

Putting people first: Critical reforms for Canada's health care system

Harvey Schipper BAsC(Eng.), MD, FRCPC
Professor of Medicine,
University of Toronto

Menaka Pai MD FRCP(C)
Fellow, Haematology
University of Toronto

Harry Swain PhD
Trimbelle Limited

Toronto, Canada
July 2008

Putting people first: Critical reforms for Canada's health care system¹

Harvey Schipper, Menaka Pai and Harry Swain
June 2008

Setting the stage

Beginning with the *Dominion Provincial Conferences* at the end of the Second World War Canada began to weave the fabric of health care as a right of citizenship. This culminated in the *Canada Health Act* (1984), and placed Canada at the forefront of modern social policy development. The particular model Canada has chosen, namely publicly operated provincial systems, and a single payor for insured services has engendered a complex culture whose ramifications extend well beyond the delivery of health care.

Our view is that tectonic changes in our understanding of biology, rapidly advancing technologies, and demographic challenges which are global are at the basis of a broadly expressed sense that a system which once served us very well may no longer be able to do so.

We begin with a broad overview of the system with some exemplars of incipient system failure. Then we propose an evaluable goal, namely *maximizing the debility-free life expectancy of each individual*, and set it in the context of these tectonic challenges. A series of proposals which touch on all levels of the governance and administration of health care follow. While the press yearns for simple solutions the reality is more nuanced. We need to shift a culture from institution-centred cost control, to patient centred continuous innovation, where our nation's health and the means to advance it are seen as assets rather than costs. We can identify no 'big bang' to effect this, nor do we wish it. Rather a series of interventions is set out, some seemingly bold other less so. However, in the end it is the continuity around the theme that will catalyse the vital cultural shift.

Health care reform, Canadian style, is an extended cacophony constrained by ideology, politics and deeply entrenched interests. The central question – advancing the health of Canadians in the face of rapid change in the biological and demographic drivers of health – is too often obscured in passionate debate on peripheral matters. Short term, the issue is always about the allocation of highly limited resources: pretty much a zero-sum game, in which losers combine to thwart change. In the longer term, the issues should be about expanding the supply of resources – scientific, human, managerial, and educational – through the interaction of the health sector with the larger economy. Simply diverting ever larger flows of finance into old patterns is not a sustainable answer. It is much better to consider the health care system as a contributor to the national economy rather than simply a drain on it.

¹ The authors are indebted to many who were interviewed and whose conversation enlightened our perspective. In addition we received advice and amendment from individuals who reviewed earlier drafts of this monograph. Some desire anonymity. Others included Elaine Borins, Adalsteinn Brown, Marty Cutler, Mark Greenberg, Donald Hathaway, Robert Hyland, Geoffrey Miller, William Robson, Scott Rowand and Kathy Vu

Health care is like any other economic activity in that the imperative is the creation of a product that meets a demand at prices people can pay. However, no market mechanism – bankruptcy, takeover – forces Canadian health organizations to confront the consequences of failure. Competition does not engage the innovative power of Schumpeter’s creative destruction. In a competitive market, institutions, products and services come and go and people change what they do. Absent a mechanism that swiftly withdraws resources from failing products, a sticky administered system focuses scarce resources on the obsolete or undesired. What’s missing is the voice of the patient

Recently the Commonwealth Fund, comparing Canada on a range of metrics with six other leading countries, found our health care system wanting.² Of the seven countries, only the US fares worse. This statistical view accords with Canadians’ daily experience of a system that works well in important ways but which is visibly fraying, and regarding whose reform there is little evidence of social consensus.

Evidence of difficulties

Not everything is awry. On standard comparative measures, our current health care system has done well on several fronts. Measures of life expectancy, child mortality and maternal mortality – the most fundamental of indicators – are excellent. We have a number of strong preventive programs, including a national immunization strategy and organized breast cancer screening programs. Though the management of chronic illness is a constant challenge, Canadian hospitals deliver trauma and acute care efficiently. Notwithstanding some significant lapses, our baseline public health infrastructure, including water supply, workplace safety, occupational health and environmental management, is in reasonable shape. We currently spend 9.9 percent of our GDP on health. This ranks in the middle of G8 expenditures, but is still only 59 percent of US per capita expenditures.³

That being said, it would appear that we are reaching the limits of what current structures can provide. The evidence comes from many quarters, including an accelerating and unquenchable demand for new spending in the absence of transparent and robust performance measures. This leads to intense ideological positioning which is more likely to choke than inform constructive political debate.

² C. Schoen, R. Osborn, M.M. Doty, M. Bishop, J. Peugh and N. Murukutia, “Toward higher-performance health systems: adults’ health care experiences in seven countries, 2007,” *Health Affairs*, 31 October 2007, 717-734

³ Ibid, also OECD in Figures 2005, accessed 08 June 2008
<http://ocde.p4.siteinternet.com/publications/doi/files/012005061T002.xls>

Average Canadians are looking elsewhere

Mrs. G is a 55 year old woman who works in a bank. She is diagnosed with breast cancer and having been told it would take several weeks before all the required tests and appointments with specialists could be arranged, decides to seek care in her native Portugal. She returns four weeks later with all investigations complete, her surgery and radiation treatment done, and a chemotherapy plan outlined. The quality of care, as assessed by her specialist in Canada, was excellent, and the cost was less than here. The provincial insurer was reluctant to reimburse the costs as the out-of-Canada care had not been pre-approved

The first problem is that the system is not well designed for patients, and they have little voice. For example, it is frequently difficult to find a physician,⁴ have a procedure performed⁵, or receive new drugs for critical illnesses. The everyday public system is largely centrally managed, and its priority is to optimize resource utilization from a system perspective. As a result patients may be directed from one facility to another, often across considerable distances for commonplace investigations. Moreover, there is no guarantee that in the event of emergency a patient will be able to gain access to their customary health care facility. This fragmentation of health care delivery means that comprehensive medical records are not easily brought together, a problem compounded by cumbersome privacy regulations. Private health providers have emerged, some affiliated with major American medical centers, offering models of comprehensive, patient-friendly primary care. Offerings are carefully positioned so as to be not inconsistent with the *Canada Health Act*. A growing market for separate major illness insurance which would provide a lump-sum payment in the event of a designated diagnosis is one example of market response to these service gaps.⁶

Perverse incentives drive the Canadian health care system

⁴ *Challenging Health Care System Sustainability*: The Conference Board of Canada, July 2004. Canada has the fewest physicians per capita in the G7.

⁵ The 'Wait Times' issue has become a surrogate for system performance, generating, among other things, an annual report from the Fraser Institute, an agreement among federal and provincial health ministers, and the establishment of a wait times management infrastructure in several provinces.

⁶ The concept of insuring to allow an element of 'queue jumping' to medical centres outside Canada was pioneered as part of compensation packages for senior executives in large corporations in the early 1990s. When concern was raised that such insurance might be illegal, the terms of benefit were revised to provide a lump sum at diagnosis of a defined list of diseases. The insurer would also provide a list of 'recommended' medical centres as part of the offering. It is interesting to note that the Ontario Medical Association recently negotiated just such a benefit for its members: rather like insider short selling.

This year, three economists won the Nobel Prize for their work on incentives and behaviour. They could have used the Canadian health care system as a case in perversity. In fact the economic incentives are so badly structured that it is remarkable that outcomes are as good as they are – reflecting, in no small measure, the dedication of individual health care workers.

The first, and best studied, problem is that there is no direct connection between the services demanded and the patient's pocketbook. This guarantees over-consumption, stress on system capacity, high waiting times, bureaucratic rationing schemes, and the like. But this is the inevitable consequence of universal insurance – a bargain Canadians long ago determined was worth the cost. Mechanisms such as co-payments might marginally reduce demand, but only for the poorest among us: another rejected choice. A better argument would be that all medically required goods and services, including drugs, home care, mental health care, optometry, physiotherapy and dental care, should be covered equally.⁷ To the degree that these have direct out-of-pocket costs attached, they will be under-consumed relative to physician and hospital care. Extending coverage would be expensive, but some of the cost would be offset by lowered pressure on the currently insured part.

Less well known, despite being excellently described in the Kirby-LeBreton Report,⁸ are the terrible twins – the fact that we pay hospitals a fixed fee regardless of the services performed but put doctors on piece-work. It should be the other way around. Physicians, especially primary-care physicians, ought to be paid to keep their patients well (thus reducing the burden on the institutions), and the best way we know how to do that is through some form of capitation. Equally, if hospitals perform more procedures, or have better patient outcomes than their competitors, then demand for their services can be expected to rise and their income should rise to match. The objections from those who do very well under the current system are understandably cloaked in terms of concern for patients – How would hospital outputs be fairly measured, since not all appendectomies are equal? Wouldn't there be an incentive to search out the healthiest patients? – but we already expect doctors to cope with precisely this system. It is always better to start on the right principle and smooth the rough parts with rules and approximations rather than the other way around. At present, the shield against too narrowly a financial approach to care on the part of physicians lies in their ethical base, which has always been fairly robust. Hospitals are another matter. They are institutions, not human beings, and are firmly focused on finances.

The perverse incentives facing hospitals are worth special attention, since they give rise to several serious problems. With minor exceptions, hospitals in Canada are granted a budget from their respective provincial treasuries. The amount may be calculated on the basis of population or “need;” it may be adjusted during the year to account for reality's little surprises, it may not even be known with certainty until well into, or even after, the fiscal year in

⁷ Adding home care and prescription drugs to existing coverage of provincial plans was a central recommendation of the Romanow Report (http://www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf) It is worth noting that current expenditures on prescription drugs exceeds the costs of physicians to the public health system.

⁸ M.J.L. Kirby and M. LeBreton, *The health of Canadians – the federal role. Final report*. Vol. 6 – recommendations for action, The Senate Standing Committee on Social Affairs, Science and Technology, Ottawa, October 2002. Accessed on 7 November 2007 at www.parl.gc.ca/37/2/parlbus/commbus/Senate/Com-e/soci-e/repoct02vol6-e.htm

question, and it may be filtered through a regional health services entity; but in all but the smallest places, where direct political allocation is still the rule, in the end, hospital administrators are faced with budgets that in the short term are generally fixed.⁹ Note that this number is not related to output. This means that administrators are not necessarily discomfited when a bed is “blocked” by a not-very-ill patient needing mostly hotel services. Such a patient costs a lot less per day than a cardiac patient in intensive care. A hospital whose board and administrators will be punished or held up to public ridicule by their political masters for over-spending will have every incentive to encourage the truly sick to go to another hospital.

**Innovation and the creation of value are choked in the
Canadian health care system**

A leading hospital CEO was presented with a proposal which offered the potential to generate revenue for the institution through a series of contracts with private sector innovators. The hospital would incur modest start-up costs. The CEO, considered one of the most innovative in the country, declined for three reasons:

- 1. There was no budget for start-up costs in the face of severe budget constraints imposed by government, likely requiring job cuts,*
- 2. The CEO would be held personally accountable for any failures which might ensure, and perhaps most significant,*
- 3. Any profits would likely be taxed back at 100% come the next budget cycle.*

The companies made their arrangements outside Canada

Hospital budgets are granted for health care: not research, not innovation, not experiments. If Nurse A finds a way to get patients with Condition X better sooner, a way that would reduce costs next year and every year thereafter, she will not as a rule find the hospital willing to invest in the up-front costs. Why? Because “investment” is not health care, and because longer convalescences are cheaper than short, intensive stays. If the entire straining budget, and then some, must be devoted to immediate care, and if the benefits of innovation simply disappear under an increased workload, there is no incentive at all for the hospital to look for better methods, beyond process innovation.

Externally fixed budgets also make labour relations more difficult than necessary. Each union, faced with a zero-sum game, defends its turf as best it can. The outcome is often measured in non-monetary gain or loss – usually in terms of restrictive work rules governing hours, shift priorities, “tenure,” and task ownership. Cooperation among guilds, at the end of very hard bargaining, is an unexpected marvel. Imagine the change in atmosphere if

⁹ Stephen Tomblin and Jeff Braun-Jackson, “Health budgeting models and the experience of Newfoundland and Labrador: why haven’t we moved to a needs-based system?” draft, May 2005, Table 4 (with permission)

management and labour, bargaining on a local rather than province-wide basis, could expand – and share – revenues for delivering superior service.

Global budgets, however, appeal to provincial bureaucrats seeking simple ways to control expenditures. In the extreme, their approaches have flown in the face of economic good sense. The Barer-Stoddard report of 1991¹⁰ suggested that demand and hence expense could be held down by constraining the supply of doctors. For most of the intervening years, training spaces for new physicians have not been allowed to increase. The result was entirely predictable: unserved small towns, people unable to find a family doctor, practitioner exhaustion, and a drift away from poorly remunerated primary care. This must rank as one of the silliest single policy initiatives of modern times. In most economics texts students learn that increasing supply decreases price.

Governments always see health care as a cost. But one person's cost is another's income. And if the 9.9 percent of GDP we spend on the health care system throws off new products and services that improve patient outcomes, these will be in demand abroad and may substitute for products now imported. Foreigners may even come to Canada for treatment. In all cases the country is better off economically. However, we have a hospital-based system that positively militates against innovation, so the economic returns from a huge base investment are foregone. Appropriating these potential rents would require new institutional arrangements in the hospitals, especially the larger research and teaching hospitals. There have been many reports about the relative deficiencies of Canada's support for technologically innovative new businesses, but a critical factor for growing companies in the biomedical business is a home market. It is there that the hidebound hospital system has its most dire effects.

System stress affects the health professions in a number of ways. Limiting the number of physicians following the Barer-Stoddard report has resulted in Canada having both the lowest number of physicians per population of any G8 country, and the lowest training rate, the latter only now reaching 1991 levels. The shift toward female practitioners, now almost half the total, combined with more balanced life-style expectations and earlier retirement also constrains supply.¹¹ Twenty years of cost control has eroded the income base of professionals across the sector, making for poor morale, tense labour relations and rigid defense of existing roles. While health professionals who leave the country attract the headlines, changes in the patterns of practice of those who remain have a greater impact. Physicians in particular are seeking alternative income streams. Many move partly outside the government-funded envelope to more remunerative, arguably less necessary activities such as cosmetic procedures. In practical terms this means that if a physician devotes half of a clinical day to uninsured services, only half is available for what the system defines as 'necessary'.

Nationally, there are significant differences among the provincial and territorial health care systems, in terms of structure, scope and performance. There are also groups which access the publicly funded system preferentially, notably those served by workers'

¹⁰ M.L. Barer and G.L. Stoddard, *Toward integrated medical resource policies for Canada*. Federal--Provincial-Territorial Conference of Deputy Ministers of Health, Ottawa, 1991

¹¹ This is nicely addressed from the physician perspective in *OMA Position on Physician Workforce Policy and Planning Revisited*, Ontario Medical Review, February 2007 accessed 03 June 2008 at www.oma.org/pcomm/OMR/feb/07maintoc.htm

compensation boards. Preference is also extended to those whose costs are covered by the federal government, including the military, Parliamentarians, and the RCMP (but not municipal police). The federal government is also directly responsible for Indians on reserves. Their health status lags the rest of the population but they enjoy a wider range of cost-free services than do other Canadians. The care provided to these special groups is not held to the same standards, and does not operate within the same rules, as that provided to other Canadians.

Portability, a key provision of the *CHA*, is eroded by different definitions of “medically necessary.” What is necessary in one province may not be in another.

Worse, there are serious conflicts of interest. Standard setting, the provision of care, and the provision of insurance services are not separate in the health care system. Nowadays, in fields as disparate as competition policy and environmental regulation, it is expected that no single entity both sets the rules and enforces them.

Our innovators can't access the Canadian market

A Canadian medical software company has developed tools which evaluate the value-added of diagnostic imaging tests, asking the question: “To what extent did this test advance the patient’s care” To date the company has 38 contracts extending to 143 sites in several countries, including major medical centres. After 6 years of marketing in Canada it has only recently secured contracts for two sites in Canada, neither in the company’s home province.

Finally, we are not inventing our way out of the crisis. Canadian researchers are tremendously productive, but there are few incentives for the health care system to develop or implement the fruits of their research. Canadian institutions, by virtue of being late adapters, have an effectively closed market for health technology, particularly, it often seems, that which is homegrown. As a result, companies attempting to commercialize Canadian inventions often wind up licensing products or selling themselves to foreign buyers at the proof-of-concept stage, well before the steep climb in economic value. The managerial class able to take innovation to the market is thin. Noting these facts, risk-averse early stage investors take their money elsewhere. It is an unhealthy spiral. Making the system more innovation-friendly will improve both health and economic outcomes.

The real objective

Sometimes the discussion of health policy stalls on finding solutions to one or another of the problems mentioned above. Thus wait times become a focus of action, or health human resource planning. Each of these has its place, but it is helpful to array them under the broadest possible specification of the objective being sought. This, we propose, should be:

maximizing the debility-free life expectancy of each individual

Of course, this does not imply ignoring persons who are born with disabilities, mental or physical, or who acquire them during life. But it does focus on the individual, and it does assist in thinking of preventive and wellness-preserving measures in the same terms as treatment of illness or trauma. It focuses not just on long lives, but the quality of those lives. The objective of health policy would thus be to assist every individual member of society, within the limits of their genetic endowment, to live a long, debility-free life. Since overall system cost is in large measure a function of aggregate time spent at less than high levels of wellness, this objective also tends to lower costs.

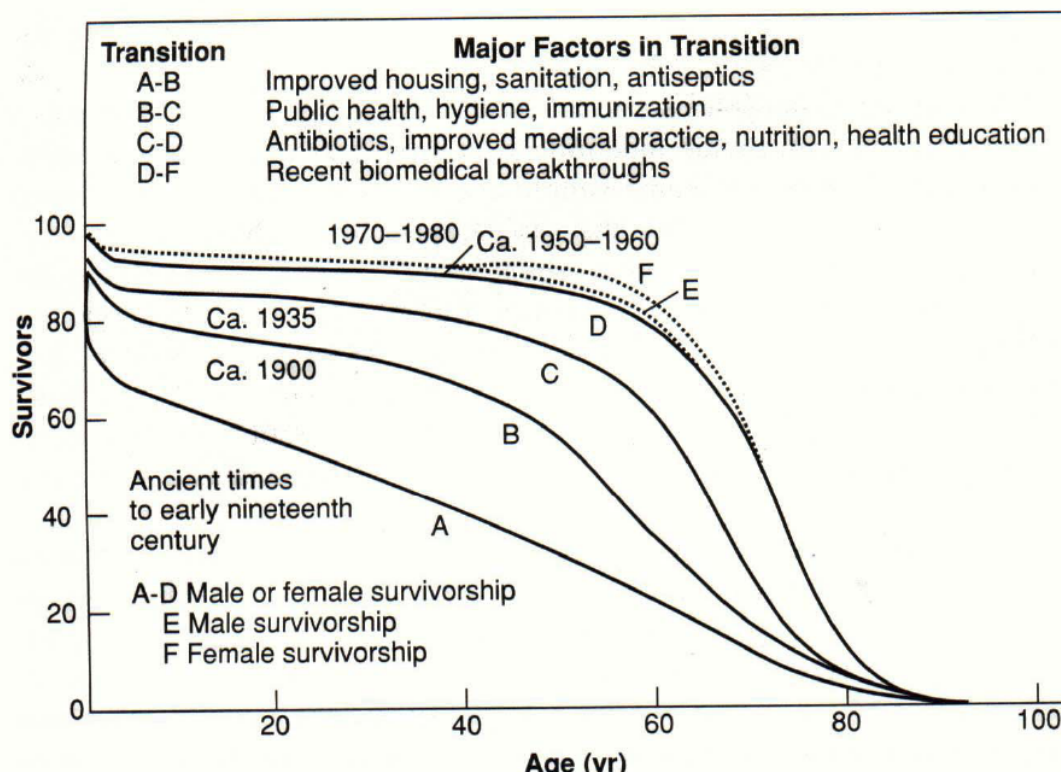


Figure 1 A Rectangular Life. This survival curve shows the impact of a range of medical and public health measures on patterns of mortality. Ideally the curve would be a rectangle, meaning that all people lived to about age 90. Any shift toward the left represents premature death. An analogous curve can be devised to represent debility-free life, meaning that in addition to a survival measure, we consider each individual's ability to live a functionally full and satisfying life. The QUALY, or Quality Adjusted Life Year is one such measure which can be aggregated. It is interesting to note that the right hand tail of the curve, representing maximum life expectancy, shifts little over time in economies such as the US. Even

under the worst of circumstances, a few people live to a grand old age. However under conditions of extreme societal stress the upper age tail of the curve can be very long and shallow.
(www.science.uwaterloo.ca/current/sci_course_notes/sci255/lecture3mac.ppt#294.40slide40)

Two important means for attaining this goal are implied in the statement. The first necessary implication is of a person-centered system. Case by case, person by person, it is the interest of the patient (or the person who will someday be a patient) that comes first. Not the interest of the insurer in financial results, not that of the physician, the nurse, or their professional bodies, not that of health policy professionals and system managers. All have legitimate interests but all are secondary to that of the person in question. A test for the satisfactory resolution of those secondary interests is whether they support, or at least do not detract from, the main objective. This is a strong statement, as will be seen, as it bears directly on the shape of the solutions we propose. But it is a necessary one, as the judgment of the Supreme Court in *Chaoulli* makes clear.¹²

The second implication is equitable access to health care. This may seem obvious, but it is worth re-stating if only because so much social controversy attaches to the various violations of the principle which may be casually observed. Equitable access means that the services, preventive as well as curative, that are helpful or necessary in attaining the objective, ought to be available to any person in a timely fashion and that the barriers of personal income and location ought to be minimized wherever possible. There is broad social consensus on this point.

Global forces driving medicine

The new biology, and the new technology, are fundamentally transforming medicine. The definition of “patient” is changing, the facts on which “evidence-based medicine” rest now involve global populations, and even the basis of insurance is being undermined.¹³

Since the invention of the microscope we have lived in a world of anatomic medicine where disease is a function or organ failure and is treated when it becomes clinically evident. When you are ‘sick’ you become a patient. Molecular and genetic medicine stands to change all that. We are on the cusp of the capability to meaningfully determine individual risk for common ‘diseases’ which now manifest in mid-life or later. Shortly we will have many treatments whose benefits present many years in the future. Not only does that change the meaning of ‘patient’, it amounts to pre-paying some health costs, and will force a redesign of health care delivery toward a much more distributed and individualized model.

¹² See the excellent discussion in Patrick J. Monahan, “*Chaoulli v Quebec* and the Future of Canadian Healthcare: Patient Accountability as the ‘Sixth Principle’ of the Canada Health Act,” C.D. Howe Benefactors Lecture, Toronto, 29 November 2006. The *Chaoulli* decision turned on the balance between public health and individual health societal obligations. This is a legitimate tension which can never be totally relieved, and as in this legal instance, the obligations are not mutually exclusive. Equity, as a concept, also is important to the construct of social policy. *The Canada Health Act* takes equity of *access from a fiscal perspective* as its imperative. However there are other equities, such as equity of access from a geographic perspective, or equity of *outcome*, which are legitimate principles offering, potentially, quite different solutions. What is required is some transparency regarding the metric.

¹³ For a fuller discussion, consider Harvey Schipper, Gale Murray and Harry Swain, “Moving forward, looking forward: a new path for Canada’s health care system,” The Change Foundation, Toronto, October 2003

The revolution in molecular medicine was made possible by genetic decoding and cloning technologies whose impact is now being felt, in turn, at the diagnostic and treatment levels. Across medicine, new technologies translate lab science to direct patient care. They also make distance medicine possible, and with it increase public expectations for service that is both up-to-date and convenient. However, these technologies are expensive, and their effective life-spans are much shorter than used to be the case. Used properly they may enable us to both target our therapies better, and assess their effectiveness earlier, thus sparing our patients unnecessary toxicity and expense.¹⁴ Implied here are swifter methods of risk management with respect to the introduction of new drugs and devices, as well as swifter methods of writing off and phasing out the obsolete.

Globalization affects health care, as it does everything else. The health system is unique in some ways, however. First, epidemiological research on increasingly rare conditions demands larger samples of people with obscure conditions who typically share relevant ethnic or environmental backgrounds. Canada's diverse population both requires these insights and at the same time provides an excellent base for research. There is an opportunity to generate innovative therapies with a distinctly patient-centered focus. Second, novel pathogens combined with the speed of international transmission in this globalized world demands that we build robust connections with medical scientists around the world. We have to look systemically outside Canada to help Canadians.

Choices for a new age

It is time to redesign our system to meet the needs of a changing world. Some principles may be accepted as axiomatic. Reinforcing bad practices with floods of unconditional new money, the federal government's recent practice, is wasteful. Instead, existing monies have to be used more wisely, and new monies made conditional on key reforms. In this context, the marked politicization of the health care debate has not been helpful. Leadership which re-frames the debate in terms of the new external drivers as well as the flexibilities already available in the statutory framework will be needed.

The policy proposals which follow are consistent with the principles of the *Canada Health Act*: public administration, comprehensiveness, universality, portability and accessibility. To these we add unambiguous accountability, which implies a huge increase in transparency, and resilience, which means a tested capacity to absorb shock and surprise.¹⁵ The overarching principle which will make this evolution possible is to ensure that the patient is the primary focus of this system.

¹⁴ For example, a PET scan can measure decreases in glucose metabolism in targeted tumour cells within 12 hours of a dose of chemotherapy. Current standard practice in Canada would require several months of chemo before a determination of effectiveness can be made. Three months of expensive misery can be avoided by a \$5,000 scan. Ontario, however, has only two PET machines, and neither is available for therapeutic use.

¹⁵ Resilience and adaptive management are fundamental concepts in modern ecology and are associated with the Canadian scholar C. S. Holling. See, e.g., Holling, "Resilience and stability of ecological systems," *Ann. Rev. Ecol. and Systematics*, 1973, 4:1-23 and L. Gunderson and C.S. Holling, *Panarchy: understanding transformations in human and natural systems*, Island Press, Washington, D.C. 2002

Change will require a deft hand. If it is clear from the outset that the goal is an equitable state-of-the-art health care system that serves every Canadian, we will remain true to the spirit of the *Canada Health Act*. The proposals which follow are modest, incremental and reasonable. Summarized in Figure 2, they resonate well with the realities of scientific advance, demographics and existing governmental structures. They allow transparency, responsibility and, through an ability to measure progress, accountability.

Develop a patient-centred system

The need for a patient-centred system seems obvious and there is much rhetoric to this effect. The reality is quite different. Here are some practical reforms:

- Attach money to patients, by moving from a block funding arrangement for health institutions to service-driven revenue generation. This fundamental reform to long-established administrative practice will be resisted by many vested interests but is not, in principle, difficult to do. Among all our proposals this would have one of the strongest impacts on the system.
- Remunerate hospitals based on success¹⁶, and therefore invest in measures of outcome (such as quality of life and functional gains), not just process (such as wait times).
- Aggregate clinical resources around the management of specific diseases. Health care organizations can then reallocate funds internally as meets their needs. This will encourage real-time multidisciplinary teamwork and allow funding to more accurately reflect the societal burden of disease. If a team performs well against an external standard, they can attract more patients and earn more funding.
- Develop innovative ways of remunerating health professionals. There should be rewards for managing complex problems and delivering quality care – not just high volume care. The principles to balance include quality of outcome, seniority and experience, and mechanism to encourage the appropriate allocation of responsibility within and across health professions. Presently most physician payment is based on volume, with a single premium for specialist certification, and various occasional supplements for remote location and areas of physician shortage. It is quite difficult, in general, to achieve payment for managing a problem which crosses disciplines (eg nursing and medicine) and is flexible enough to adjust to changing conditions and technologies.
- Insure a broader range of maladies, including particularly mental health and the care of eyes and teeth. Unbiased consumer choice implies that the proportion of costs born by insurance would be equal across all domains. Although that is a counsel of expensive

¹⁶ The authors acknowledge this is not a simple exercise. Measures of success will be a mix of process (such as wait time), outcome (cure rates, complication rates), and patient satisfaction measures. Meaningful measures are tuned to the clinical setting, and follow conceptually from the overall mandate, ‘rectangularizing’ individual health over a lifetime. The issue is not simply efficiency. For an excellent discussion of that theme, readers are directed to Janice Gross Stein’s important book, *The Cult of Efficiency*, House of Anansi Press, Toronto 2001

perfection when the proportion approaches 100 percent, the direction of progress is clear and should guide incremental decisions.

- Allow patients to access, both within and outside public facilities services not insured under provincial insurance schemes, and to seek supplemental insurance for such services in the private market.

Reinvigorate public health

For all the necessity of focusing on the individual patient, we cannot lose sight of the source of the greatest increases in “rectangularity” of the last 150 years: clean water, immunization, nutrition and hygiene education, and prevention programs such as smoking cessation and the management of hypertension.

- We need to redouble our flagging efforts to make sure that all Canadians, especially young ones, benefit from a full suite of vaccinations, and we need to exploit the opportunities offered by the new biology to prevent the clinical manifestation of many common diseases we now see later in life.
- Better management of water quality, especially in smaller places across Canada, has been long neglected.¹⁷ Walkerton was a wake-up call, but we have gone back to sleep. A real step toward safer water would be the consolidation of the thousands of very small water suppliers under management systems big enough to invest in quality.¹⁸
- Our public health early detection capability - which performed credibly during the SARS episode, as the delivery system teetered on the edge of collapse - needs strengthening, to improve sensitivity and response time, and extend beyond infectious pathogens. Better coordination with hospital outcomes data, adverse drug reporting and environmental toxin monitoring, from a public health perspective may provide a more sensitive and better balanced assessment of this quite related group of health risks. Bringing innovative technologies to bear offers both direct health and economic benefit.

Set real standards

Health care is a pillar of the social contract. However, the federal government has largely ceased to be a player in its shaping. As a result, the principles of the *Canada Health Act*, particularly portability and equity of access, have come under attack. In fields as diverse as transportation safety, food and drug regulation and even nuclear power, there is a clear

¹⁷ S.E. Hrudefy, “Safe water? Depends on where you live,” *Cdn Med. Assn. J.*, forthcoming

¹⁸ The story of Walkerton is told in Justice O’Connor’s *Report of the Walkerton Inquiry*, Queen’s Park, 2001. Many improvements in the public health aspects of drinking water quality have followed all over the country, but provincial governments have stopped short of requiring consolidation to improve safety and economic outcomes. H. Swain, F. Lazar and J. Pine, *Watertight: the case for change in Ontario’s water and wastewater sector*, report of the water strategy expert panel, Queen’s Printer, Toronto, July 2005

leadership role for the federal government in the establishment and monitoring of national standards applicable to all.

- The federal government should fully assume responsibility for health care standards that flow from its *Canada Health Act*, including access, portability and services to be insured. An arms-length federal body should set, measure and publish performance measures such as disease specific outcomes, quality of care and professional and patient satisfaction. Its work can build upon accepted methodologies used by health systems experts (e.g. Commonwealth Fund, World Health Organization, Canadian Institute for Health Information, Institute of Clinical and Evaluative Science), clinical trials organizations and other entities.
- Beyond standards and current commitments, new federal cash should be provided only for research (as at present) and for the transitional costs in meeting these new norms.

Eliminate conflicts of interest

Establishing standards for care at the federal level diminishes the conflict in being simultaneously rule maker and operator, the exception being the case of the federal government's own operations. However, a serious conflict remains between the service provider and the payor, on the one hand, and the insured patient on the other.

- The current separation between ministries of health, which provide hospital and related costs, and provincial health insurance operations, which principally provide physicians' services, is imperfect but workable except where the definition of medical necessity arises. There is a need for a swift and transparent appeal process, and moreover one that does not automatically bar retroactive claims in cases where emergencies have led patients to seek treatment abroad before the paperwork is done.
- Reinforce hospitals' identities as independent non-profit corporate bodies, able to gain resources from better outcomes, and with letters patent stressing the obligation to patients rather than provincial ministers. The fiduciary obligation of the board should be to the corporation and its objectives, not the provincial department of health, in keeping with a large body of law and practice. Financial contribution agreements should not derogate from this principle.
- Encourage the professional colleges to put the patient's interests first. They should participate in standard setting, be responsible for licensing and professional development, and not act as exclusionary labour unions. Issues arising from the financial or administrative relationship between professionals and government should not be in the college's remit, except in the event of a criminal conviction leading to the withdrawal of the privilege of practice.

Change the human resources environment

More than 20 years of centrally managed cost control has created a siloed, defensive work force. Change of any sort tends to be seen as a zero-sum game. There are only two ways

to meet the expertise gap: optimize the use of each professional's skill and experience, and increase the supply of trained people. Solving our personnel problems by import has little future; in fact, Canada will be increasingly called on to help poorer countries with their supply of well-trained health professionals.

- Regulations should allow nurses and other health professionals to more readily assume novel roles where quality can be assured by a combination of training and supervision. As examples nurse practitioners should be able to assume greater responsibility for both decision making and routine procedures. (eg, in the UK nurse clinicians are being trained to do colonoscopies under supervision, thus alleviating a major human resource impediment for an effective cancer prevention policy). This will require adjustments to remuneration schedules and insurance liability structure.
- To create a more flexible workforce, abolish barriers to inter-provincial migration. Health Canada might start the process by convening provincial colleges and other parties, in the spirit of the *Agreement on Internal Trade*, with a view to harmonizing licensing standards.
- Contractual rigidities in the labour market should be relaxed, for example enabling workers to move between unionized and non-union positions and even job share between. This will be challenging given current wage structures, and the historical focus on job preservation in a cost-control determinate environment.

Provide a truly accessible health care system for all Canadians

Creating an equitable single payer, public system means both addressing painful deficiencies and ending inequitable privilege. Privileged access to the public health care system strikes at the heart of the *Canada Health Act* principles, and must end. Not only does this encourage inefficiency and queue jumping, it impairs our ability to maintain a uniform standard of care.

- Reserve communities should be encouraged to establish a national health administration addressing First Nations issues, fully responsible and accountable to the same federal standards which govern the provinces. The Assembly of First Nations has from time to time thought about a *First Nations Health Act* which would set out the relevant accountabilities. A Parliamentary committee might explore this idea.
- Curtail preferential access through Parliamentary privilege, worker's compensation, and the uniformed services except in the instance of service injury.
- Harmonize the differences between provincial and territorial health care systems with respect to coverage, or at least render them transparent. Federal standards are relevant here.

Encourage innovation and create wealth

For the reasons mentioned, the hospital-centred health care system is rigid and loath to sponsor innovation. But bringing new science to the bedside in a timely way, motivating and retaining professionals and regaining public confidence requires an eagerness to innovate. Successful innovation does not raise costs – it streamlines health care delivery and frees up funds. Innovation is critical in three spheres: new therapies, health care delivery and strategies for introducing, evaluating and phasing out treatments and technologies. In the specific case of developing novel therapies, Canada has a genetically diverse population adequate to provide global leadership in the development and integration of new medicine. Capturing the health as well as the economic benefits of innovation will require several steps.

- Advance medical informatics. This can be done by:
 - i. creating an electronic medical record that meets the needs of patients as well as their licensed health care providers.¹⁹ Privacy legislation should allow physician access to scattered individual records for clinical need. Health systems research and evaluation must use strictly anonymized files except in circumstances of imminent public health risk. Such access would be reviewed by an independent body;
 - ii. mandating a set of pragmatic national standards for information system connectivity. Only in this way can truly comparable data be enlisted in the search for better treatments;
 - iii. paying for systems that work and phasing out old, redundant and inflexible technology. Since practical systems cannot be purchased off the shelf, risk and cost-sharing arrangements should be established between developers, suppliers and institutions.

- Supplier contracts could include provisions to encourage or at least allow the development and utilization of Canadian advanced technologies.

- Innovation should be rewarded by including measures of investment and success in the accountabilities of health system managers. Only when managerial job descriptions are rewritten to include a responsibility for fostering innovation will there be much change. Implicit is recognition that the lessons of failure are essential to innovation and change.

- Experiment with health innovation centres, based in the great research hospitals. These free-standing entities would bring the fruits of health research to the market and to the patient. Such centres could provide business development and management expertise for all stages of potentially profitable science, allow networking and collaboration, and facilitate access to capital by reducing investment risk.²⁰

¹⁹ (Dr.) Michael Evans, “The real holy grail of medicine: a secure electronic health record would be a medical breakthrough – and would transform health care,” *Globe and Mail* L6 6 March 2008

²⁰ MaRS, in Toronto, is one such example wherein medical researchers and business facilitation resources are co-located in a purpose-built facility. Other more pro-active models have been proposed, including one developed by the authors for Health Innovation Canada in 2004. That model envisioned a free-standing entity which would actively mine major health institutions for 1. innovation to commercialize and advance, 2. excess capacity to market to outside innovators for development purposes, and perhaps most provocatively 3. engaging both institutions and the private sector to compete for solutions to problems identified by the institutions. This latter

- Develop broad, permissive and transparent guidelines for the ethical, regulatory, human resource and business elements of an innovation enterprise within the health care system.
- Enable hospitals and regional health authorities, perhaps through related research foundations, to gain and retain revenue from innovation.²¹
- Target development. The federal government could choose a few areas where new technologies or procedures could make a large difference. To avoid the consequences of Ostry's Law,²² significant cash prizes could be offered for successful innovations in a handful of areas chosen by a committee of scientists and entrepreneurs, meeting not more frequently than once every two years. The prizes, which ought to be worth millions depending on the potential breadth of application, could be administered by the Canada Foundation for Innovation.

A note about the roles of the public and the private sectors

No debate on health policy is complete without touching its third rail – the relative roles of public and private providers and financiers. To be clear, we do not take issue with the “public administration” called for in the *Canada Health Act* nor its corollary, a single public insurer. That said, we would make three observations. First, the private sector already has a huge and inescapable role in health care, from the supply of medicines and machines to all manner of contract services. Medical practitioners also see themselves as independent professionals, not civil servants, and properly so. Second, nothing in the *Canada Health Act* precludes private providers of clinical services, political and union rhetoric notwithstanding.

Third, in his report on the second biggest public health emergency of the decade, Walkerton, Mr. Justice O'Connor concluded that there were too many intervening steps between ownership and outcome to attribute the latter to the former. In other words, this is a sterile debate with much more ideological than empirical content. What is most dispiriting is the tactical use of these windy arguments by the political class to shut down debate on the real issues.

Coda

Reform will require both leadership and vision. Ever since Bismarck used social policy to advance the unification of the German states almost 150 years ago, governments have come to understand the relationship between the health of the nation and the political legitimacy of government. The barefoot doctor became a measure of Mao's legitimacy in China. Bevan used national insurance to re-frame the post-war social contract in the UK. Canada's roots in

element draws upon the targeted application model behind DARPA, the Defense Advanced Research Projects Agency in the US, which developed, among other things, the framework for the internet.

²¹ Parseq, at Queens, has grossed more than \$22 million for the University and its scientists through the licensing of intellectual property developed on campus. This is one example of a triple win – the university, its researchers, and the ultimate customers all benefit.

²² According to the distinguished economist and public servant Sylvia Ostry, “Bureaucrats are as good as anyone at picking winners. But losers are wonderful at picking governments.”

national health policy lie in the Dominion-Provincial Conferences at the end of the Second World War. Medicare and the *Canada Health Act* were further stops along this journey. These proposals are in this sense quite traditional.

One reason for the political controversies surrounding health care is that the structures we have established over the years are based on a defunct medical model. The medical system that drove our existing public policies was profoundly different from the one of today. Its cost and logistics were simple and inexpensive. Today's medicine is global, molecular, high-tech and rapidly evolving. The leadership challenge will be to work across jurisdictions and professions to enable substantive change, while preserving the underpinnings of the system: equity, accessibility and excellence.

Something else has changed as well. It has become clear that the health and life sciences can be the drivers of economic transformation. One sees this around the world, as countries as diverse as India, Singapore, the United States and even African states seek to build health care economies. It amounts to a transformation in thinking about health care. It is no longer sufficient to consider health care a cost sink. It is the output of a vibrant sector of the economy, between 8 and 15 percent of GDP, engaging the brightest minds, creating life-saving and society-transforming new things, and it is of global import. Perhaps the closest example of how that transformation can be managed comes from the United States 70 years ago. The issue then was the employment of physics and science to transform a major economy. Vannevar Bush, an eminent physicist and president of MIT, came to an understanding with Franklin Roosevelt that integrating science into the economy would both energize and transform the United States from the late stages of an industrial and agricultural community into the leader of a new technological age. The existential crisis of World War II doubtless added impetus, but the vision extended far beyond 1945. It made America a technological powerhouse.

There is no one line solution to the transformation of our health care system, and the fostering of a health and life sciences economy. A progressive series of initiatives, some of which are already nascent, can gradually position Canada to both meet the challenge and seize a global initiative. Given only one choice, we would call for express and passionate leadership at the highest levels, to motivate and grant permission to think differently, try, measure and evaluate progress, make mistakes and move forward.

This is a national leadership issue. Only national government can set an exciting vision and lead other levels of government, as well as the professions, to shift what we do and how we do it not only so that it works and is sustainable for Canadians, but also provides economic benefit and global presence.

Figure 2: Summary of proposals against objectives

	Rectangularity	Equity	Patient-centred	Cost/difficulty
Attach dollars to patients	Positive	Positive	Very Positive	Stroke of a pen
Pay for outcomes	Positive	Positive	Very Positive	Modest
Disease teams	Positive	Neutral	Very Positive	Modest
Pay for experience	Positive	Neutral	Positive	Moderate
Insure minds, teeth and eyes	Positive	Neutral	Very Positive	Easy but expensive
Public health: education	Positive	Positive	Moderate	Modest cost but hard to do
Independent standards	Positive	Very Positive	Very positive	Modest cost but hard to do
Federal cash for transformation	Positive	Positive	Positive	Difficult politics
End gov't-insurer conflict	Very positive	Very Positive	Very Positive	Moderate
Hospitals focus on patients	Positive	Positive	Very Positive	Modest cost, hard to do
HHR flexibilities	Positive	Neutral	Positive	Low cost but hard to do
First Nations Health Act	Positive	Very Positive	Very Positive	Hard to do
Curtail preferences	Neutral	Positive	Neutral	Lower costs, difficult politics
Harmonize coverages	Positive	Very Positive	Positive	Easy
Better informatics	Very Positive	Positive	Very Positive	Hard; large change costs
Accountability for innovation	Very Positive	Neutral	Positive	Lower costs
Local innovation contract preferences	Neutral	Neutral	Positive	Lowers market risk for innovation
Innovation Centres	Neutral	Neutral	Positive	Accelerates innovation
Ethical standards	Neutral	Positive	Positive	Absolutely necessary to both care and innovation
Public sector institutions retain profits from innovation	Positive	Positive	Positive	Stroke of a pen, tough politics
Targeted development	Positive	Neutral	Neutral	Better ROI