Carver

Robert.Carver03@rotman.utoronto.ca

In March of 2005, Co-Class Champion **Rob Carver** celebrated his milestone 50th birthday with a combination of long-time friends from Toronto and Vancouver, as well as his new friends from EMBA20.



On a hot and sunny day in July, Co-Class Champion **Anita Windisman** hosted the 2nd Annual St. Chicken's Day Family BBQ for EMBA20. This yearly event is held in

remembrance of the lessons learned in Jim Fisher's leadership class from Shakespeare's Henry V, as he delivers his battle's eve speech on St. Crispin's Day.



2004

Co-Class Champions:

Fariba Anderson

Fariba.Anderson04@rotman.utoronto.ca

Paul McKernan

Paul.McKernan04@rotman.utoronto.ca

With over 20 years of experience in the technology industry, **Fariba Anderson** is experience spans the telecommunication and software sectors and includes customer service and general management. She is currently a partner with The Manta Group (www.mantagroup.ca) where she is focused on building their Governance, Compliance and Risk practice. As a management consultant, she provides executive consulting and customer advisory services to companies that are evaluating strategies for new products, services and markets. In her latest leadership roles in the telecommunication sector, as CIO of Allstream and Bell Nexxia, Fariba leveraged the power of innovative technologies to drastically reduce IT costs, and accelerate the introduction of new products and services. In the software sector, she led Compuware Corporation's software development laboratory for UNIFACE product line and serviced fortune 1000 companies in the Americas, Europe and Asia Pacific region, while based in Amsterdam, the Netherlands. Fariba is on the board of Youth in Motion charitable foundation and involved in many youth-centric mentoring and coaching programs including Top 20 Under 20 and Opportunities Unlimited.

2005 (EMBA22)

Class Champion:

Michele Henry

Michele.Henry04@rotman.utoronto.ca

James MacQueen has accepted the role of vice president, real estate and development with Cara Operations in Toronto. In this position, James will lead a team of 18 real estate and construction professionals in delivering the real estate strategy across Cara's numerous restaurant brands, including Swiss Chalet, Harvey's, Kelsey's Bar & Grill, Milestones, and Montana's Cookhouse.

Luis San Juan has left MCI and joined Fidelity National Financial, a provider of products and services to the financial services industry whose clients in Canada include RBC, CIBC, ScotiaBank, BMO and HSBC, and in the U.S., Deutsche Bank and Allstate. In his new role of customer service manager, Luis will coordinate the team that provides technical support to clients who use Fidelity's Wealthware Information Management applications to conduct their mutual funds and equities operations.

2005 (EMBA23)

Co-Class Champions:

Ann Stafford

Ann.Stafford05@rotman.utoronto.ca

Joyce Rankin

Joyce.Rankin05@rotman.utoronto.ca

David Yu is a VP of systems operations at Cryptologic, the world's largest public internet gaming software developer and supplier. Before this David worked in the Canadian mutual funds industry at AIM Trimark for 13 years and last served as the VP of IT, architecture and technology management. David is married and has one daughter. He looks forward to lots more events organized by his class.

GEMBA (Global Executive MBA)

1998

Lan Nguyen is expanding her business development portfolio in education and

renewable energy national and globally. She is planning to set up Canadian education programs and customized corporate training in Vietnam and the Philippines through partnerships with international academic institutions and business corporations. One of her projects is to set up a call centre training program in the Philippines and a Canadian campus in Vietnam. Lan sends her regards to her GEMBA'98 classmates and hopes to get their interest in a class reunion in summer 2006 in India.

1999

Class Champion:

Jim Coutts

Jim.Coutts99@rotman.utoronto.ca

2000

Class Champion:

Nancy Dudgeon

Nancy.Dudgeon00@rotman.utoronto.ca

2001

Co-Class Champions:

Margaret Evered

Margaret.Evered01@rotman.utoronto.ca

Renald Hennig

Renald.Hennig01@rotman.utoronto.ca

2002

Co-Class Champions:

Manfred Koo

Manfred.Koo02@rotman.utoronto.ca

Petra Cerhan

Petra.Cerhan02@rotman.utoronto.ca

2003

Co-Class Champions:

Michal Berman

Michal.Berman03@rotman.utoronto.ca

Susanne Justen

Susanne.Justen03@rotman.utoronto.ca

It's been an exciting year for **Jason Trussell**. In the spring Jason was promoted to assistant vice president at iGATE where he is responsible for sales and business development in Canada. In July 2005, Jason and his partner Jeff welcomed the birth of their son Austin Jeffrey Trussell. Austin and Dads are doing well (a bit sleep deprived at times). Jason has enjoyed the last three months at home with Austin.



Austin Jeffrey Trussell

2004

Co-Class Champions:

Ralf Martinelli

Ralf.Martinelli04@rotman.utoronto.ca

Brent Furneaux

Brent.Furneaux04@rotman.utoronto.ca

A mini-GEMBA'04 reunion took place in late-May 2005 when **Frank Reuter** from Germany and **David Di Felice** from Canada paid a visit to their GEMBA classmates in Austria. The Austrians, which included **Hubert Zajicek, Andreas Asamer, Werner Pamming, Günter Knogler, Hermann Kaineder, Uwe Leopold, Ralph Martinelli, Andreas Huber, and Martin Anzenberger**, did a superb job in hosting Frank and David and providing them with a comprehensive tour of Salzkammergut, Salzburg, Wachau, Vienna, and Linz. While the temperature in Austria soared to new record levels (average high of 35 degrees for the duration of the visit) for the month of May, the heat was no match for the ice cold Stiegl beers and the fantastic Wachau wines. A special thanks goes out to all the Austrian GEMBA'04s who planned and organized the various tours. All of the GEMBA'04s are looking forward to the full-GEMBA'04 reunion being planned for 2006.

Andreas Huber and his wife Andrea welcomed their twins into the world. Magdalena and Raphael were born on October 14, 2005 in Linz, Austria. All 4 are fine and extremely happy.



MBA (Accounting) / Master of Management & Professional Accounting

1994

Class Champion

Chris Hind

Chris.Hind94@rotman.utoronto.ca

1996

Co-Class Champions

Vanessa Blumer

Vanessa.Blumer96@rotman.utoronto.ca

Blake Langill

Blake.Langill96@rotman.utoronto.ca

Janet Scarpelli

Janet.Scarpelli96@rotman.utoronto.ca

1998

Class Champion

Melody Tien Grewal

Melody.Grewal98@rotman.utoronto.ca

1999

Class Champion

Jamie Ferguson

Jamie.Ferguson99@rotman.utoronto.ca

Jonah Bonn is a mortgage consultant with Ontario Wealth Management Corporation, a private equity lender that syndicates private funds for investment in

short-term real estate mortgages. Jonah continues to live and work in Ottawa.

Jamie Ferguson and fellow classmate **Marta Brisco** were married in the summer of 2002. After taking a sabbatical in 2004 to see a bit of the world, they decided to relocate to Marta's home town of Vancouver. Jamie has recently accepted a position with a leading mid-market accounting firm. He is building a personal tax consulting practice primarily in the areas of trust and estate planning.

2001

Class Champion:

Elaine Ilavsky

Elaine.Ilavsky01@rotman.utoronto.ca

2002

Class Champion:

Ali Spinner (Charyk)

Ali.Charyk02@rotman.utoronto.ca

2004

Chao (David) Qu is working in the Assurance and Advisory Department of Mintz and Company, a medium-sized accounting firm (7th largest in Canada). David received his CPA (U.S.) designation in 2004 and just finished the UFE exam this September. "Hopefully I can pass it and get a CA designation soon."

Be a Class Act: Volunteer as a Class Champion

Class Champions ensure their class remains active and vibrant long after graduation and bring the Rotman School and its graduates closer together. They help organize reunions, promote events, and keep track of their classmates' activities for inclusion in the Class Notes section of Rotman magazine. To represent your graduating class, contact the Rotman Alumni Office at (416) 978-0240, or via e-mail at alumni@rotman.utoronto.ca.

Don't miss the 16th Annual Rotman MBA Business Conference:

Rebound:

Staging a Comeback that Lasts

February 3, 2006

For details, see back cover...

Upcoming Events

Complete details are available at www.rotman.utoronto.ca/events

January 2006

January 10, 2006, 5:00-6:20pm

Rotman Integrative Thinking™ Seminar & Booksale

Speaker: Charles F. Knight, Chairman Emeritus and former CEO, Emerson Electric; Author, "Performance Without Compromise: How Emerson Consistently Achieves Winning Results" (HBSP Press, 2005)

Booksale: Signed first-edition copies will be available for \$41.95

Cost: \$99 Rotman Alumni Cost: \$79

January 18, 2006, 4:00-6:00pm

Rotman Institute for International Business Roundtable

Speaker: Kevin Lynch, Canada's Executive Director, International Monetary Fund (Washington) (former Deputy Minister, Finance Canada and Industry Canada, Government of Canada)

Topic: "The Celtic Tiger – Ireland's Lessons for Canada"

Cost: none

January 19, 2006, 5:00-6:20pm

Rotman Business Design™ Speaker Series

Speaker: Tom Stemberg, Co-Founder and Chairman Emeritus, Staples Business Depot; Venture Partner, Highland Capital Partners (Boston)

Cost: \$99 Rotman Alumni Cost: \$79

January 24, 2006, 5:00-6:30pm

Rotman Corporate Citizenship Speaker Series

Speaker: Bill Young, President, Social Capital Partners

Topic: "The Double Bottom Line: Re-examining the Entrepreneurial Business Model"

Co-Hosts: Net Impact @ Rotman; AIC Institute for Corporate Citizenship
Cost: \$49 Rotman Alumni Cost: \$39

February 2006

February 3, 2006, 9:00am-3:00pm

16th annual Rotman MBA Business Conference

Theme: "Rebound: Making a Comeback"

Cost: \$599 Rotman Alumni Cost: \$499

February 9, 2006, 5:00-6:20pm

Rotman Corporate Citizenship Speaker Series

Speaker: David Hemler, President, Microsoft Canada Co.

Cost: \$49 Rotman Alumni Cost: \$39

February 16, 2006, 5:00-6:30pm

Rotman Integrative Thinking™ Seminar

Speaker: Robert F. Engle, 2003 Nobel Laureate in Economics; Armellino Professor in the Management of Financial Services, Stern School of Business, New York University

Topic: "Financial Volatility – Causes, Consequences and Global Patterns"

Cost: \$199 Rotman Alumni Cost: \$179

February 22, 2006, 5:00-6:20pm

Rotman Integrative Thinking™ Seminar

Speaker: Gwyn Morgan, former President and CEO, EnCana Corporation ("Canada's Outstanding CEO of the Year for 2005")

Cost: \$99 Rotman Alumni Cost: \$79

March 2006

March 22, 2006, 9:00am-3:00pm

4th annual Rotman Conference on Business and Society

Theme: "Integrating Sustainable Business"

Cost: \$599 Rotman Alumni Cost: \$549

March 22, 2006, 4:00-6:00pm

Rotman Institute for International Business Roundtable

Speaker: Paul Masson, Adjunct Fellow, Rotman School (former Senior Advisor, International Monetary Fund)

Topic: "International Imbalances: How Serious Are They?"

Cost: none.

March 28, 2006, 5:00-6:30pm

Rotman Integrative Thinking™ Seminar & Book Sale

Guest Speaker: Jeff Pfeffer, Dee Professor of Organizational Behaviour, Stanford University's Graduate School of Business; Columnist, *Business 2.0 Magazine*

Topic: "Hard Facts, Dangerous Half-Truths, and Total Nonsense: Profiting from Evidence-Based Management" (HBSP 2006)

Booksale: Signed first-edition copies will be available for sale

Cost: \$99 Rotman Alumni Cost: \$79

April 2006

April 3, 2006, 11:30am-1:30pm

Rotman Integrative Thinking™ Seminar & Book Sale

Speaker: Malcolm Gladwell, Staff Writer, *The New Yorker Magazine*; Author, *Blink: The Power of Thinking Without Thinking* (Little, Brown 2005) and *The Tipping Point: How Little Things Can Make a Big Difference* (Little, Brown 2000)

Topic: "The Power of Thinking Without Thinking"

Booksale: Signed copies of "Blink" and "The Tipping Point" will be available for sale

Cost: \$199 (includes lunch) Rotman Alumni Cost: \$179 (includes lunch)

April 7, 2006, 5:00-6:20pm

2006 Rotman World Health Day Lecture

Lecturer: Ruth Collins-Nakai, President, Canadian Medical Association

Sponsor: Centre for Health Sector Strategy @ Rotman

Cost: \$49 Rotman Alumni Cost: \$39



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Rebound:

Staging a Comeback that Lasts

Following the success of our 2005 conference on Business Design™, we've turned our sights to 'the comeback'. Even the most successful companies can stumble from time to time. What does it take to face up to the unique challenges of a turnaround and craft a new strategy for lasting success? How do firms and individuals remake themselves and emerge the stronger for it? This esteemed roster of business leaders will tell their stories and share some hard-earned lessons for staging a comeback that lasts:

Meg Breckel, Chief Operating Officer, Royal Ontario Museum

Laurie Laykish, Vice President – Marketing, McDonald's Restaurants of Canada Limited

Andrew Shaw (MBA 85), President and CEO, Toronto Symphony Orchestra

Jeff Stober, Owner, Drake Hotel

Fred Tomczyk, Vice Chairman – Corporate Operations, TD Bank Financial Group

Ken Whyte, Publisher and Editor-in-Chief, *Maclean's Magazine*

Bob Young, Owner, Tiger-Cats Football Club, Canadian Football League

Conference Host: **Roger Martin**, Dean, Rotman School

Don't delay. Register today. Seats are selling fast.

Complete details: www.rotman.utoronto.ca/businessconference



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