



UBC CENTRE FOR  
HEALTH SERVICES AND  
POLICY RESEARCH

# Extravagant Americans, Healthier Canadians: The Bottom Line in North American Health Care

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THE UNIVERSITY OF BRITISH COLUMBIA

## About CHSPR

The Centre for Health Services and Policy Research (CHSPR) is an independent research centre based at the University of British Columbia. CHSPR's mission is to advance scientific enquiry into issues of health in population groups, and ways in which health services can best be organized, funded and delivered. Our researchers carry out a diverse program of applied health services and population health research under this agenda. The Centre's work is:

- Independent
- Population based
- Policy relevant
- Interdisciplinary
- Privacy sensitive

CHSPR aims to contribute to the improvement of population health by ensuring our research is relevant to contemporary health policy concerns and by working closely with decision makers to actively translate research findings into policy options. Our researchers are active participants in many policy-making forums and provide advice and assistance to both government and non-government organizations in British Columbia (BC), Canada and abroad.

## Funding and Support

CHSPR receives core funding from the BC Ministry of Health, and ongoing support from the University of British Columbia and the UBC College of Health Disciplines. This enables the Centre to focus on research that has a direct role in informing policy and health reform, and facilitates CHSPR's continuing development of the BC Linked Health Database.

Our researchers are also funded by competitive external grants from provincial, national and international funding agencies. They include the Canadian Health Services Research Foundation, the Canadian Institutes of Health Research, the Commonwealth Fund, Health Canada, the Michael Smith Foundation for Health Research, and WorkSafeBC.

## Data Services: BC Linked Health Data Base

Much of CHSPR's research is made possible through the BC Linked Health Database, a valuable resource of data relating to the encounters of BC residents with various health care and other systems in the province. These data are used in a de-identified form for applied health services and population health research deemed to be in the public interest.

CHSPR has developed strict policies and procedures to protect the confidentiality and security of these data holdings and fully complies with all legislative acts governing the protection and use of sensitive information. CHSPR has over 30 years of experience in handling data from the BC Ministry of Health and other professional bodies, and acts as the access point for researchers wishing to use these data for research in the public interest.

## The International Context: Canadian Conformity, American Exceptionalism

From 30,000 feet, both the provision and the financing of health care look roughly similar among high income, industrialized countries. Important structural contrasts quickly become obvious at lower altitudes, and there are on the ground virtually infinite fascinating differences in detail that can have important influences on overall system functioning. But the same basic institutions and personnel are recognizable everywhere.

Modern health care systems all have at their core a highly-trained physician workforce directing the care of patients in hospitals, public or private clinics and offices, or (less commonly) home care settings. They are supported by a diverse and much larger staff of nurses, technicians, and other personnel, most of whom are reimbursed by other organizations rather than the physicians who direct them. The technology potentially available for diagnosis and treatment is similar internationally, although the actual availability can vary considerably across countries. The pharmaceutical industry is dominated by large multinational firms with global reach, though specific national regulatory frameworks can have a major influence on the relative cost and effectiveness of the patterns of drug use in different countries.

Expenditures on health care are everywhere (in the high income world) met primarily from public health insurance programs financed either from taxation or from social insurance premiums. These cover more or less the whole population in each country, though not necessarily “on equal terms and conditions.” All systems include a secondary but significant level of out-of-pocket payment by patients, although the pattern of such payments (by whom? for what?) varies greatly across countries.<sup>1</sup> In a number of countries there are also private insurance systems; these may cover a significant proportion of the population but contribute relatively little toward meeting overall expenditures. Private insurers prefer, for perfectly understandable commercial reasons, to cover healthy people for relatively low-cost services.

The great exception to this common pattern is the United States, which as in many other respects is “not a country like the others.” The extent of American exceptionalism is a debated topic in the political science and public policy literature – particularly in the United States – but in health care policy the pattern is clear. The United States is very different from other high-income countries on critical dimensions of system performance, and these are traceable to important differences in key structural features. The extent to which these in turn reflect systematic differences in underlying ideologies is more debatable – is it American political institutions that are fundamentally different or do Americans themselves just “think differently” from the rest of us? Whatever its roots, however, exceptionalism is an obvious and fundamental feature of the American health care system.

This international dimension is critical context for any comparison of Canadian and American experience. It is too easy, and far too common, for observers on both sides of the border to slip into the fallacy of imagining that American institutions and approaches, particularly in financing, represent some sort of norm or natural state from which Canada’s “socialized” health insurance (*not* socialized medicine!) represents a peculiar departure. Such a perspective is virtually automatic for Americans, unfortunately it is also often accepted by Canadians.

The American media flood across the border, bringing with them a powerful set of preconceptions of both fact and value, and providing a natural reference point for Canadians on any number of issues. But in the case of health care, and especially health care finance, it is vitally important to recognize that it is the United States that is the international “odd man out”, and a long way out at that. The Canadian health care system, on the other hand, is well within the pattern that White (1995) identified as the “international standard” – at least for high income countries.

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<sup>1</sup> Out-of-pocket payments are payments directly linked to the use of care – user charges. They do not include individual payments for public or private insurance coverage.

It is also important, however, not to fall into another trap, that of trivializing the differences across the border as a simple “public-private” contrast.

It is true that for Canadians, virtually all hospital and medical care (though not pharmaceuticals or dentistry) is provided without charge at point of service by private fee-for-service practitioners and not-for-profit hospitals.<sup>2</sup> Providers are fully reimbursed by provincially-administered insurance programs at collectively negotiated fees or fixed budgets.<sup>3</sup> In the United States, on the other hand, the only generalization possible is that patients (other than the very poor) are unlikely to escape without any financial liability. But that liability may vary from minimal to ruinous, depending upon which (if any) of a bewildering array of public or private organizations accepts responsibility for payment. And the array of provider organizations is almost equally diverse, with differential access and quality of care depending upon the nature of the patient’s insurance coverage.

## Surprising Similarities, Dramatic Differences

Yet according to official data Canadians and Americans actually pay, on average, virtually the same proportion of their total health care costs out-of-pocket (12.4% and 12.8%, respectively, in 2003). In both countries, seven dollars out of every eight are now paid by “third parties” – public or private insurers.<sup>4</sup> In both countries, furthermore, the bulk of finance comes from governments.

The official data report 69.6% public financing in Canada (in 2004) and only 45.1% in the U.S., but both countries also provide public subsidies (through the income tax system) for employer-paid private health insurance. In Canada these “tax expenditures” are relatively small, amounting to less than 4% of total health care costs, but in the U.S. they, in addition to other government-source contributions, bring the total public share, direct and indirect, to just under 60%.<sup>5</sup> The *net* contribution of private health insurance to funding health care, after accounting for these subsidies, is just under 25% of the total, and about 7.5% in Canada.

So both systems are predominantly financed from public sources, and both draw about equal – small -- proportions of their financing from direct payments by users. So far, so similar. The really big differences emerge, however, when one looks not just at the public-private split of costs, but at their total amounts, and at how those costs -- and access to care -- are distributed across the two populations. Compared not only with Canada but with every other high income country, American health care costs are both extremely high and extremely unequally distributed.

These two characteristics interact to produce the results that Paul Krugman and Robin Wells (2006) describe with characteristic vigour:

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<sup>2</sup> Diagnostic imaging and laboratory services outside hospitals are an anomaly, in many provinces provided by for-profit public corporations yet billed as if they were professional medical acts

<sup>3</sup> Canadian physicians have, throughout the history of Medicare, argued for the right to “extra-bill” patients at rates above those negotiated with the public plans. Extra-billing was largely suppressed by the *Canada Health Act* of 1984, but twenty years later some entrepreneurial practitioners have developed various indirect ways of circumventing the *Act*. While “two-tier medicine” is a highly controversial political issue, and likely to remain so, it is still confined to a handful of elective surgical and diagnostic procedures, and accounts for a very small share of total expenditures.

<sup>4</sup> Canadian expenditure data are drawn from CIHI (2005). That source provides expenditure forecasts for 2004 and 2005, but the division of private expenditure into out-of-pocket and privately insured is available only to 2003. American expenditure data to 2004 are from the United States, Centers for Medicare and Medicaid Services (2006). International comparative data in Figures 1 and 2 are from OECD (2005); note that the OECD concept of GDP is slightly different from that in Canadian and American sources.

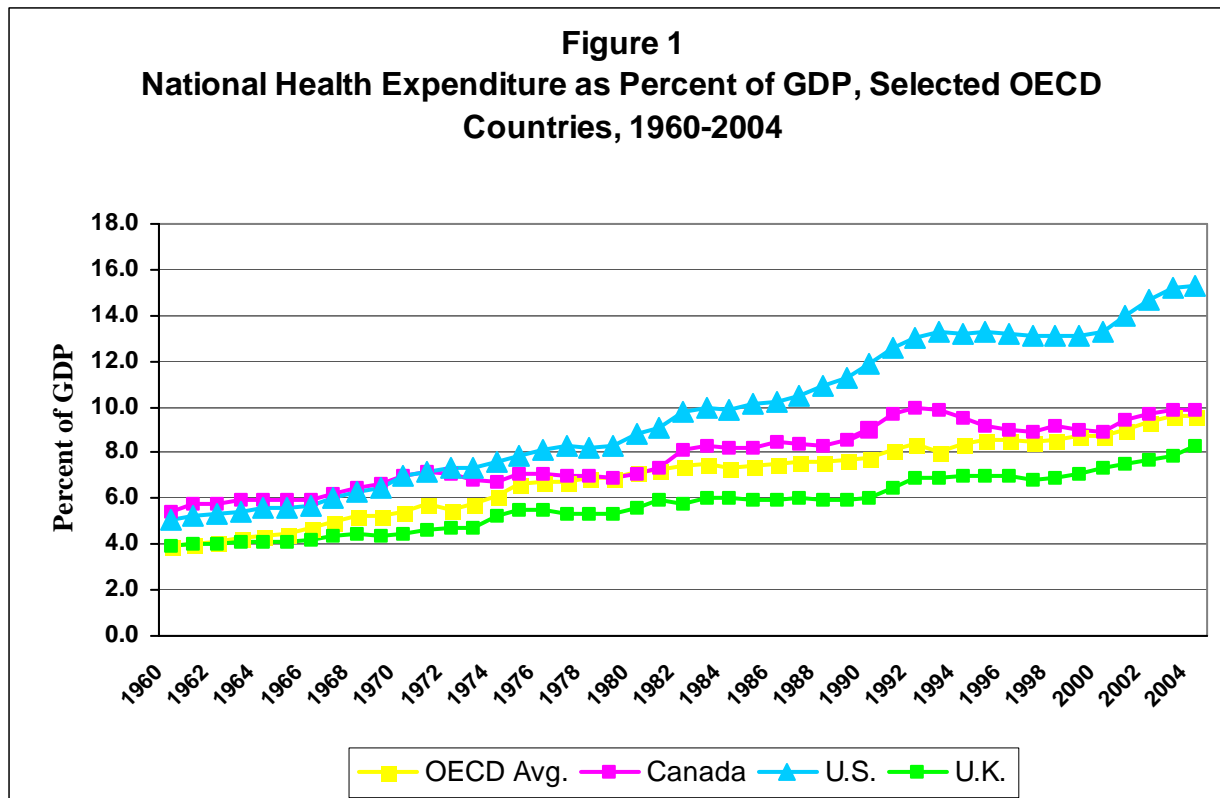
<sup>5</sup> Woolhandler and Himmelstein (2002) provide the estimates for the United States; the 4% for Canada is projected from Smythe (2001).

“The United States is unique in being a place where the cost of illness and medical expense can bankrupt you, where the inability to pay for basic medical care can lead to a downward spiral in your health, and eventually death. Millions of Americans are unable to afford medical care and the results are dire. The best estimates suggest that something like 18,000 unnecessary deaths take place each year just because of inadequate health insurance. That’s the equivalent of six 9/11s every year. And there’s much more, there are many people who suffer from ill health, who suffer a collapse of their finances, collapse of their families, all because of this failure of basic health care provision that every other wealthy country has managed to do, but that we have not.”

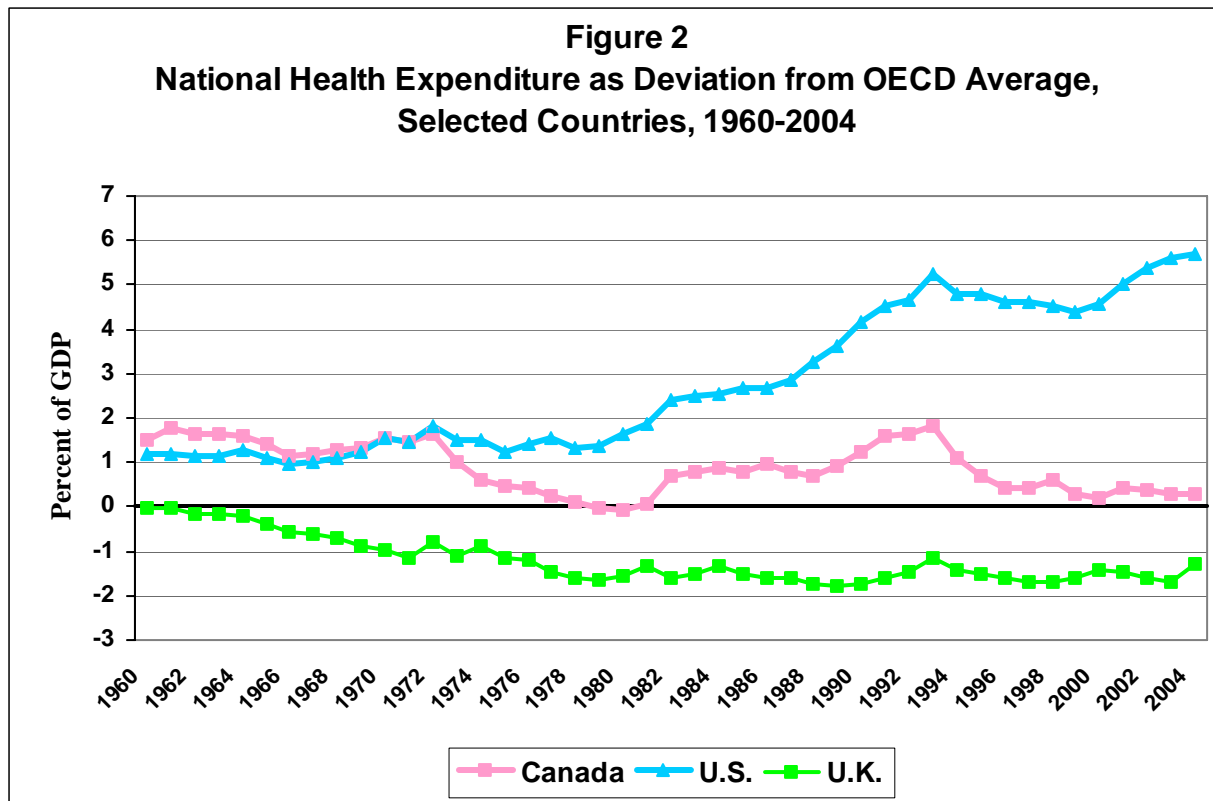
Well, yes.

### Cost Explosion, Cost Containment

The most obvious and dramatic difference between the two systems, and the clearest evidence of American exceptionalism, is in the pattern of evolution of total health expenditures. Figure 1 shows the ratio of total health expenditures to national income (gross domestic product or GDP) for Canada, the U.S., the U.K. and an unweighted average of those countries of the Organization for Economic Cooperation and Development (OECD) for which data are available back to 1960.<sup>6</sup> (This excludes new member states such as the formerly socialist economies.) Figure 2 shows these data as deviations from the OECD average. The overall pattern is of continuing cost escalation, but health care in the United States is much more expensive than anywhere else. The gap has been growing for about thirty years, and continues to grow.



<sup>6</sup> Countries reporting to the OECD revise their data from time to time, but do not always revise earlier data. Figure 1 is drawn from the most recent data, interpolated and extrapolated back to 1960 based on data previously reported.



The introduction of Canada’s public Medicare system at the end of the 1960s is clearly evident in the flattening of the Canadian trend line after 1970 and its convergence toward the average for OECD countries. Prior to that time, the Canadian and American ratios were more or less equal, and rising in parallel. Universal public coverage brought with it cost control. Canadian costs have escalated (as a share of income as well as in total) significantly since then, more rapidly in some periods than in others, and have never ceased to be politically contentious. But thirty years later they remain close to the OECD average. Relative to the pre-Medicare trend and contemporaneous American experience, the growth has been much more moderate.

Almost as clear is the similar pattern in the OECD generally. Prior to the mid-1970s, the OECD average ratio also rises in parallel with that of the United States, although at about 1½% - 2% below. But during the 1970s the other countries of the OECD also developed administrative mechanisms of cost control within their various universal public insurance systems. From then on, their costs rose much less rapidly, and the gap between the U.S. and everyone else has widened steadily. By 2002, the share of national income spent on health care in the United States was fifty percent greater than the average for the group of OECD countries in Figure 1 -- a difference of more than five percentage points of GDP.

Spending in Canada, by contrast, was only slightly above this OECD average. The 2005 spending projections for Canada are \$142 billion, or \$4410 per capita, and 10.4% of national income. This is no small sum. But if we were burning money at the American estimated rate for 2005, 15.6% of GDP, we would be spending exactly fifty percent more, \$213 billion or \$6615 per capita. That is \$2200 extra for every man, woman and child in the country.

Moreover, the U.S. Office of the Actuary projects that American health expenditures will double between 2005 and 2015, reaching \$4 trillion, or 20% of national income (Borger et al., 2006). Expenditures will undoubtedly rise in Canada as well, and in all other high-income countries, but nowhere else is anything like

this expansion anticipated. Costs are clearly out of all control south of the border – and indeed have never been in control.

## Resilient Myths and Economic Interests

This comparative experience gives the lie to thirty-five years of claims by American opponents that universal public coverage would be “too expensive”. Canadian opponents made similar claims in the 1960s, and indeed still do. Current rhetoric that Medicare in Canada is economically “unsustainable” simply puts a new label on an old myth. It was not true then, and it is not true now. But such claims continue, impervious to experience.

The reasons for this resilient myth-making and myth-propagation will be easier to understand after a bit deeper probing of comparative system structure and function. But at the core of the explanation is a simple accounting identity that is one of the keys to understanding all controversies over health policy, public or private. Every dollar of expenditure, in every system, is simultaneously a dollar of someone’s income.

Whatever other effects it may have, good or bad, cost control is always income control. It follows that no matter what the level or rate of growth of health care expenditure, or the intensity of public concern over “spiraling costs”, there will always be powerful economic interests attempting to frustrate efforts at control and keep those costs escalating. These interests include not only physicians, and drug and medical device companies, but also private insurance companies and hospital unions, and indeed all those groups whose members derive their incomes directly or indirectly from the provision of health care and related services. It is immaterial, whether the cost escalation corresponds to expanded services with significant health benefits, or simply waste motion or even active harm. Expenditure, no matter on what, still exactly equals income.

It is this accounting identity that underlies the insight expressed compactly thirty years ago in Aaron Wildavsky’s *Law of Medical Money*: “Costs will increase to the level of available funds . . . that level must be limited to keep costs down.” (Wildavsky, 1977) Unless countervailing forces – and that turns out in practice to mean political forces – can be put in place, costs and incomes will keep on escalating. The United States has been uniquely unsuccessful in putting in place those countervailing forces.

## What Bent the Canadian Curve? Sole-Source Public Funding

The contrast in total expenditures is powerful *prima facie* evidence of important differences between Canada and the United States. As the lawyers say, *res ipse loquitur*, the thing speaks for itself. But it does not in itself tell us anything about either how and why these differences have emerged, or what implications they might have for health and well-being on the two sides of the border. The timing of emergence of the expenditure gap, however, links it directly with the extension of Canada’s Medicare system at the end of the 1960s, to cover physicians’ services as well as those of hospitals. The United States also introduced, in 1965, major public programs for financing health care – Medicare for the elderly and Medicaid for the indigent. But these new programs, important as they were, were not associated with any change in the American trend of cost escalation.

The observation of parallel cost escalation prior to 1970 and continuous divergence thereafter thus reflects the consequences of fundamentally different choices made in the Canadian and American approaches to public financing. The major difference between the two countries is that while both have maintained a diversity of financing sources, with public payment predominating, the dividing line between public and private is placed very differently.

**In Canada the primary source of funding depends upon the type of benefit; in the United States it depends upon the characteristics of the beneficiary.** This is critical. Canada’s Medicare programs cover the entire population, but pay only for the services of hospitals and physicians. Dentistry and

pharmaceuticals are financed through a mix of public and private insurance (albeit in the latter case with substantial public subsidies) and a substantial component of out-of-pocket payment.

A number of individual provinces have their own programs for covering some portion of pharmaceutical costs, and for continuing care (institutional or home). But these are not part of the national (“federal-provincial”) Medicare program and consequently vary greatly in coverage from one province to another. Pharmaceutical insurance coverage in Canada thus follows the American model, with partial public coverage and a major role for private insurers. Correspondingly, pharmaceutical costs show the same pattern of uncontrollable cost escalation.

In the United States, by contrast, the population is divided into different categories by age and income. The federal Medicare program pays for (most of) the cost of hospital and medical services for those 65 and over; and now for some pharmaceutical costs as well. State-administered Medicaid programs, with federal financial contributions, pay for those falling below state-defined income levels – (which in some states are well below the official poverty line). These two programs account for just over 70% of reported public contributions; the rest comes through a wide diversity of specialized categorical programs including those for the military, veterans, native populations and many more. The majority of the non-elderly population have private insurance, almost entirely employer-sponsored, of highly variable cost and coverage.

This patchwork of programs provides the large majority of Americans with good, or at least adequate insurance coverage, though they may be unhappy at its cost. The proportion of hospital costs, for example, that Americans in 2003 had to pay out-of-pocket was both very small and very little different from that paid by Canadians -- 3.2% compared to 2.3%. As a share of national income the American payments are about twice as large, because total hospital costs take up a roughly fifty percent larger share of American incomes. But in both countries hospital insurance coverage is almost complete.

Physicians’ services are a somewhat different story; Americans paid 10.0% of those bills out-of-pocket compared with 1.2% in Canada, and “physician and clinical services” account for a much larger share of total costs in the United States – 21.3% rather than 12.8%. Some of the services bundled into hospital care in Canada are in the United States charged separately by physicians and private clinics. But ten percent of twenty percent is still not a huge number. On average Americans paid less than \$200 (USD) out-of-pocket for hospitals and medical care in 2005. Canadians paid proportionately much less, a bit under \$30 (CAD), but the bottom line is that while Medicare in Canada covered about 98% of patients’ hospital and physician costs, the patchwork of American public and private insurance programs covered, on average, about 94%.

## Nobody We Know – The Uninsured Americans

On average. But a significant proportion of the American population do not fit into any of the insured categories. If one is neither elderly, nor very poor, nor a veteran, nor in a highly paid or well-insured job (nor independently wealthy), a serious illness or an expensive chronic condition is very likely to lead to bankruptcy and/or lack of appropriate care.

Just under sixteen percent of the American population – 46.6 million in 2005 (United States Census Bureau, 2006) have no health insurance coverage at all. A further fifteen million of those insured are estimated (Schoen et al., 2005) to have coverage inadequate to meet any serious health problem. In total twenty percent of Americans and over one third of the adult, non-elderly population are either uninsured or under-insured. That is about twice the population of Canada.

The incidence of un- or under-insurance is far from random. Those without adequate or any coverage are much more likely to be poor and unhealthy. Schoen et al. find that 49% of those in their lowest income group (< \$20,000 in 2003) were uninsured and another 19% underinsured with similar proportions for those

within 200% of the official poverty line. Over two-thirds of American adults in the lowest income groups have inadequate or no coverage. And people in these groups are on average less healthy. Inadequate or no coverage was twice as prevalent (54%) among those with fair or poor (self-reported) health as among those with excellent or very good health (28%). Private health insurance differentially excludes those with lesser resources and greater needs – as it must, in a competitive private market.

Nor is lack of coverage solely a problem of the poor. Loss of well-covered employment, onset of expensive chronic illness, or just a problem excluded in the fine print, and an American can be left uncovered or scrambling for coverage on any terms available. It is a continuing source of anxiety, particularly for those in the years -- between forty-five and sixty-five – of pre-Medicare senescence. (“Job lock” refers to the inability to change employment, because health insurance would not be available anywhere else.)

This is the point emphasized above by Krugman and Wells. No coverage means much more limited access to care, poorer health outcome, and excess mortality. People die. The “problem” of the uninsured has been well-known and widely deplored for many years. But nothing is done.

There is obviously no shortage of resources in the American health care system – quite the contrary, compared with every other system in the world it is awash in money. But all that money already has someone’s name on it, so despite hand-wringing across the political spectrum there has never been any political stomach for re-allocating the relatively small share of current expenditures that would be necessary to provide coverage, and care, for the uninsured. The uninsured may from some perspectives be a black mark on the American system, but so long as the vast majority of Americans have adequate coverage their problems are not sufficiently important to merit serious action.

## Divide and Conquer (the Treasury)

The American system of categorical coverage, however, also underlies the pattern of uncontrolled cost escalation – another “problem” that has been endlessly debated and deplored for the past forty years but never effectively addressed. The experience throughout the OECD world has been that pressures for health care cost escalation are universal and unlimited, and can be checked only by a payment system that effectively monopolizes all sources of funding and places a global limit on total system revenues. This was learned by students of health care, and particularly by health care payers and policy-makers, during the 1970s, and the effects of their various responses are reflected in Figure 1. It was that practical experience that Wildavsky drew upon in formulating his Law of Medical Money/.

The most common way of achieving this control is through establishing a “single-payer” system, in which all or nearly all of the revenues of the health care system flow through a single public agency, either a branch of government or a public agency responsible to government. The necessary revenues are raised through either taxation or compulsory insurance premiums, typically linked to income but not to illness status. The same effects can be achieved with multiple payers, as in Germany, so long as the multiple payers are tightly regulated and co-coordinated, and *not* permitted to behave like commercial insurers, charging premiums based on risk status (the sick pay more) and refusing to cover the “bad risks”.

As noted above, however, every dollar of expenditure is a dollar of someone’s income. Those whose income, and future prospects, are being restricted by effective cost control never cease and never will cease to search for ways to outwit Wildavsky and expand their revenues – i.e. health care costs. These efforts fall into two general categories, not mutually exclusive.

The first is political pressure to relax constraints on public funding by promising great health benefits either from expanding particular programs or simply from bigger budgets. Alternatively, failure to expand budgets will have dire consequences – the British expression is “shroud-waving.” Unless we get more money, people

will die! A common sub-theme is that more money for *this* program will result in cost savings elsewhere. But since those savings would necessarily involve reducing someone else's income, in practice they are rarely if ever realized.

The second line of attack, however, recognizes the (relative) effectiveness of public cost constraints, and thus tries to open or expand private channels of funding. User charges to patients, for example, enable strategically-placed physicians and other providers to increase their revenues over and above the reimbursements they receive from public programs. Private insurance offers support for such charges, by reducing the possibility that they might actually discourage use, thereby threatening provider incomes and perhaps patient health. The "public-private" financing debates have gone on for years, and go endlessly over the same ground, but they always come back to the fact that private funding, preferably from multiple sources, undermines or defeats collective efforts to contain costs.

And that, in a nutshell, is the story of the many decades of American cost expansion – and the equally persistent efforts in Canada to open up private channels of finance for hospitals and particularly physicians' services. The American experience is idiosyncratic because, alone among OECD countries, it has preserved a fragmented, multi-sourced financing system for hospitals and medical services. Canada's experience parallels that of the rest of the OECD because it has not.

The United States is unique not just in the OECD but indeed in the world (except for the Union of South Africa) in the extent of its reliance on private commercial insurance to finance health care. Private insurers manage only one third of the payment flows, and raise, net of public subsidy, less than one quarter of the costs. But they are the primary payers for a majority of the population, because they do not cover the high-use categories, the elderly and the poor. And American governments, though they issue the payments for 45% of health care expenditures, do so primarily through two quite separate programs – Medicare and Medicaid -- of approximately equal size but with very different rules for eligibility, benefits and administration. Moreover they are managed by different levels of government. In the United States "government" is not a single payer but two, even for the costs that are directly covered by the public sector.

### "We Stand on Guard, Eh?" – Sort Of

In Canada, by contrast, provincial governments are in total responsible for about 91% of public spending on health care. The federal government makes substantial cash contributions to the provinces, and has over the years transferred to them access to a greatly increased share of the individual and corporate income taxes to assist with the financing of the Medicare program. These funds, however, flow into provincial general revenues and are not directly linked to provincial expenditures.

The federal government plays an absolutely critical role, however, in maintaining the integrity of the Medicare system through the *Canada Health Act*, which makes the federal cash contributions conditional upon provincial plans conforming to the fundamental national principles of

- Universality (coverage of 100% of the eligible population "on equal terms and conditions"),
- Comprehensiveness (coverage of all medically necessary services),
- Reasonable Access which *inter alia* requires that the federal cash transfers be reduced dollar-for-dollar for any user charges that a provincial government levies or permits to be levied on insured residents for insured services),
- Portability (residents of a province are covered for services received in another province), and
- Public Administration of the payment system.

The centrality and significance of the *CHA* is clearly recognized by those with an economic or ideological interest in undermining Medicare and expanding the role of private financing. User charges have been the principal focus; right-wing provincial governments have been quite explicit about their desire to shift more of

the costs of health care from taxpayers to patients, from the more to the less healthy and wealthy. They are strongly supported both by representatives of upper-income taxpayers and by those providers of health care who recognize the restraints that the single-payer public system places on their income opportunities. To date they have been restrained by the threat of a corresponding reduction in federal cash transfers. There has however been a certain amount of “creeping privatization” to which the response of successive federal ministers of health, despite their legal obligations under the *CHA*, has not been overly energetic.

## Uniquely Expensive -- But Worth the Money?

A focus on comparative costs risks missing a central point. What do residents of the two countries get for their money? International comparisons make it clear that the American health care system is exceptional both in the level and rate of growth of expenditures and in the incompleteness of insurance coverage. But what about the more than eighty percent of Americans who *are* insured? Many, perhaps most, seem willing to believe that their country offers “the world’s finest health care” as well as the world’s most expensive. Are those who have access to it exceptionally well cared for? Are they healthier or happier than Canadians, or Europeans? Do they in fact get more or better care, or do they simply pay more for what they get? For that matter, how well served are Canadians, by a system that is among the more expensive in the OECD?

Conclusive answers to these questions have been slower to emerge. It is (relatively) easy to count dollars, pounds, marks and francs – cost estimation is an accounting exercise, albeit a complex one. Converting cost data to utilization data is much more difficult, ideally requiring construction of reliable cross-national price indices that would enable one to identify the bundles of services that expenditures actually buy, in different systems.

Comparing the quality of those services, across entire systems, is still more difficult. No one could deny, for example – and no one does – that the best of American health care is among the best in the world – as in fact is the best in Canada. But that care is not available to many Americans, who receive care -- if at all – on terms that would not be tolerated in Canada or any western European country. How should one average the good, the bad, and the ugly?

## Paying Much More for Much Less: The Worlds Most Expensive Insurance

Nevertheless, over the last couple of decades there is increasing evidence that Americans do not in fact get better health care than Canadians, or citizens of other high income countries, they just pay (much) more for it. As Anderson et al. (2003) titled their comparison of costs, services and outcomes across the OECD, “It’s the prices, stupid!”

One of the most significant observations has been the large discrepancy between Canada and the United States in the costs of running their respective payment systems. In all insurance systems, public or private, some portion of the amounts contributed must be used not to pay for health care *per se* but to cover the costs of the insurance mechanism itself. These “overhead costs” are required to assess and collect contributions and to evaluate and pay claims. But they vary greatly depending upon whether the system is universal and comprehensive, and financed out of general tax collections, or whether private companies must set a complex system of rates based on the risk status of individuals and groups, and offer a bewildering variety of types and levels of coverage -- and earn a satisfactory profit margin -- in a highly competitive market.

In 2003 these overhead costs absorbed 17.7% of expenditures on private health insurance in Canada and 14.2% in the United States. By contrast, the overhead share for the major public programs in the United States was 2.8% for Medicare and 7.1% for Medicaid. The Canadian data do not break out Medicare separately, but reported provincial government spending on administration, as a share of spending on hospitals and other institutions, physicians and other professionals, and prescription drugs, was 2.3%. The

private insurance mechanism thus adds a mark-up of 10%-15% to the total costs of providing health care, relative to the administrative costs of a universal public system.

But this is only half the story. In their pioneering study of insurance overheads twenty years ago, David Himmelstein and Steffie Woolhandler (1986) pointed out that system comparisons must include not only the reported expenditures on “pre-payment and administration” by private and public insurers, but also the relative administrative costs incurred by providers – physicians, hospitals, and nursing homes – in dealing with the different types of insurers. These administrative costs, which must be added into the costs of the care services themselves, are much higher in the United States because of the diversity of different insurers and different policies, each with its own rules for eligibility and coverage.

Himmelstein, Woolhandler and their colleagues have provided several updated estimates of the total administrative costs of the American payment system, relative to the single-payer system in Canada. Woolhandler et al. (2003) estimated using 1999 data that in that year the private insurance mechanism in the United States generated \$209 billion in excess administrative costs, relative to what the costs would have been to administer a universal, public single-payer insurance system as in Canada. These excess administrative costs made up 16.5% of total American health expenditures of \$1.27 trillion in 1999. Projecting this percentage to spending in 2004 yields a figure of \$309 billion, or roughly \$1000 for every man, woman and child in the United States. Surely they would have had better use for the money.

The costs of this bureaucratic waste motion -- pure “paper-pushing”, if the real objective is to finance health care -- account for a little over half of the difference between the two countries in the share of national income devoted to health care. Since these costs do not support the actual provision of care – they pay for accountants, clerical staff, and marketers, not doctors and nurses – it is hard to see how they can offer any additional health benefits to Americans.<sup>7</sup>

## Same CABG, Twice the Price

The excess costs associated with the private insurance system are, however, only one (albeit a large one) of the sources of higher expenditures in the United States. Where does the rest of the money go? A recent study by Eisenberg et al. (2005) suggests part of the answer. They noted that a number of hospitals in Quebec and in the United States are using the same computerized accounting system. They were thus able to compare, using exactly the same methods of cost-finding and allocation, the total direct and indirect costs of caring for patients undergoing the same procedure, coronary artery by-pass grafting (CABG), between 1997 and 2001. Medical records were available to identify individual patient characteristics prior to surgery, and subsequent outcomes.

Their conclusion:

“The in-hospital cost of CABG in the United States is substantially higher than in Canada. This difference is ... not explained by demographic or clinical differences, and does not lead to superior clinical outcomes.” (p. 1506)

Specifically, after controlling for demographic and clinical differences in the patient populations on the two sides of the border, costs were 82.5% higher for the American patients.<sup>8</sup> About 55% of this difference was due to higher direct costs of treatment, and about 45% to higher administrative overhead costs. American patients underwent more procedures, on average, while staying for fewer days. The greater number of

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<sup>7</sup> They could conceivably be used to manage the actual provision of care more effectively. But they aren't.

<sup>8</sup> Canadian costs were converted to USD using purchasing power parities defined at the economy-wide level; during 1997-2001 these ranged from .826 to .847 USD to the CAD. In 2006 the CAD is trading around .89 USD; converting to USD at this rate yields costs averaging 71.5% higher in the United States.

interventions, however, explained little of the cost differential; adjustment for greater procedural intensity only reduced that differential from 82% to 75%.

The primary factor was an across the board higher cost per unit of service in the U.S. – confirming the conclusion of Anderson et al.: “It’s the prices, stupid!” And the similarity of outcomes on both sides of the border undercuts any argument that the higher American unit costs corresponded to higher “quality”, however measured.<sup>9</sup>

Although the episodes of care for Canadian patients were much less costly, and equally effective, it is worth noting – as the authors do – that their average length of stay in hospital was 16.8% longer.<sup>10</sup> This reflects a long-standing difference between the two hospital systems; more is done to or for patients in American hospitals, in a shorter time period. Both admissions and lengths of stay in acute care hospitals have dropped dramatically over the past thirty years, on both sides of the border, largely due to changes in clinical conventions rather than to changes in medical technology.<sup>11</sup> Throughout this period, however, Canadian hospital utilization has remained significantly above American.

If patient outcomes are the same, why cannot Canadian hospitals shorten their lengths of stay? The primary impact would be to reduce requirements for nursing staff, at a time when nurses are in short supply across the country. The fact that the American system is vastly more expensive than the Canadian does not prove that Canadians necessarily “have it right”, or that the lessons from south of the border are all negative. In fact, American hospitals are often remarkably efficient at what they do. The integrated systems such as the Veterans’ Administration and Kaiser-Permanente, or the Mayo Clinic, are world models. Overall, however, they just do too much of what they do and charge far too much for it.

## Healthier Canadians – But Because of Health Care?

Directly comparable patient-level data on costs and outcomes are, unfortunately, rare. Another way to come at the question of relative system costs and effectiveness is to try to measure the health status of the two populations. Canadian life expectancies, for example, are significantly better than American. They are little inferior to the highest in the world, the Japanese and the Swedish, while the Americans are well down in the OECD pack. This was not always so; in 1950 life expectancies in the two countries were more or less equal (Siddiqi and Hertzman). But during the 1950s and 1960s, while life expectancies were increasing in both countries, they were increasing faster in Canada. The United States partially caught up in the late 1970s, but from 1980 on Canada has pulled still farther ahead. By the end of the century the Canadian advantage was about two years.

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<sup>9</sup> An older study by Tu et al. (1997) compared procedural intensity of care on the two sides of the border for patients with new acute myocardial infarct in 1991. American patients were five to eight times more likely to undergo coronary angiography, percutaneous transluminal coronary angioplasty, or coronary-artery bypass surgery in the first 30 days after infarct. Mortality rates were slightly lower in the United States during the first 30 days (21.4% compared with 22.3%) but after a year the difference had virtually disappeared (34.3% versus 34.4%). Again, more activity and (presumably) higher costs but no significant difference in outcomes.

<sup>10</sup> Many Canadian acute care hospitals include long-term care wards. When data at the national level are reported by hospital, not by patient, average lengths of stay in acute-care are upward-biased by the inclusion of these long-term patients. This can distort international comparisons. But even after removal of this bias, Canadian stays are still persistently above those in the United States.

<sup>11</sup> Pharmaceutical marketers have tried hard, and with some success, to promote the claim that these reductions have occurred because of the development of new and more effective drugs, thus justifying the rapid increases in drug costs. There are certainly cases where this has happened, but in general the claim is just marketing. It presupposes that the earlier lengths of stay were in fact clinically justified, given the technology of the day, and that is simply false, inconsistent with analyses of hospital use then and now. The primary factor bringing about reductions in hospital use was budgetary; clinicians and administrators took advantage of well-known opportunities for reduction only when funds were no longer sufficient to support previous practices.

“A two-year life expectancy gap may not sound like a lot, but during ages 25-64 it translates into mortality rates 30-50% per year higher in the US compared to Canada. Socioeconomic analyses show that the poorest 20% of Canadians enjoy the same life expectancy as Americans of average income.” (Siddiqi and Hertzman)

Canada is a healthier society,<sup>12</sup> and the differential is most marked at the low end of the income range. But one cannot necessarily attribute these differences to the relative effectiveness of our differing national health care systems. They reflect a whole array of social and economic differences of which access to health care is only one.

Some are obvious, such as contrasting attitudes toward gun control, or the greater extent and depth of poverty in the United States. Others are much more subtle, such as the levels of chronic stress arising from the whole pattern of circumstances in which people live and work (Gosselin, 2004). Universal public health insurance, for example, may contribute to the health of a population not only through access to needed care, but also through a sense of security and reduced vulnerability. The millions of Americans facing potentially dire consequences from an episode of illness have, as Krugman and Wells emphasized above, no counterpart in Canada or any other high income country.

One cannot even rule out, at least not on the basis of comparative health status alone, a contrarian claim that the American health care system might do a *better* job of protecting the health of its population against the myriad threats of a much more unhealthy society. The overall American mortality rates may be relatively poor, but perhaps without the massive expenditures on health care they would be much worse. (Such a claim invites the response that perhaps Americans would be better advised to spend less on health care and more on addressing the social determinants of their ill-health, but that is beside the point.)

## Living Is a Thing that Insurance Can Buy

A series of papers by Gorey, however, presents evidence bearing directly on this claim. He focused on the five-year survival rates of patients diagnosed with cancer, in pairs of roughly comparable cities – Winnipeg and Des Moines, Toronto and Detroit, Honolulu and Toronto (Gorey et al., 1997, 2000, 2003). The presumption is that whatever the biological, environmental or social origins of cancer, access to health care is a critical factor in determining survival rates. Gorey grouped patients into socio-economic classes, looking for cross-border differences in survival rates in aggregate and by income class.

The city pairs showed no (statistically) significant differences in five-year survival rates, with one consistent exception. Survival rates were significantly lower in the lowest income class in the United States. These are the people least likely to have insurance coverage, and thus with the poorest access to health care. Gorey’s findings indicate that Canadians and most Americans, if they are unfortunate enough to develop cancer, are about equally well served by their respective health care systems – the extra American spending does not buy longer survival. But the poorest Americans can expect to die sooner than Canadians or other Americans. The most plausible explanation is inadequate health care.

## Mining the JCUSH: Poorer, Sicker, Fatter, and Uninsured

A similar though less sharply pointed message emerges from the *Joint Canada/United States Survey of Health, 2002-03* (JCUSH) (Sanmartin et al., 2004). This telephone survey was designed jointly by Statistics Canada and the United States National Center for Health Statistics, asking identical questions to representative

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<sup>12</sup> “...simple indexes of health, such as mortality and life expectancy ... happen to correlate well with multi-dimensional health indexes.” (Siddiqi and Hertzman)

samples of Canadian and American respondents and focusing on self-rated health status along with a range of potential correlates.

On average, slightly more Canadians reported themselves to be in excellent, very good, or good health – 88.3% compared with 85.4% -- and the difference though small is statistically significant (Sanmartin *et al.*, *op. cit.* Table A-1). The remainder reported themselves as in fair or poor health. (Interestingly, statistically significant differences were also found within the 18-44 and 45-64 age groups, but not for those 65 and over, who in the United States are all insured under the national Medicare plan.)

Self-reported health in both countries followed the usual gradient by income class (Table A-7). The proportion of people reporting fair or poor health falls monotonically as one moves up the income scale. The gradient was however significantly steeper in the United States; 31.0% of those in the bottom income quintile in the United States reported themselves as being in fair or poor health compared with only 23.3% in Canada. Interestingly, Americans in the top income quintile were also significantly more likely to report fair or poor health – 7.0% as against 4.4. The spread between the fair/poor percentages at top and bottom incomes is 18.8 percentage points for Canada and 24.0 for the United States.

The JCUSH data provide clear evidence of much weaker attachment, and lower access, to the health care system among low-income and/or uninsured people in the United States. Canadians and *insured* Americans are equally likely to report that they have a regular medical doctor – 84.9% and 84.3% (Table A-12). (In both countries, this proportion rises with age and is about ten percentage points higher for females.) Among uninsured Americans, however, only half as many, 42.5%, report that they have a regular medical doctor. (Table A-12)

The American uninsured were also far more likely to report an unmet health care need; 40.0% compared with 10.0% for insured Americans and 10.3% for Canadians (Table A-14). Reported unmet needs are in both countries greater in the lower income quintiles (Table A-16), but the rate is much higher in the United States – 26.6% in the lowest quintile and 14.1% in the next lowest, compared with 17.4% and 11.3% in Canada.<sup>13</sup>

On the other hand, Americans were also much more likely to be obese (Table A-9), which is a well-recognized risk factor for ill-health in many forms. Obesity is in both countries graded by income; the proportion reporting an “obese” body mass index rises steadily as income falls. But again the gradient is steeper in the United States; 27.3% and 23.4% of Americans in the bottom two income quintiles were reported as obese compared with 17.6% and 16.6% of Canadians. Canadian rates were lower in every other quintile as well, though the differential shrinks as income rises. These findings point to differences in social context – an unhealthier society south of the border that bears more heavily on those with lower incomes – quite independently of the health care system itself.

The gender-specific data also suggest a link between obesity and ill-health. Obesity rates among males were quite similar, 17.7% in Canada and 19.7% in the United States (Table A-6). But 21.4% of American females were reported as obese, nearly double the Canadian rate of 12.4%. Rates of self-reported fair or poor health are also quite similar among males -- 12.4% in Canada and 13.4% in the United States (Table A-2). But 15.7% of American females report fair or poor health, compared with only 11.1% of Canadians. At least according to the JCUSH, American females are fatter and sicker than American males or Canadians of either sex.

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<sup>13</sup> The data reported in Sanmartin et al. (2004) do not identify the separate effects of low income and uninsured status.

## Healthy Brits, Sick Americans – And It's Not Health Care

But the higher rates of obesity among American females and at the bottom end of the income distribution, while correlated with poorer health, may not, in fact, play much of a role in explaining the cross-border differences. This is indicated by another recent international study showing major health effects apparently due to differences in social context – the point emphasized by Siddiqi and Hertzman.

Banks et al.s (2006) compare the health of residents of the United States and the United Kingdom. In each country, data were taken from comparable questions on two different surveys, one using self-reports of the prevalence of seven chronic diseases (diabetes, hypertension, heart disease, myocardial infarction (heart attack), stroke, lung disease, and cancer) and one providing biological measures or markers linked with these diseases. Data were also collected on income and education (ranked by tertiles or thirds in each country), and on several behavioural risk factors – smoking (present and past), alcohol use, and obesity. The researchers compared only non-Hispanic whites in both countries, in order to avoid the possible confounding effects of obvious differences in race and ethnicity. They also restricted attention to those in the 55-64 age range.

The usual social gradients in health emerged clearly in both countries; lower prevalence was associated with both higher income and higher education for every disease except cancer. But the prevalence of every illness was higher in the United States at every income and education level (except for lung disease in the highest income or education tertile). The American disadvantage was particularly marked in the lowest income/education tertiles, but for several diseases – diabetes, hypertension, heart disease and cancer – the prevalence among the highest income and education tertiles in the United States was greater than or equal to that in the lowest third in the United Kingdom.

The data on disease prevalence in both countries come from self-reports. But in each country the patterns in these data were consistent with those from the surveys collecting biological data.

“Two simple but powerful conclusions follow [from this consistency] ... First, Americans are much sicker than the English. Self-reports of disease are not deceiving us ... Second, the SES-health gradient is also not a reporting mirage; a by-product of differential ability ... to recognize and report disease in surveys ...” (p.2044)

Several of the findings of this study are relevant to the interpretation of the JCUSH, and for the comparison of the Canadian and American health care systems more generally. First, it provides powerful evidence that Americans (at least in this age bracket) *are* relatively unhealthy, even after removing disadvantaged racial and ethnic groups from consideration. Nor is this a consequence of differential access to health care. The United Kingdom, like other high income countries has a universal, tax-financed health care system, but health insurance is also virtually universal among high income Americans. Banks et al. estimate that only 2.6% of those in the top third of incomes in their sample were uninsured (p.2043). Americans simply spend about twice as large a share of their considerably larger national income on health care (14.6% compared with 7.7% in 2002). That extra spending, whether it is buying more procedural interventions or simply supporting higher prices (and incomes) for those in the health care sector, has not yielded better health.

Furthermore, although Banks et al., like the JCUSH, find significantly higher rates of obesity in their American sample – the Brits are harder drinkers, and smoking rates are about the same – adjustment for these well-recognized behavioural risk factors has *no impact at all* on the observed differences in disease prevalence. This suggests that it would thus be unwise too quickly to attribute the differences observed in the JCUSH to differences in obesity rates.

As noted above, however, evidence that “Americans are sicker” could well be interpreted as evidence not of an inefficient and wasteful health care system but of the additional resources required to care for people in a much more hostile social environment. Perhaps health care costs more in the United States because it has a

more difficult task than in other, more healthful countries? While Banks et al. rule out the effects of a few of the most prominent forms of unhealthy individual behaviour, that simply shifts attention to less immediately obvious aspects of the social environments in which Americans live and work, as sources of their health disadvantage.

## Clinical Practice Variations within the United States: More Money Buys More Care -- and Poorer Outcomes!

A series of remarkable studies within the United States itself, however, does permit us to reject this line of argument. Researchers at Dartmouth University, under the leadership of John Wennberg, have for many years been studying the sources and implications of geographic variations in medical practice. A landmark pair of papers by Fisher et al. (2003a,b) examined costs and outcomes of care for four patient cohorts (those hospitalized for hip fracture, colorectal cancer, acute myocardial infarction, and a representative beneficiary survey) within the American Medicare (over-65) population. Dividing the country into 306 more or less self-contained Hospital Referral Regions, they grouped these areas into quintiles according to the relative level of end-of-life spending per enrollee in each region.<sup>14</sup>

Baseline health status was similar across regional quintiles in each cohort, but patients in high-cost regions received about 60% more care than those in low-spending regions. Measures of quality of care and patient satisfaction showed no differences by spending level, despite these much more intensive levels of service. And measures of patient mortality were actually slightly *worse* in the high spending regions. (The differences were quite small, but they were statistically significant because the sample sizes were so large.)

The importance of these findings for comparisons between Canada and the United States is that the range of spending levels across the American quintiles is of the same magnitude as the cross-border difference in national averages. Indeed, allowing for the fact that about half of the cross-border cost difference is accounted for by the excess administrative costs associated with the American private insurance system, the within-US variation is in fact much larger than the Canada-US differential in actual costs of care. Yet this large variation is not reflected in any advantage for patients in high spending regions – instead their mortality rates are slightly higher.

If it were the case that unusually high levels of health care resources were required to compensate for the less healthful social context of the United States, then one might expect to find that patients in those American regions where resource use was comparable to Canadian levels were at a significant health disadvantage. They are not.<sup>15</sup>

The finding of similar levels of patient satisfaction in high and low cost regions also disposes of another line of argument, that the more costly American system may not yield better health, but it does meet patient “demands”. Americans may not be healthier, but perhaps they are happier because more is spent? This argument, essentially circular reasoning in a data-free environment, has had little appeal other than to a certain school of economists. (Patients *must* be happier or they -- being rational and fully informed -- would not have spent the money.) But the absence of any reported difference in satisfaction levels implies that if patients are happier in high-spending regions they are either unaware of it, or choose not to tell.

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<sup>14</sup> Regional costs were measured at standard national service prices, and adjusted for enrollee age, sex, race and illness.

<sup>15</sup> This is not the whole story – it never is. The regional variations within the United States are measured at standard national prices per unit of service, thus removing any effects from regional price variations. But the cross-border expenditure differences are not standardized for the lower prices of services in Canada. To the extent that Canadian prices per unit of service are lower, the comparison of total expenditures overstates the difference between Canadian and American average levels of care use. Care use in the low-using quintile of American regions may thus be well *below* the Canadian average, suggesting that Canada is also supplying at least some forms of care beyond the point of health benefit.

Two more recent studies by Baicker et al. have generated a similar message of cost without benefit from different American cross-regional data sets. Baicker et al. (2004) found that a widely-used index of quality of medical care was negatively correlated, across states, with both total Medicare spending per enrollee and numbers of specialists per capita. (The correlation with availability of generalists, however, was positive.) Most recently, Baicker et al. (2006) report that Caesarian section rates vary across counties in the United States by a factor of about two to one, and show that these variations are minimally related to clinical factors. The overall rate of Caesarian section is much higher in the United States than in other countries.

“This is a source of national concern: The Centers for Disease Control and Prevention’s (CDC’s) Healthy People 2010 initiative has the explicit goal of reducing the cesarean birth rate.” (p. w355)

The Baicker et al. study is intended to provide a better understanding of the factors accounting for this excessive and inappropriate care.

## Yep, It’s the Prices that Make the Difference

In summary, the American health care system is vastly more expensive than any other system in the world and the gap is growing. Canada by contrast is just above average for a high income OECD country. The 80%-85% of Americans who have good or adequate insurance appear to be as well served by their health care system as Canadians.<sup>16</sup> Extra expenditures do not, however, buy proportionately higher levels of care, being largely absorbed by higher prices and administrative overheads. Whatever extra services Americans do receive, moreover, are not reflected in better health.

The 15%-20% of Americans who have no or minimal insurance, however, have much poorer access to health care, reflected in significantly lower health status. This may be deplorable, but is hardly surprising. What is more interesting is the emerging evidence that the well insured and well cared for American majority are also less healthy than the English, and quite possibly than Canadians as well. The reasons may have little to do with the effectiveness of the health care system itself, being rooted in more fundamental characteristics of American society. Whatever those characteristics are, however, they are not compensated by massive levels of spending on health care.

In the end we come back to the title of Himmelstein and Woolhandler (1986) -- “Cost without Benefit” – or that chosen by Anderson et al. (2003), “It’s the prices, stupid!”

It is hard to see how the present American trajectory can be sustained. Twenty percent of American GDP for health care by 2015? Large American corporations see themselves driven towards bankruptcy by escalating health and pension costs – “legacy costs” – for their current and retired employees. They are being forced to cut back; employment-based coverage has begun to shrink since the turn of the century. In the public sector, the tax cuts and heavy military spending by the Bush administration have driven the federal government sharply into deficit, and the ratio of national debt to GDP is accordingly climbing. Where is all the new money to come from?

## Unacceptable Costs? Pass Them On

Yet the majority of Americans, and certainly of their political and economic leadership, seem as determined as ever that the universal public coverage that has contained costs – relatively speaking – in every other high

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<sup>16</sup> This refers to the insured American population as a whole. Within that population, however, the quality and style of care, and associated amenities, vary dramatically by social class (Scott, 2005). Some are much better served than others.

income country is simply unacceptable in the United States. Instead, the “new” strategy is to lower both public and private insurance coverage under the banner of “Consumer- Directed Health Care”.

Stripped of the public relations rhetoric about “consumer empowerment and choice”, this strategy amounts to no more than transferring the rising costs of health care from employers and taxpayers and back onto patients themselves. It resuscitates yet again the ancient fiction that patient decisions determine health care use in the same way that consumers purchase cans of beans at the supermarket. Costs are said to be escalating because “consumers” are not paying for their own care; increase the use charges and they will purchase more selectively -- “demand” less.<sup>17</sup>

In the face of overwhelming evidence that the American system is not delivering value for money, indeed is monumentally inefficient in world terms and rapidly getting worse, the response by American policy-makers and politicians (cheered on by many economists) is not to try to manage that system for better results but to transfer a larger share of those costs from taxpayers and employers to patients, from the healthy and wealthy to the unhealthy and unwealthy.

“That no one in the U.S. Congress shows much interest in the glaring inefficiencies that could easily be addressed within the current Medicare program speaks volumes about the true, but hidden, agenda that actually drive the quest for privatizing the Medicare program. ... Crisply put, the objective is to shift responsibility for health spending on the elderly from the general taxpayer onto the elderly themselves ...” (Reinhardt, 2001)

Nothing much has changed in the last five years; and the same comments could equally well be applied to the private insurance sector.

## America’s Failure, Canada’s Future?

And in Canada? Remarkably, the rhetoric of “unsustainable” public health care dominates the public debate. Canadian health care must be “reformed” by expanding the role of both private payment and private delivery alongside Medicare – i.e. introducing more features of the American health care system – to contain costs! Are these people nuts? What planet are they on?

In the first place the costs of Medicare are not “unsustainable” and everyone involved in health care policy knows this.<sup>18</sup> The numbers are all public, and quite transparent (Evans, 2005). Figures 1 and 2 makes the picture crystal clear for aggregate health expenditures. If we focus in more closely on the Medicare-financed services, hospitals and doctors, these accounted in 1975 for 59.8% of total health care spending and 4.2% of national income. By 2005 they had fallen to 42.7% of health spending, and took up 4.4% of national income.

Prescription drugs, by contrast, which were and are financed by an American-style mix of public and private insurance and user payments, had risen from 6.3% to 14.5% of health spending, and had more than tripled their share of national income, from 0.4% to 1.5%. Who in their right mind could seriously argue that we in

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<sup>17</sup> It is not clear whether anyone beyond a certain school of academic economists actually believes this. Thorpe and Howard (2006) are the latest in a long line of analysts, on both sides of the border, to show that cost escalation is largely attributable to the increasing intensity of servicing of people who are quite sick – in their study, chronically ill and under medical management for five or more treated conditions. That these patients would manage their own care more effectively, getting more value for money, if they were required to pay more of the cost, is simply a cynical political fiction to mask a policy of cost-shifting.

<sup>18</sup> Anyone who does not, should go away and do about half a day’s homework. The claims that Medicare cost escalation is “unsustainable” typically draw on very short runs of expenditure data, measured relative to inappropriate denominators (other provincial expenditures rather than provincial revenues or national income. The *pressures* for cost escalation are always there – Wildavsky’s Law has not been repealed and no amount of money is ever enough. But the long term picture shows that these pressures have been reasonably well contained.

Canada should expand private financing for Medicare (and private insurance) in order to mitigate health care cost escalation?

## Cost Shifting, Cost Driving -- The Architecture of Economic Interest

So what is going on? Well, nobody is nuts, and the advocates of private funding are very much in their right minds. They are pursuing a perfectly rational agenda, but one that is fundamentally different from what is presented in the public rhetoric. In Canada as in the United States, the objective of the privatizers is to shift the balance of burdens and benefits in favour of the healthy and wealthy and against the unhealthy and unwealthy. In the United States this shift is being advocated as a “solution” – which it will not be -- to a genuine problem of escalating costs that has been decades in the making. But in Canada, where no such “sustainability” crisis exists, the same agenda is being pursued by the same interest groups. So a crisis must be fabricated.

In neither country does this redistributive agenda have anything to do with improving the efficiency and effectiveness of the health care system itself, as a set of institutions for advancing the health of the population served.

All health care financing systems embody the answers to three fundamental distributional questions:

- Who Pays (what share of the total cost of the system)?
- Who Gets (access to what kinds of care, on what terms)? and
- Who Gets Paid (how much, for doing what)?

The answers to these questions define the principal axes of debate and political conflict in every system, because they represent genuine and fundamental conflicts of economic interest that are typically closely aligned with ideological convictions as well. (Where you stand depends very much on where you sit.)

*Who Pays?* When a system is financed through taxation, as is Canada’s Medicare program, people contribute roughly in proportion to their incomes. The distribution of burdens depends on the progressivity or regressivity of the overall tax system. Direct taxes, such as the income tax, typically take a somewhat larger share of the income of those with higher incomes, and indirect taxes, such as sales taxes, take a larger share of the income of those with lower incomes. But contributions are linked to economic capacity, not to the utilization of health care. The wealthy pay more; the sick do not.

User payment, whether or not dressed up as “Consumer Directed Health Care” transfers costs in exactly the opposite direction. Those who use more care, regardless of their economic capacity, contribute more toward total system expenditures. And those who use more care are sicker. Since contribution is unrelated to income, the share of income contributed falls as income rises. It follows that the introduction or expansion of out-of-pocket payment in a tax-financed system, as so often advocated by the representatives of upper income groups in Canada, serves to shift the burden of payment down the income distribution, as well as from well to ill.<sup>19</sup>

Private insurance has a similar effect. If insurers are to survive in a competitive market they must charge premiums based on the risk status of the insured. So those at high risk – the elderly, the chronically ill – must pay much higher premiums if they can be insured at all. The burden of payment is thus distributed by the probability of illness, rather than the actual experience. In practice, however, insurers’ estimates of

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<sup>19</sup> Various schemes have been proposed, during the past thirty-plus years, to link patient liability to income level – charge the rich more. These can reduce but not eliminate the net transfer from lower to higher income groups – and especially to very high income groups, who pay the highest taxes. And it is still only sick who pay.

probability of illness – and corresponding premiums -- are based in large part on past experience – “experience rating” – so that contributions are linked to illness over time.

But they are not directly linked to income. (Higher income people, being on average healthier, may pay lower premiums or receive better coverage.) This elementary point is one of the principal sources of support for the private insurance industry in both the United States and Canada. A universal public system in the United States would be much less expensive overall, but would definitely shift the burden of contributions up the income distribution. Higher income people can therefore be rallied against such coverage in the United States, and in Canada in favour of preserving private coverage for pharmaceuticals and introducing it for Medicare.<sup>20</sup>

If people were as rational and far-sighted as economists typically assume, many Americans with above-average incomes might realize that while they are paying a smaller *share* of the total costs under private insurance than under tax finance, the extra *total* costs that result – large and growing -- are eroding and for many have swallowed up those gains. But a good deal of public disinformation from various sectors of the health care industry is devoted to making it difficult for the general public to see this point.

*Who Gets?* In Canada’s Medicare system, access to care is based primarily on professionally assessed need.<sup>21</sup> Patient aggressiveness and social contacts undoubtedly also play a role, as they do in any human system, and professionals’ perceptions of need may be biased in favour of certain groups, but these are at most second-order effects. What the system does *not* do, is provide preferred access for those with greater economic resources, and this too is a continuing point of attack for those with greater economic resources.

The contrast with the United States is stark. Apart from the difficult and sometimes appalling circumstances of the uninsured, there is a steeply-graded economic hierarchy of differential access and quality of care (Scott, 2005). But many European systems, though universal and predominantly publicly funded, have retained “privilege-preserving” features that permit the better-off to purchase more timely, more comprehensive, and (real or perceived) better quality care through out-of-pocket payments directly to providers. In some countries this is supported by voluntary private insurance, typically with some form of public subsidy.

Some systems also impose small user charges for the general system; insofar as these differentially impede access by those with lower incomes they may serve to improve access by those with higher incomes. (And if they do not impede anyone’s access, they are simply a way of shifting costs from taxpayers to users.)

Canadian advocates of an expanded role for the private sector are quick to insist that they are not trying to import an American-style system, although how in the North American context they would prevent such a development is never made clear. Rather they point to the privilege-preserving features of European systems as worthy of emulation by Canada’s Medicare.

As they may be – if the objective is simply to provide privileged access for those with higher incomes. There is no evidence to suggest that “two-tier” care either contributes to cost control or improves the overall effectiveness of a health care system – if anything they do the reverse.<sup>22</sup> They are part of the compromises that many European governments felt it necessary to make, in establishing their universal systems. Those

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<sup>20</sup> The members of the Supreme Court of Canada are all very high up in the income distribution, as one suspects are nearly all the people they talk to.

<sup>21</sup> Individuals may make the initial decision to seek care, but these initial visits to general practitioners or emergency wards account for a very small fraction of use and costs.

<sup>22</sup> It is often claimed by advocates that a two-tier system would reduce pressure on the public system, thus improving access for everyone. This makes no economic sense. Better access in the public system means fewer patients for the private tier. Since the same providers work in both, and are paid more in the private tier, their incentive is to limit their effort in, and thus access to, the public tier. And, in actual two-tier systems, they do.

compromises were not made in Canada, and it is perfectly understandable that Canadians with higher incomes would seek similar privileges for themselves, without having to pay, through taxes, to support a similar standard for everyone else. But it is not clear why the rest of us should want to extend those privileges, and voluntarily step back in the queue.

That is not to say that Canadians might not be able to find in the European experience many constructive ideas for improving our system. We can – as indeed we can in the American experience. But enhanced privileges and reduced financial burdens for the wealthy, and increased incomes for those who care for them, are not among those ideas. They are a distraction from the more fundamental problem of improving the efficiency and effectiveness of the Canadian health care system.

*Who Gets Paid?* Health care systems in all high income countries are huge and complex, and their management is far from easy. But the greatest difficulty arises not from the inherent complexity of the system itself but from the fact that, whatever the public rhetoric, improving system efficiency is a contested objective, not a shared one. As emphasized above, every dollar of expenditure is a dollar of someone's income, and this simple, almost trivial fact is at the core of the problem.

The American private insurance industry is perhaps the world's leading example. Virtually every serious student of health care, anywhere in the world, now understands that that industry imposes huge costs on Americans, costs for which there is no corresponding benefit in terms of health care, let alone health improvement. But it also generates huge incomes, in exactly equal measure. Those incomes would disappear in a more rational system. The private insurance industry is thus the most powerful American opponent of universal public coverage. In Canada the industry advocates private financing for Medicare, private charges against which they could offer insurance.

The role of single-payer coverage in containing price inflation is also well understood by providers of health care, which is why so many provider groups in the United States are opposed to a universal public program, and in Canada support more private payment.

The pharmaceutical industry is the leading example in Canada, strongly opposed to universal Pharmacare on the Medicare model.

A naïve application of elementary economic theory might lead one to expect any industry to want its products to be “free” to the user, at public expense. A slightly more sophisticated understanding focuses on the relative bargaining strengths of buyer and seller. Private individuals, whether or not covered by private insurance, must take whatever price the drug manufacturer chooses to set, for whatever (patented) drug the physician prescribes. A single public buyer has much more bargaining power.

## **With Money We Will Get Men, With Men We Will Get Money**

Other major economic interests are involved. Canada has always banned the advertising of prescription drugs to the general public – Direct To Consumer Advertising or DTCA. Similar restrictions in the United States were lifted in 1997, and now the pharmaceutical industry spends several billions a year on advertising in the American media. The industry is highly sophisticated and highly successful in its pursuit of profit; one has to infer that those advertising expenditures are more than recouped in increased sales – i.e. increased drug expenditures -- and profits.

The industry's increased advertising expenditures are in turn the increased revenues of its chosen media outlets. It is not therefore difficult to understand why in 2006 the Canadian media group CanWest Global launched a constitutional challenge to the Canadian ban on DTCA; their objective was not the improvement of Canadians' health.

The circle of “Who Gets Paid” spreads wider, and is not restricted to other corporations. The co-optation of physicians and other scientists into the industry’s marketing programs is an old story, but one which is creating increasing difficulties for medical journals. Supposedly objective scientific papers may be ghost-written for the nominal authors (who are themselves paid industry consultants) to provide a favourable assessment of a company’s products. And the journals themselves survive virtually entirely on pharmaceutical industry advertising.<sup>23</sup> Political pressure on governments to reimburse the industry’s products comes from “grass-roots” patient organizations funded and assisted by the industry – cynically referred to as “Astroturf”.

Private insurance in the United States, and pharmaceuticals in both countries, provide the leading examples of income- and profit-driven constraints on the effective management of health care systems. But it is important to keep in mind that, while Canada’s Medicare system may have avoided (for now?) these most egregious sources of cost without benefit, it is not itself always a model of efficiency and appropriate care.

### Is It the Climate? Canadians and Hospital Beds

Hospital bed use is particularly questionable. The finding by Eisenberg et al. (2005) that lengths of inpatient stay for Canadian CABG patients were on average 16.8% longer than those of comparable American patients, for equivalent outcomes, was noted above. A cross-Canada study of regional variations in cardiovascular hospitalization rates (for acute myocardial infarct (AMI), congestive heart failure (CHF), angina, and “chest pain”) found:

“There is considerable regional variation in the cardiovascular hospitalization rates across the country that may be amenable to further interventional strategies.” (Hall and Tu, 2003)

Their characterization of this variation as “moderate to high” seems somewhat understated: the measures of SCV (Systematic Component of Variation) that they calculate fall into the “Very High” category for both angina and chest pain, and reach “Very High II” for CHF. The SCV measure for AMI at 38.7 is on the borderline (39) between “Moderate” and “High”:

“... perhaps reflective of AMI being a nondiscretionary admission, and having well-developed and disseminated guidelines emphasizing the need for hospitalization and treatment of all cases of AMI.”

The good news is the suggestion that such guidelines may be *relatively* effective; the bad news is that the variation remains borderline High.

This analysis was part of a major series of studies of cardiac care carried out by the Canadian Cardiac Outcomes Research Team (CCORT) and recently collected in the Canadian Cardiac Atlas (Tu et al., 2006). The CCORT summary table shows regional rates of hospitalization (age-sex adjusted, for the population 20 years of age and over) for the four conditions above. These range from 508.4 per 100,000 people in Vancouver, to 1,929.6 – nearly four times higher -- in region 7 of New Brunswick. In general, rates in each province were markedly lower in metropolitan areas, but there was also a pronounced east-west gradient; Winnipeg was 30% above Vancouver, while Toronto, Ottawa and Montreal were up 45%-55%, and hospitalization rates in Halifax were 75% higher.

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<sup>23</sup> Medical journal editors at least recognize the problem. The fact that some economists are now also on the industry payroll, presenting industry marketing as academic research (Pear, 2003) seems not yet to have penetrated the consciousness of that profession.

The average rate for Canada as a whole was nearly double that for Vancouver – 93% higher -- implying that if Vancouver patterns of cardiac care could be replicated across Canada, hospital case loads for these four conditions could be cut nearly in half. Inpatient bed use could fall by more than half, because average lengths of stay are also significantly lower in British Columbia.

Such observations of course raise more detailed questions about comparability of population needs – are people sicker in the east, or going uncared for in Vancouver? But it should be recalled that the regional variations found in the United States by Fisher et al., where hospital utilization rates are on average significantly lower than in Canada, did not find poorer outcomes in low-use regions. Indeed in explaining these variations Fisher et al. focused attention on the factors that were also first on the list of suggestions offered by Hall and Tu – variations in physician supply and practice styles.

The CCORT studies deserve attention because while reports of large and unexplained variations in clinical practice go back decades, these are the most detailed and comprehensive to be carried out for Canada as a whole, and because cardiac care is a major part of the acute care hospital case load there is no reason to expect the regional variations for other types of cases to be very different. Even after thirty years of decline in inpatient utilization rates, there appears still to be plenty of potential for further reductions.

### **Procedure Rates – There’s No Reason, It’s Just Our Policy (and It Pays)**

While the regional variations in hospital use are large and without obvious justification, they are at least variations around a stable or declining average rate. Studies in Ontario of cardiac service use and cost, however, both in and out of hospital, show similar wide and unexplained regional variations but around rapidly escalating overall rates (Alter et al., 2004). Total provincial expenditures for a set of six cardiac services nearly doubled between 1992 and 2001, from \$206.9 million to \$390.8 million (Alter et al., 2006). This average increase of 7.3% per year is well above the increases in cardiac disease prevalence or shifts in demographic structure. Alter et al. suggest that it is “... likely attributable to continued proliferation in cardiac technology and specialty physician supply, as well as to changes in physician referral behaviors.”

These observations give Alter et al. concern about the financial “sustainability” of Canada’s Medicare system. Particularly worrying for the longer term, is that despite the increases they report in Ontario, the capacity for and use of these procedures in the United States remains far above Ontario levels. There is thus the potential for considerable further seepage into Canada, more or less indefinitely, of the American disease of “cost without benefit” (except to providers).

### **Beware Americans [or Their Local Agents] Bearing Solutions**

The very negative view of American health care presented here is by no means idiosyncratic; American observers have been making these points for many years.<sup>24</sup> The American public seem now to share this view – a recent Harris poll conducted for the Commonwealth Fund (Schoen et al., 2006) found three quarters of respondents believe their system needs either fundamental change or a complete rebuilding. Expanding coverage and containing costs were identified as the top priorities – precisely the principal points of contrast with the Canadian system.

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<sup>24</sup> “...it would be, quite frankly, ridiculous...to suggest that we have achieved a satisfactory system that our European friends would be wise to emulate.” (Enthoven, 1989); “The American health care system is at once the most expensive and the most inadequate system in the developed world, and it is uniquely complicated” (Angel, 1999); “... like many other observers, I ... see an administrative monstrosity, a truly bizarre mélange of thousands of payers with payment systems that differ for no socially beneficial reason ...” (Aaron, 2003).

These observations should encourage considerable Canadian skepticism, indeed deep suspicion, of proposals to introduce or expand here the characteristic features of American health care – multi-source funding, direct charges to patients, private insurance, and extensive corporate for-profit delivery. But they also underline the fact that though the Americans have so massively “got it wrong”, there is no basis for complacency that Canadians have “got it right”, and that there is no room for improvement. Fortunately there is no great danger of this illusion taking hold, amid the cacophony of voices telling us that the Canadian health care system is “in crisis”, “unsustainable” and on the verge of collapse.

What *is* dangerous, is that this cacophony is in large part deceptive and diversionary, dis-information driven by the desire of narrowly-based but strategically placed interest groups to introduce more opportunities for private payment and “multi-tier” medicine. Such proposals would, and are intended to, improve the relative access of those with greater financial resources, while shifting the burden of payment from taxpayers to patients and increasing overall costs (provider/insurer incomes). They leave untouched the considerable inefficiencies that lurk in the organization and delivery of care. But it is in focusing on those that the long-term future of Canadian health care depends. The United States provides a dramatic lesson in the consequences of failure.

## References

- Aaron, H.J. (2003) "The Costs of Health Care Administration in the United States and Canada — Questionable Answers to a Questionable Question" *New England Journal of Medicine* Vol. 349, no. 8 (August 21) pp. 801-3.
- Alter, D.A., R. Przybysz and K. Iron (2004) "Non-Invasive Cardiac Testing in Ontario" ICES Investigative Report, Toronto: Institute for Clinical Evaluative Sciences, October.
- Alter, D.A., T.A. Stukel and A. Newman (2006) "Proliferation of Cardiac Technology in Canada: A Challenge to the Sustainability of Medicare" *Circulation* doi: 10.1161/circulationaha.105.560466 (January 24) pp. 380-87
- Angel, M. (1999) "The American Health Care System Revisited — A New Series" *New England Journal of Medicine* Vol. 340, no. 1 (January 7) pp. 70-76.
- Baicker, K. and A. Chandra (2004) "Medicare Spending, The Physician Workforce, And Beneficiaries' Quality Of Care" *Health Affairs* Web Exclusive DOI 10.1377/hlthaff.W4.184 (April 7) pp. 184-97.
- Baicker, K., K. Buckles and A. Chandra (2006) "Geographic Variation In The Appropriate Use Of Cesarean Delivery" *Health Affairs* Web Exclusive DOI 10.1377/hlthaff.25.w355 (August 8) pp. 355-67.
- Banks, J., M. Marmot, Z. Oldfield and J.P. Smith (2006) "Disease and Disadvantage in the United States and in England" *Journal of the American Medical Association* Vol. 295, no. 11 (May 3) pp. 2037-45.
- Borger, C., S. Smith, C. Truffer, S. Keehan, A. Sisko, J. Poisal, M. K. Clemens (2006) "Health Spending Projections Through 2015: Changes On The Horizon" *Health Affairs*, 10.1377/hlthaff.25.w61-w73 (February 22).
- CIHI (2005) *National Health Expenditure Trends 1975-2005* Ottawa: Canadian Institute for Health Information.
- Eisenberg, M.J., K.B. Filion, A. Azoulay, A.C. Brox, S. Haider and L. Pilote (2005) "Outcomes and Cost of Coronary Artery Bypass Graft Surgery in the United States and Canada" *Archives of Internal Medicine* Vol. 165, no. 13 (July 11) pp. 1506-13.
- Enthoven, A.C. (1989) "What Can Europeans Learn from Americans about Financing and Organization of Medical Care?" *Health Care Financing Review*, Annual Supplement, December, pp. 49-63.
- Evans, R.G. (2005) "Political Wolves and Economic Sheep: The Sustainability of Public Health Insurance in Canada" in Alan Maynard, Ed. *The Public-Private Mix for Health* London: The Nuffield Trust.
- Fisher, E.S., D.E. Wennberg, T.A. Stukel, D.J. Gottlieb, F.L. Lucas and E.L. Pinder (2003a) "The Implications of Regional Variations in Medicare Spending: Part 1. The Content, Quality and Accessibility of Care" *Annals of Internal Medicine* Vol. 138, no. 4 (February 18) pp. 273-87.
- Fisher, E.S., D.E. Wennberg, T.A. Stukel, D.J. Gottlieb, F.L. Lucas and E.L. Pinder (2003b) "The Implications of Regional Variations in Medicare Spending: Part 2. Health Outcomes and Satisfaction with Care" *Annals of Internal Medicine* Vol. 138, no. 4 (February 18) pp. 288-98.

Gorey, K. M., E.J. Holowaty, G. Fehring, E. Laukkanen, D.J. Webster, A. Moskowitz and N.L. Richter (1997) "An international comparison of cancer survival: Toronto, Ontario, and Detroit, Michigan, metropolitan areas" *American Journal of Public Health* Vol. 87, no. 7, pp. 1156-63.

Gorey, K.M., Holowaty, E. J., Fehring, G., Laukkanen, E., Richter, N. L., & Meyer, C. M. (2000) "An international comparison of cancer survival: Metropolitan Toronto, Ontario, and Honolulu, Hawaii" *American Journal of Public Health* Vol. 90, no. 12, pp. 1866-72.

Gorey, K.M., E. Kliever, E.J. Holowaty, E. Laukkanen, and E.Y. Ng (2003) "An international comparison of breast cancer survival: Winnipeg, Manitoba and Des Moines, Iowa metropolitan areas" *Annals of Epidemiology* Vol. 13, no. 1, pp. 32-41.

Gosselin, P.G. (2004) "The New Deal: If America Is Richer, Why Are Its Families So Much Less Secure?" *Los Angeles Times* (October 10).

Hall, R.E. and J.V. Tu (2003) "Hospitalization rates and length of stay for cardiovascular conditions in Canada, 1994 to 1999" *Canadian Journal of Cardiology* Vol. 19, no. 10, pp. 1123-31.

Himmelstein, D.U., and S. Woolhandler (1986), "Cost Without Benefit: Administrative Waste in U.S. Health Care", *New England Journal of Medicine* Vol. 314, no. 7 (February 18) pp. 441-5.

Krugman, P., and R. Wells (2006) "The Health Care Crisis and What to Do About It" A public forum at the Community Church of New York, Tuesday, May 30. Sponsored by: The NY Metro Chapter of Physicians for a National Health Program; The Community Church of New York Action for Justice Committee; and The New York Review of Books.

OECD (2005) *OECD Health Data 2005* Paris: Organization for Economic Cooperation and Development (June).

Pear, R. (2003) "Drug Companies Increase Spending to Lobby Congress and Governments" *New York Times* May 31.

Reinhardt, U.E. (2001) "Commentary: On the Apocalypse of the Retiring Baby Boom" in "Northern Lights: Perspectives on Canadian Gerontological Research", Special Supplement, *Canadian Journal on Aging* Vol. 20, Supp. 1 (Summer) pp. 192-204.

Sanmartin, C., E. Ng, D. Blackwell, J. Gentleman, M. Martinez and C. Simile (2004) *Joint Canada/United States Survey of Health, 2002-03* Ottawa: Statistics Canada and United States, National Centre for Health Statistics, Centres for Disease Control and Prevention (June).

Schoen, C., M.M. Doty, S.R. Collins, and A.L. Holmgren (2005) "Insured But Not Protected: How Many Adults Are Underinsured?" *Health Affairs* DOI 10.1377/hlthaff.W5.289 (June 14).

Schoen, C., S. K. H. How, I. Weinbaum, J. E. Craig, Jr., and K. Davis (2006) *Public Views on Shaping the Future of the U.S. Health Care System* New York: The Commonwealth Fund, August.

Scott, J. (2005) "Life at the Top in American Isn't Just Better, It's Longer" *New York Times* May 16.

Siddiqi, A. and C Hertzman "Towards an Epidemiological Understanding of the Effects of Long-Term Institutional Changes on Population Health: A Case Study of Canada versus the United States" *Social Science and Medicine* Submitted for publication, 2006.

Smythe, J.G. (2001) "Tax Subsidization of Employer-Provided Health Care Insurance in Canada: Incidence Analysis" Working Paper, Department of Economics, University of Alberta, Edmonton (August 19).

Thorpe, K.E , and D.H. Howard (2006) "The Rise In Spending Among Medicare Beneficiaries: The Role Of Chronic Disease Prevalence And Changes In Treatment Intensity" *Health Affairs* DOI 10.1377/hlthaff.25.w378 (August 22) pp. w378-88.

Tu, J.V., C.L. Pashos, C.D. Naylor,, E. Chen, S.L. Normand, J.P. Newhouse and B.J. McNeil (1997) "Use of Cardiac Procedures and Outcomes in Elderly Patients with Myocardial Infarction in the United States and Canada" *New England Journal of Medicine* Vol. 336, no. 21 (May 22) pp. 1500-05.

Tu, J.V., W.A. Ghali, L. Pilote and S. Brien, eds. (2006) *Canadian Cardiovascular Atlas* Canadian Cardiac Outcomes Research Team.

United States Census Bureau (2006) *Income, Poverty, and Health Insurance Coverage in the United States: 2005* United States Department of Commerce, Economics and Statistics Administration (August).

United States, Centers for Medicare and Medicaid Services (2006) "National Health Expenditures By Type Of Service And Source Of Funds: Calendar Years 2004-1960"  
[www.cms.hhs.gov/NationalHealthExpendData/02\\_NationalHealthAccountsHistorical.asp#TopOfPage](http://www.cms.hhs.gov/NationalHealthExpendData/02_NationalHealthAccountsHistorical.asp#TopOfPage)  
downloaded on August 20, 2006.

White, J. (1995) *Competing Solutions: American Health Care Proposals and International Experience* Washington, D.C.: Brookings.

Wildavsky, A. (1977) "Doing Better and Feeling Worse: The Political Pathology of Health Policy" *Daedalus* Vol. 106, no. 1, pp. 105-24.

Woolhandler, S. and D.U. Himmelstein (2002) "Paying For National Health Insurance—And Not Getting It" *Health Affairs* Vol. 21, no. 4 (July/August) pp. 88-98.

Woolhandler, S., T. Campbell and D.U. Himmelstein (2003) "Costs of health care administration in the United States and Canada" *New England Journal of Medicine* Vol. 349, no. 8 (August 21) pp.768-75.