Introduction

Charles M. Beach, Richard P. Chaykowski, Sam Shortt, France St-Hilaire and Arthur Sweetman

The papers in this volume and the issues they examine are set against an important health policy backdrop. There were substantial public funding cuts to the health-care system in the mid-1990s, and also substantial reinvestments more recently. Currently, not only are tens of billions of dollars spent each year on providing health-care services for Canadians, but the rate of spending growth for the last decade has been, and looks like it will continue to be, well above inflation even after adjusting for population growth. Government spending on health care is an increasing, and historically unprecedented, proportion of total program spending and there are concerns about it crowding out other government services. Yet the health-care system is under sustained pressure and there are continuing demands to improve the availability of services including rhetorically and medically important wait times. Moreover, baby boomers are just starting to turn 60 and an increasing demand for health care by an aging population will put increasing stress on some components of the current system. Rapid advances in new medical technologies and pharmaceuticals come at an increasing cost. The health-care system is trying to catch up with new information technologies. And the effective delivery of health care is under major re-exmination in terms of incentives and responsiveness to local needs, regional access over large geographical areas, and funding and payment arrangements.

Public concern over health-care issues has spurred considerable debate in recent years. The federal Romanow Commission on the Future of Health

Care in Canada focused attention on access and wait times and recommended large increases in federal health-care funding to the provinces within essentially the current health-care framework in Canada. This was followed by two major increases in federal funding transfers to the provinces to address health-care shortages, and there is pressure for yet more resources through revision of the federal equalization program. The methods of delivery and alternative modes of funding of health care were the subjects of commissions in Alberta and Quebec and the federal Kirby Senate reports, and Ontario undertook a major hospital restructuring exercise. Most recently, the Chaoulli Supreme Court decision has forced politicians and governments to address more immediately the issues of access and wait times for critical medical procedures. The most recent federal election saw both major political parties making wait times reduction commitments.

A great deal of the public debate on these issues, especially in the media, has been polemical and polarizing. A principal objective of this volume is to try to reshape this debate away from polemical positions, and to reposition it instead on objective evidence and standard research tools of analysis. Many of the studies in this volume thus utilize basic economic and statistical analyses and empirical evidence to support new thinking and help inform debate on appropriate directions for health policy and services. The overarching theme of the volume is the role of evidence on health-care policy and service delivery — what have we learned and what does the experience tell us about what works and what doesn't? The second major objective of the studies in this volume is to provide some fresh insights and evidence on some of the key ongoing and emerging issues confronting the Canadian health-care system. The studies focus on many of the pressing challenges in health-care reform including: how to best use evidence to inform health policy, demand for private health insurance, impacts of regional health-care delivery reforms, effectiveness of reference drug programs, alternative health human resource strategies, managed competition in home-care delivery, the economics of obesity, prioritization in adoption of health technologies, and public health planning in an era of SARS.

The first papers in the volume examine various aspects of recent health-care reform in Canada. Pierre-Gerlier Forest leads off with a very conceptual paper on the role of evidence in the formation of health care policy. He argues that researchers need to understand how policy makers frame policy issues often in terms of their own frames of reference and experience, and then select evidence that is consistent with this frame. In order for scientific evidence to influence policy instruments and choices, one needs first to understand the process of how policy formation works

and the way in which evidence can feed into the framing of policy issues. The next four papers provide case studies of specific recent health services reforms.

The study by Greg Marchildon examines a series of regionalization reforms of health-care delivery in Saskatchewan in the early- to mid-1990s which had the objectives of rationalizing health services among regional health authorities to better reflect demographic shifts in the province and moving the allocation of resources from illness care to wellness services. He evaluates the initial impacts of regionalization reform in terms of such criteria as service delivery integration, quality and timeliness of services, responsiveness to local needs, and shifts of resources to wellness care. He finds mixed results with lessons for other provinces.

The Ana Johnson-Masotti and Kevin Eva paper offers a new decision-making framework for prioritizing the assessment of new health technologies for possible adoption in health-care delivery by regional health authorities. Within a four-step decision process, the authors identify 12 criteria that are of particular importance for the prioritization of new health technologies and that are found to be useful in a pilot test of participants.

The paper by Mark Stabile and Courtney Ward examines the demand response to the delisting of health-care services, and how this response differs across income and age. Any public health insurance system has to make choices on what procedures or health services will be covered, which will not, and whether current coverage should be continued, reduced or terminated. The study uses delisting experiences across provincial plans in Canada between 1994 and 2001 and regression techniques to find that such delistings do affect utilization of the services. But the estimated effects are not uniform, and differ significantly across the services affected and population subgroups affected. This is a topic that clearly deserves further investigation in order to make reliable predictions.

The Alberta government has been considering several alternative proposals for how health care can be financed in the province, and the recent Chaoulli Supreme Court decision has drawn attention to a patient's right to purchase private health insurance to pay for private provision of health-care services. Accordingly, Herb Emery and Kevin Gerrits examine what the take-up rate would be for a private health insurance system which would compete with the parallel public health-care system for all medical treatments. Would such a development deliver a large infusion of new funding for the health-care system in Alberta? Emery and Gerrits estimate the level of demand for private health insurance in Alberta in the presence of a universal public health-care system under the assumptions of an Australian-type system of mixed public-private health care. They estimate

that 28.5% of the Alberta population would take up private health insurance, and that this would increase funding for total health-care expenditures by at most 10%. It would thus provide relatively little fiscal relief compared to the ongoing rates of increase of costs in the public health-care system.

The second set of papers in this volume turn to some key policy issues of pharmacare in Canada, the fastest growing component of health care. The study by Aidan Hollis looks at "orphan drugs", typically very expensive new drugs for rare diseases. The issue is how a public insurance plan should decide whether to pay for such drugs, and if so how much. Hollis argues that it is important to develop a coherent rule determining coverage so that drug firms can better anticipate returns on their development investment and public insurers can provide a clear justification for their decisions. The rule should balance incentives to develop new therapies versus affordability of the treatments. The rule should reflect the therapeutic effect of the drug, its innovation costs, its manufacturing and distribution costs, and the number of patients who stand to benefit from the treatment in the market at large and in Canada. Hollis' proposed rule is to continue to use conventional cost-effectiveness evaluations, but with special cost credit to reflect the above factors in a straightforward manner.

The paper by Sebastian Schneeweiss focuses on reference drug programs (RDPs) which cover the cost of only the least expensive drugs within a therapeutically equivalent group of drugs. The objective is to reduce drug plan costs while providing as extensive coverage as possible, as well as offering drug manufacturers an incentive to lower prices. The paper summarizes the operation and rationale of RDPs, and overviews empirical evidence on the effectiveness of RDPs. Their experience in British Columbia in the mid-1990s is examined in terms of drug utilization, economic effectiveness, and possible unintended outcomes. The author concludes that reference drug programs appropriately set up are safer and more effective than a range of other conventionally used alternatives.

The third set of papers address several issues in the delivery of health care, particularly with respect to human resource management within the health-care sector and regionalization in the delivery of health care. Martine Durier-Copp and Dominika Wranik note that the Canadian health human resources (HHR) environment is in increasing need of new strategies to deal with growing shortages of health-care professionals in the country. Their paper identifies the major challenges facing HHR planners and offers a framework for improving health-care delivery in Canada. Following from a 2005 conference on HHR strategies at Dalhousie, the authors set out six models of innovative HHR strategies (e.g., redefining the roles of health-

care professionals, enhancing interdisciplinary collaboration, and changes in health-care education approaches) and illustrate each with concrete examples. The authors then provide recommendations for overcoming barriers to implementing such innovative strategies.

Margaret Denton, Isik Urla Zeytinoglu, Sharon Davies, and Danielle Hunter look at the determinants of high turnover rates among home-care workers. In 1997, Ontario restructured its approach to delivery of home care away from a "cooperative model" to a more market-based one of "managed competition". The Denton *et al.* paper reports on a case study of three not-for-profit home-care provider agencies and what happened to the 50% or more of nurses and home support workers who left these agencies between 1996 and 2001. The authors examine their reasons for leaving and for selecting their subsequent jobs. They find that the shift to a more competitive market environment was associated with an intensification of work as more clients were released "quicker and sicker" from hospitals while there was less time available per home visit, an increased casualization of work and irregularity of work hours providing employers a more flexible labour supply, and a growing gap between what nurses were paid in home care versus what they could earn in hospitals.

Lori Curtis' paper looks at health-care utilization in Canada, whether it has changed over a 20-year period, and whether it varies across socio-economic status (SES). A novel feature of her work is that she examines both the incidence of receiving care and the frequency of usage conditional on accessing any care that year. She also takes account of possible endogeneity in health status as a major determinant of health-care utilization. She uses adult data from national surveys in 1978 and 1998, and she considers three measures of health-care utilization: physician visits, overnight hospital stays, and dental visits (which are not covered by public health insurance). She found that, first, the number of physician visits increased over this period, overnight hospital stays decreased, and the incidence of dental visits rose while the mean number of visits declined — so there has been a mixed pattern of utilization changes. Second, SES became more important as an indicator of health-care services utilization over time as SES became more strongly related to utilization rates, most markedly so for dental care.

The fourth set of papers relate to public health concerns. The study by Christopher Auld and Lisa Powell looks at the economics of obesity and compares obesity rates between Canada and the United States. Obesity rates (as measured by the Body Mass Index or BMI) have increased dramatically over the last 20 years in both countries, but remain significantly higher in the United States. Their paper analyzes the determinants of BMI levels among adults aged 35 to 45 in both countries, and seeks to explain the

cross-country BMI gap in terms of socio-economic and demographic variables. The authors find that the determinants of obesity vary substantially across sexes, education level, and other socio-demographic characteristics, but that key characteristics such as income, education, race, and living arrangements cannot explain the "obesity gap" between Canada and the United States. Other factors such as contextual influences deserve further examination.

Robert James' and Manya Sadouski's paper is also a conceptual piece on appropriate performance measures for the health-care sector so as to help foster health services restructuring in Canada. Existing measures, they argue, reflect a macrosystem perspective that focuses on governance, strategy, and leadership, and are not that helpful in guiding detailed initiatives for health services restructuring. Following from the application of Brian Quinn's service sector organizational model to the clinical interface at the core of the health-care system, the authors put forward a "clinical microsystems" approach as a complement to existing macrosystem measures. The former focuses on matters such as goals for clinical teams, client profiles, how patients are treated, communication within the clinical team, and regular assessment of care provided as guides to health-care restructuring.

Finally, Kumanan Wilson's paper examines the structural reforms in the Canadian blood system following from the tainted blood tragedy and the recommendations of the 1997 Krever report. As the reforms brought in are viewed as successful, there is much to be gained from better understanding of what is behind this success. The paper reviews the recommendations of the Krever report for blood system reform, the reforms actually implemented at the federal/provincial levels, and their effectiveness in protecting the blood system from possible risks of infection. Factors that have improved the decision-making process include a clear allocation of roles and responsibility, proactive decision-making, a consultative process involving consumers, a federal-Quebec two-operator system, and greater co-ordination with other countries. The paper then examines the system's decision-making process when faced with the major recent challenge of Creutzfeldt-Jakob disease.

It is clear from these papers that the Canadian health-care system faces major challenges. Health-care costs are rising faster than the general rate of inflation because of expensive new technologies and drug treatments and, more controversially, an aging population. Improved and sustainable alternative funding approaches for health care need to be developed. Shortages of health-care professionals and of adequate modern equipment and capacity lead to access problems, queuing, and substantial wait times

for critical procedures. Largely top-down resource allocation rules within the health-care system lead to problems of responsiveness to local needs and uncompetitive and inefficient outcomes by health providers. Restructuring the delivery of health care through more localized patient-centred approaches is slow in happening. There needs to be improved integration and coverage rules for the complementary systems of drug therapy and home care. Improved preparedness and more proactive public health facilities are needed to better deal with the next public health challenge. Progress on any of these complex challenges will be a real benefit to all Canadians.