

## Health reform in Canada

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Health systems in Canada and Europe have come under intense scrutiny over the past year as the United States has debated healthcare reform. The Canadian health system has been caricatured by a small but influential minority as a costly socialist endeavour that limits patient choice and ultimately fails to provide timely access to effective health care. Typical of this discourse, Sarah Palin, former Vice-Presidential candidate who had described the public health insurance option proposed by the democrats as “evil”, recommended that Canada dismantle its public health care system in favor of private health care (1).

Canadians, who tend to be aware of the hardship experienced by tens of millions of Americans with no health insurance or inadequate coverage, view this commentary as bizarre (2). Surveys repeatedly show that 85% of the population supports public healthcare and opposes privatisation (3); 96% of adults with selected common chronic conditions reported that they had access to a regular place of care; 76% reported that the quality of the primary health care they received was either ‘excellent’ or ‘very good’; and 92% of Canadians with a regular place of care would recommend their doctors to a friend or relative (4).

Nevertheless, even Canadian Medicare’s staunchest supporters would acknowledge that it is not adequately meeting health needs and has failed to deal effectively with physician shortages, chronic disease, patient safety and waiting lists (5). One in six Canadians (age 15 and older) reports difficulty accessing routine or ongoing health care, and getting health information or advice; one in four having difficulty getting immediate care for minor health problems; and one in seven report waiting 3 months or longer to see a specialist for a new illness or condition (4). Wait lists are the most visible and principal source of discontent.

Reform has been on the agenda in Canada for the last 30 years yet system-wide redesign of the way healthcare is organised, funded or delivered remains elusive. This has been attributed, in part, to a series of policy legacies such as limitation of compulsory coverage to hospital and physician services, the principle of public payment for private medical practice, and Canadian federalism itself which assigns healthcare to the provinces (6).

Despite lack of progress on system-wide reform, or perhaps because of it, numerous health authorities and institutions across Canada have taken innovative

steps to improve the quality of health care at the local level. Drawing on methods commonly used in supply chain management, operations research and industrial engineering, they have successfully applied a variety of tools including six sigma, lean thinking, queuing theory, the theory of constraints and systems dynamics to improve access to primary care, reduce use of emergency services, improve patient flow through the emergency department, improved discharge planning, wait

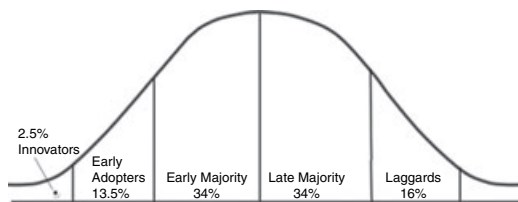
times and patient safety (7).

Of particular relevance is complexity science which seems to resonate with many healthcare leaders who may find some types of continuous quality improvement (CQI) mechanistic or inadequate because they do not take into account variations due to human interactions. It provides a language and conceptual framework for what they intuitively know and have been doing over the last decade, that is, taking small steps, learning from the reaction of the system to each initiative and then moving forward (8). Complexity science is particularly attractive because it entails nonlinearity – the notion that there is not necessarily a proportional relationship between cause and effect and that large change that reverberates throughout the system can arise from small actions if points of leverage have been identified.

The results have been impressive; review of innovations over the last few years suggests that a distinguishing feature of the Canadian health system is that where a culture of innovation and an enabling environment prevail, quality improvements are often significant and vastly disproportionate to the investments made. Commonalities among high performers show that many, if not most, of the factors needed for success are already in place and that ingredients such as leadership and collaboration often represent the missing pieces.

Just 10 years ago, innovations were seen perhaps in 2–3% of instances; today reporting from and within Canada’s provincial and territorial health systems and sub-systems suggests broader uptake, possibly in the range of 15–20%. Figure 1 shows the rate of uptake of innovations according to Diffusion of Innovation (DOI) Theory; Canadian healthcare probably has emerged from Phase II and entered Phase III. To date,

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**Figure 1** Diffusion of innovation. *Source:* adopted from Rogers (11)

innovators have been mainly cosmopolitan, opinion leaders and gatekeepers of new ideas that are typically well integrated in the social system and capable of making judicious and successful use of innovation.

Several aspects of recent innovations bode well for rapid advancement through Stage III and achievement of critical mass (that is, the point at which participation of skeptics and traditionalists becomes only a matter of time). A recent report (10) from 23 teaching hospitals and academic institutions from across Canada describes 45 success stories of improved patient flow through the health system – undertaken on the basis of “doing more with the same resources and existing physical constraints”; innovations were designed to ensure that patients could access timely care, where and when they need it. Other innovations have achieved substantial cost savings in addition to improve output. For instance, the Calgary Health Region’s (CHR) complete redesign of its hip and knee replacement programme led to decreased wait times from 145 to 21 days and from clinic to surgery from 58 to 7.5 weeks; this reduced hospital and overall costs by 15% and 2% respectively. Similarly, in its Calgary Stroke Programme, the length of stay for stroke patients has decreased by 20% since 2002, while mortality rates have decreased from 19% to 15% during the same period. This translated into annual savings of \$4 million for CHR.

Many highly successful innovations are striking because of their simplicity and common sense. For example, the PanAm Clinic, Winnipeg which specialises in joint and bone surgery has reduced wait times for the magnetic resonance imaging (MRI) by scheduling knees in the morning using the knee coil, and then perhaps shoulders in the afternoon so that coils only need to be changed once. The University of British Columbia’s Center for Surgical Innovation has cut wait times for joint replacement surgery from 1–2 years for surgery to 1–2 months by using ‘swing operation rooms’ which allows surgeons to do twice the number of cases freeing up times to see more patients, thus reducing two waiting lists at once (11).

Many innovations focused on wait lists. Research shows that these lists may not be due to lack of supply but rather its distribution, that is, they represent fail-

ure to match-up ‘times/places at which care is available and the times/places at which it is needed’ (12). Innovations such as pooling queues, advanced access, partial booking, team-based care, rationalisation of booking and discharge flows, and segmentation of wait lists can be highly effective. Ontario, Canada’s most populous province, made lists a priority and, since 2005, has reduced wait times for cataract surgery, cancer surgery, knee replacement, hip replacement, MRIs, CT scans, angioplasty and cardiac surgery by 66.2%, 27%, 57%, 52.7%, 12%, 53%, 46% and 9% respectively (13). The key to making this happen was the decision to act on an established priority.

What is the best way forward? More dollars is not the answer. In any case, in industrialized nations, the best predictors of health system performance and quality is not level of resources (\$ per capita) but rather system design as a core business strategy, capability for improvement, integration across care, sites and disciplines, information, incentives and accountability (14). Taking small innovative steps, testing the reaction of the system to each initiative and building on these achievements appears to be the route to success.

Although federalism has long acted as a barrier to system-wide reform, Canada’s federal-provincial structure may actually be well-suited for piloting and diffusion of healthcare innovations. Informed by complexity theory which holds that local health care systems are ‘complex systems’ exhibiting variations in values, structures, and processes, and that decision-makers will want to take advantage of unique attributes or variations in these systems (positive variation or positive deviance) that might provide the leverage to improve outcomes. Successes in one setting may be applied to another if existing conditions, practice configuration, and dynamics are taken into account (15). Conceivably, with the right support, Canada could become a hotbed for the beta testing and implementation of new ideas.

In order to undertake the above and progress through Stage III, among the ingredients needed are: an overarching framework of incentives that supports local innovation across Canada and, a reliable and robust source of health information. Although most of the responsibility for healthcare in Canada rests with the provinces, the federal government exercises enormous fiscal leverage and tends to set the agenda: it is particularly well positioned to promote a framework that encourages innovation to flourish within the provinces and territories. The development, piloting and replication of innovations might be supported through federal–provincial agreements that involved cash transfers (under the Canada Health Transfer), tax credits, grants or forgivable loans. For many of the health authorities that have prioritized access and patient

**Best predictor of health system performance and quality is not level of resource (\$ per capita)**

safety but have yet to undertake substantive action, a pan-Canadian initiative based on federal-provincial agreements, might provide the needed incentive.

Second, high quality, comprehensive and timely information is needed to describe the linkage between health status, health care needs, health care services and outcomes. To assist managers, clinicians and policy-makers with their decision-making, data are required to describe efficiency, cost-effectiveness, appropriateness, safety and access. They will need data that tells them what works, what does not work and why. At the local level, in a hospital setting for instance, quantitative and qualitative data are needed that describe operations, structure and interrelationships between personnel so that key characteristics can be identified and interventions can be tailored accordingly (15). Effective knowledge management presumes high quality health information.

Although substantial progress has been made over the last 10 years, serious gaps in information (and therefore analyses) remain (4). One sign of this shortfall is that Canadians cannot access information that tells them what wait times to expect for needed medical care. Wait times for psychiatry, obstetrics/gynaecology, gastroenterology, plastic surgery, anaesthesiology and emergency care remain sketchy. More worrisome, targets and benchmarks are lacking. For example, governments agreed to set targets for coronary artery bypass grafting 5 years ago yet expanding benchmarks have not advanced even though a full set of evidence-based care was developed in 2005 (16).

Every national health system has its challenges and Canada is no exception. Although the issues described in the foregoing are normally termed "secondary" problems, the Canadian health care system nevertheless deserves scrutiny and immediate, innovative action. A strong and effective response is needed by federal leadership whose stance on private sector involvement in health care and the commercialization of health research sometimes appears ambiguous.

Canadians, who have witnessed the health reform debate in the USA over the past year and the coincident misery caused by economic crisis and loss of healthcare coverage, do not entertain the dismantlement of the Canadian Medicare but do applaud efforts by health reformers south of the border - for the same reason: universal access to affordable health care is the fairest approach to service provision. Four decades ago, when Edward Kennedy was pressing for universal health coverage, a group of Canadians from the level of the provincial health authority were invited to Chicago to share their experiences (17). What many of these Canadians concluded from the conference was that, given the vested interests, the probability of the public health insurance option in

the USA was very unlikely: they would be saddened if they found this assessment still accurate.

## Disclosure

No conflict of interest.

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