

How Does Private Finance Affect Public Health Care Systems?

Marshalling the Evidence from OECD Nations

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INTRODUCTION

Across OECD nations, the decade of the 1990s was on balance one of relative fiscal constraint in the health care sector. Whereas real per capita public expenditures increased at a rate averaging 4.4 percent a year in the 1980s in the 23 OECD nations for which data are consistently available, during the 1990-98 period the average annual rate of increase slowed to 3.3 percent. After decades in which the public share of total health expenditures steadily increased on average across OECD nations, this share marginally declined in the 1990s from 74.9% to 73.9% between 1990 and 1998. There was, however, considerable variation across nations with respect to the degree of fiscal constraint and its implications for the balance of public and private finance. In a number of nations, these developments re-kindled debate about the appropriate roles of public and private finance in the health care arena both with regard to distribution of costs within the population and across different kinds of health care services.

An important dimension of this debate concerns the impact that an increased role for private finance has on the public health care system itself. For example, does private finance simply augment the resources devoted to health care, or does it drain resources from the publicly-financed system? Similarly, does an increased role for private finance erode political support for the publicly-financed system? Unfortunately, these debates have been characterized much more by claims and counter-claims from competing ideological bases than by evidence. This paper is intended to marshal existing evidence from across OECD nations, as to which of these claims can be substantiated. Our focus is largely on systems in which the preponderance of health care financing is public, although we will draw upon experience in the US system where relevant.

In marshalling this evidence, we wish to make two very important points. First, it is not enough to draw comparisons across nations at a given point in time, although such comparisons may be suggestive. What is more important (and more challenging) is to look for the *dynamic* effects of changes over time within given systems. In this paper, we look, across a number of nations, for the effects of *changes* in the level and share of public and private spending on a number of dimensions of the health care system.

Second, it is not enough to look at the level and the share of public and private spending *per se* – we need also to consider how the relationship between public and private finance is *structured*. There are at least four basic models for the structuring of this relationship; and they have different implications for the dynamics of the systems:

1. Parallel public and private systems: For a given range of services, a separate privately financed system exists as an alternative to the public sector.
2. Co-payment: Across a broad range of services, financing is partially subsidized through public payment, with the remainder financed through out-of-pocket payments and/or private insurance. The degree of co-payment may be scaled according to the income of the patient.
3. Group-based: Certain population groups are eligible for public coverage; others rely on private insurance.
4. Sectoral: Certain health care sectors are entirely publicly financed; others rely much more heavily upon private finance.

In this paper, we first consider the experiences of five nations that incorporate these models in different ways, in order to understand their internal dynamics. We then explore further

some of the research questions raised by these cases, and finally present cross-national data to investigate aggregate trends, in light of what we know about individual systems.

NATIONAL EXAMPLES

The four models presented above are idealized types: no national system provides a pure example of any one of these models; many combine elements of several models. Nonetheless, we can find examples of systems whose “central tendency” represents a particular model. Such case studies of “model” systems can highlight the implications of particular ways of drawing the public/private boundary, with relevance for other systems in which such elements are found. The hospital sectors of Britain and New Zealand provide examples of parallel private systems across a limited range of services. The New Zealand ambulatory sector provides an example of extensive co-payment. The United States is the primary example of a group-based model. However, it is an outlier among OECD nations, albeit a very large and important outlier, in its relatively small share of public finance and the proportion of the population without health insurance. Because we wish to consider the impact of private finance upon predominantly publicly-financed systems, we look instead at the Netherlands, which also takes a group-based approach, providing near universal coverage for a broad range of care through a mixture of mandatory and voluntary insurance. The Canadian system comes closest to the sectorally-based model: hospital and medical services are almost entirely publicly financed, while others fall into a mixed realm of public coverage subject to co-payment or group-based limited eligibility, private alternatives to publicly financed services, or entirely private finance. Finally, Australia represents a deliberate attempt to find balance among a number of models, combining co-payment across a broad range of services with a parallel quasi-private system.

Britain:

Britain combines public coverage of a broad range of services with a small, niche-oriented *parallel private sector*. For most publicly-covered health services there are no co-payments or user charges. For out-of-hospital drugs and dental services, which are publicly subsidized, there are co-payments. However, 60 percent of the population are exempt from co-payments for drugs; and over 80 percent of prescriptions are in fact dispensed to those who are exempt (Ryan and Yule 1993).¹ Co-payments for dental services steadily rose over the 1980s and 1990s. In 1995 out-of-pocket payments by UK patients accounted for a mere 2.7 percent of total health care expenditures, as compared with 15.7 percent of total health care expenditures in Canada, 17.2 percent in the US, 18 percent in Australia and 22.8 percent in New Zealand (no figures are available for the Netherlands) (OECD 2000).

Most private expenditure in Britain is concentrated instead in a small, niche-oriented private system (comprising services provided in private hospitals or on a private basis in public hospitals) which exists in parallel with the public system in a fairly stable symbiosis. The private system is dependent on the public system for its primary human resource – the consultant physicians who have their base in the public system – and for broad back-up for the relatively narrow range of procedures performed privately (about 17% of all elective cases in 1994) (Tuohy 1999: 186). Private finance comprises a combination of private insurance and out-of-pocket payments. The proportion of the population with private health insurance is small. Nonetheless, it grew over the 1980s from 6.4 percent in 1980 (Klein 1995: 155) to 11.6% in 1990. Coverage fluctuated somewhat over the 1990s, but returned to 11.5% by 1998 (Laing 1999). The proportion of total health expenditures covered by private insurance was less than 10 percent throughout this period.

One of the key sets of questions raised by the parallel public/private system model has to do with public sector waiting lists. Does the existence of a parallel private system provide a “safety valve” that reduces pressure on the public system and hence reduces waiting lists and waiting times? Or does it divert resources from the public sector, hence increasing public-sector waiting lists and waiting times? Britain’s experience can shed some light on these questions. Waiting lists have been used as a rationing device in the public sector for certain procedures and have fed the demand for private insurance. There does not, however, appear to be any feed-back effect from the private sector to reduce public-sector waiting lists. Besley and his colleagues, for example, found that regions with high levels of private insurance coverage were likely to have relatively large waiting lists, controlling for other regional characteristics such as household income, aged population and level of public spending (Besley et al. 1998).

New Zealand:

New Zealand also has a small, niche-oriented private hospital system parallel to a publicly-owned and operated system along the lines of the British model. As we shall see below, the effect of this system in exacerbating public-sector waiting lists is similar to that in Britain. The key feature of the New Zealand system for our purposes, however, is that unlike Britain (and most other nations), New Zealand requires very significant *co-payments* for ambulatory care. The level of public subsidy for ambulatory care is geared to income; and above a given income level, the subsidy disappears entirely. Private insurance is more wide-spread than is the case in Britain, covering about one-third to 40% of the population yet still only accounting for about 7% of total health expenditure, largely related to private hospital care. In the year ending June 1999 the sums paid out-of-pocket by patients amounted to approximately 28% of drug spending, 30%

of spending on family doctor visits and 58% of specialists' visits (New Zealand Ministry of Health 2000:57).

The extensive co-payments in the ambulatory sector took on even greater significance as, in common with most advanced nations, New Zealand experienced a technologically-driven shift of services out of hospital settings – a phenomenon that in New Zealand's case contributed to a reduction in the public share of total health expenditures from 82.4 percent to 77.0 percent between 1990 and 1998.

Key questions relating to systems with extensive co-payments have to do with access to care and ultimately with resulting health outcomes. And indeed, utilization of ambulatory and particularly primary care services is low in international perspective. In a 1997 study, Grant *et al.* found that out-of-pocket payments were barriers to access for some sectors of the population, and that New Zealanders were less able to access basic primary care than the British, Canadians or Australians (Grant *et al.* 1997; see also Schoen *et al.* 2000:6). Moreover, New Zealand does not perform as well as many other developed countries on some key health outcome measures (Flood 2000): 74-88. New Zealand's figure of 4097 potential years of life lost per 100,000 people under 70 years of age for all causes except suicide and homicide in 1997 was significantly higher than the figures of 3741, 3421, and 3367 recorded respectively in the UK, Canada and Australia (OECD 2001). Moreover, New Zealand's infant mortality rate of 7.3 per 1000 live births in 1996 was significantly higher than the 5.6, 5.7, 5.8, and 6.1 deaths per 1000 recorded respectively in Canada, the Netherlands, Australia and the UK. However, this rate fell to 6.8 deaths per 1000 live births in 1997 and again to 5.7 deaths per 1000 live births in 1998 (*ibid.*), bringing New Zealand's statistics on infant mortality into line with these other countries. This remarkable decline may be related to the introduction in 1996 of free primary care for all

children under the age of 6 and several public health initiatives (e.g. aimed at crib-deaths) specifically geared towards reducing infant mortality.

Netherlands:

The Netherlands deliberately seeks to incorporate private insurance within a system of universal coverage. But rather than allowing private insurance to finance a parallel option to the public sector, the Dutch health care system relegates public and private insurance to different population groups (Flood 2000: 60-74). It has been described as a system where “tight and detailed central regulation of prices, volume, and capacity has been superimposed on an essentially private system of provision and a mixed system of finance” (OECD 1992: 87) It builds upon the European model of social insurance dating back to late nineteenth-century Germany – a model that was directly imported into the Netherlands during the World War II German occupation and subsequently modified.

There are three important government-mandated insurance schemes: one covering "exceptional" or "catastrophic" medical expenses scheme, which covers the entire population; the social insurance or “Sickness Fund” scheme, covering hospital and physician services, drugs, and home care, for the 60% of the population earning less than 64,600 guilders per year; and one covering hospital and physician services, drugs and home care for all civil servants (Netherlands Ministry of Health, Welfare and Sport 2000 14-19, 27, 51, 56). Unlike systems with a parallel public/private model, the wealthier 36% of the Dutch population who are free to purchase private insurance covering hospital and physician services, drugs and home care cannot fall back on the public system. All their needs (apart from "exceptional" and "catastrophic" expenses) must be met by their chosen private insurer.

Hospitals are operated on a private not-for-profit basis and funded through global budgets negotiated with representatives of private insurers and Sickness Funds. Physicians who service Sickness Funds patients are paid on a capitation basis, with patients being required to register with a physician. Physicians who service private insurance patients are paid on a fee-for-service basis. Physician fees have historically been set through regulation, which required a complicated set of negotiations between the physicians' associations, the Sickness Funds and private insurers.

A potential problem with group-based systems is the existence of very different standards of care for different population groups. With its strong solidaristic elements, however, the Dutch system seeks to mitigate this potential. Private insurers are tightly regulated to prevent cream-skimming and risk rating of premiums (*ibid.*: 51). Moreover, it is seen as against a physician's ethical code to prefer a patient with private insurance over a patient with social insurance.

Another perceived problem with group-based plans is their potential to create “captive markets” and monopolies. To deal with this perceived problem, beginning in 1987, the Netherlands attempted to move away from its sharp group-based distinctions, to integrate social insurance funds and private insurance within an overarching framework of managed competition (Enthoven 1993:24). The reforms were launched by a centre-right coalition government in 1987 and endorsed by a centre-left coalition in 1991. In 1994, however, under a complex left-right coalition government, the reforms were essentially stalled. To date, their effect has been largely within the social insurance sector, in which the regional monopolies for sickness funds were abolished, and the funds were freed to compete with each other for subscribers and to contract with physicians across the country. The stalling of the broader reforms can be attributed to both political and technical factors.

Politically, the reforms were adopted as a compromise package. But what was not appreciated at the time was that, in a succession of coalition governments, progress would be very difficult unless *each step along the way* were as balanced as was the full package – an almost impossible design problem (van de Ven and Schut 1995: 108). Technically, two problems emerged. First, an over-arching system of managed competition required the definition of a basic package of benefits that competing insurers would have to buy for all enrollees. In 1991, the Dutch cabinet essentially skirted the hard issues of what should and should not be included in the basic package by deciding that 95 percent of health care services previously provided should be included in the standard package. In 1992, the Dutch government's "Committee On Choice In Health Care" produced a report (subsequently known as the Dunning report), which provided a mechanism for determining what services would be publicly funded (Government Committee On Choices in Health Care 1992). After producing its report the Dunning Committee was dissolved and no other organization appears to have explicit responsibility for determining what services should and should not be included in the basic package using the Dunning principles. The second technical problem involved the development of a risk adjustment formula, and some progress has been made in this regard. On a phased basis, retrospective payment to sickness funds was partially replaced by a prospective risk-adjusted capitation payment for each subscriber, and the risk adjustment formula was elaborated to include employment/social security status and region of residence as well as age and sex.

Thus the attempt to modify the tight regulatory framework while maintaining safeguards against the effects of perverse incentives has proved extremely challenging. The challenge nonetheless maintains its allure, it appears, for in 2001 the Dutch government announced its intention to embark yet again upon an attempt to integrate social and private insurance. Even

given this on-going experimentation with reform over the last fifteen years, however, the Netherlands group-based model has persisted in maintaining a remarkable consistency in the terms and conditions upon which care is provided across the population under both public and private insurance regimes.

Canada:

In Canada the distinction between the public and private finance has been drawn along sectoral lines. Necessary medical and hospital services are entirely publicly financed; all other services are subject to mixed modes of public and private finance that vary across provinces. Under federal legislation, the *Canada Health Act*, in order to qualify for federal contributions provincial plans must cover all medically required physician services and all necessary hospital services, and no additional private charges may be made for publicly insured services. The translation of these principles into provincial plans has varied somewhat from province to province, but the effect has been to foreclose private insurance firms from covering the vast bulk of physician and hospital services, either explicitly or in practice (Flood and Archibald 2001). The definition of the core of health care services that is exclusively publicly financed on a universal, first-dollar basis is hence common across provinces, with only marginal differences. The role of private finance, including private insurance, is confined to the mixed world of health care finance beyond physician and hospital services and thus beyond the reach of the *Canada Health Act* – drugs, home care, long-term care, dental care, medical appliances, etc. – which are publicly subsidized to varying degrees and on different terms across provinces. Private insurance in Canada covered about 72% of the population, but only about 10 percent of health care expenditure in 1996 (Canadian Institute for Health Information 2000: 40). The proportion of the population covered has approximately doubled since the implementation of Canadian medicare

in 1971, while the proportion of expenditures covered by private insurance has more than tripled from a low base of about 3% in 1971.

Canada's distinctive way of defining the boundary between public and private finance has had its own particular vulnerability. As technological changes have shifted services out of hospital, care has migrated from the world of universal, first-dollar coverage to a world in which private finance plays a much larger role. The shrinking of the public share in Canada, then, does not for the most part mean that the public share of expenditures on *physician and hospital services* declined. Rather it means that those sectors in which private finance already played a significant role expanded their share of total expenditures. This "passive privatization" process, together with fiscal constraint, was largely responsible for the shrinkage of the public share of total health expenditure in Canada to 69.8 percent in 1997 from 75.0 percent a decade earlier.²

The system of universal, comprehensive, first-dollar coverage for physician and hospital services has been enormously popular in Canada, and has indeed taken on an important role in Canadian public mythology. It has also meant that both physician and hospital sectors have been characterized by "bilateral monopolies," and the system has been shaped by the relationship between the provincial governments on the one hand and medical associations and hospitals on the other. Private insurers, who have been major political and economic actors in other systems, have played a relatively limited role in shaping the health care system in Canada.

In the 1990s, the Canadian health care system experienced a degree of fiscal constraint that was dramatic in cross-national perspective. As governments at both federal and provincial levels embraced deficit-reduction agendas, real per capita public spending began to decline. This decline was apparent in aggregate national terms beginning in 1993, although it began earlier in some individual provinces. The bottom of the trough occurred in 1996 and 1997, after which

public spending began a sharp recovery. Between 1992 and 1996, total per capita public spending declined by almost eight percent; between 1996 and 2000 it rose by almost 18 percent. Under Canada's sectorally-based division of public and private finance, these fiscal swings were disproportionately felt in physician and hospital sectors (Tuohy 2002).

These fiscal swings, together with the "passive privatization" of the system, led to rising public concern and anxiety and threatened the accommodations between provincial governments and physician and hospital providers. The proportion of Canadians in a cross-national survey reporting the view that the health care system needed "only minor change" plunged from 56 percent to 20 percent between 1988 and 1998, and did not rebound with increased public investment: in 2001, the figure stood at 21 percent (Blendon et al. 2002). Meanwhile, provincial governments looked at the rate of increase in real per capita public spending from 1997 to 2000, extrapolated it forward, and expressed growing fears about the "sustainability" of the public system.

Australia:

Australia represents a hybrid system, a deliberate attempt to balance public and private responsibility for financing health care, which incorporates both parallel public/private and co-payment models. For decades Australia has deliberately sought to pursue a model of health-care finance that balances the three sources of finance – public, private out-of-pocket, and private insurance. Successive governments have, however, taken very different approaches to the weighting of each source; and the centre of gravity has shifted back forth between the public and private sectors as control of the Commonwealth (federal) government has alternated between Labour and Coalition (right-of-centre) parties. The Coalition government elected in 1996 (and re-elected in 1998) was the first since the Second World War not to dismantle the policies of its

Labour predecessors (Gray 2000). In the late 1990s, about two-thirds of health care expenditure was publicly-financed; about 15 percent was financed by private insurance,³ and about 18 percent was in the form of out-of-pocket payments (Commonwealth Department of Health and Aged Care 1999: 14-15).

The current system combines several key elements. As in Britain and New Zealand, a parallel private hospital system sits alongside the public hospital system, and physicians may practice in both public and private hospitals. Care may also be provided on a private basis in public hospitals – patients who opt to be treated in public hospitals as private patients have a choice of physician as well as greater amenities such as private rooms. As part of its deliberate attempt to combine public and private insurance (as well as out-of-pocket payments), however, Australia both subsidizes and more tightly regulates the private insurance industry. Unlike Britain and New Zealand (and similar to the Netherlands), Australia requires private health insurance funds to offer “community rating,” establishing a common premium structure for all eligible enrollees regardless of health status. Physician services provided in hospital on a private basis are publicly reimbursed at a rate of 75% of the medical fee schedule. Private insurance coverage is available for private hospital costs and for the difference between the public subsidy for physician services up to the full level of the medical fee schedule. About 70% of expenditures on private hospital services in 1996 were covered by private insurance, and another 9% was borne by individuals out-of-pocket.⁴

Such a publicly-subsidized private system on its face presents a potential to exacerbate public-sector waiting lists even greater than that in fully private parallel systems such as that of Britain and New Zealand, by reducing the costs of “queue-jumping” by private patients and encouraging physicians to offer their services on a privately-financed basis. Until 1998, Australia

dealt in part with this problem by banning “queue-jumping” by private patients in public hospitals under the Commonwealth-State financial transfer agreements between the Commonwealth and the state governments which operate public hospitals. In that year, however, that ban was reversed as part of an attempt to encourage the take-up of private insurance as discussed below.

In the ambulatory care sector, Australia also relies on co-payments, although not as heavily as does New Zealand – and unlike New Zealand, Australia bans private insurance for these co-payments. Australian Medicare remunerates physicians at 85% of a fee schedule, which is formally set by the Commonwealth government but is in practice subject to “discussion” with the Australian Medical Association (Podger and Hagan 1999:15). Recipients of public income assistance and any patients who have incurred ambulatory medical care costs of a specified maximum in a given year are exempt from billing above the 85% charge.⁵ Moreover, physicians who “bulk bill” Medicare directly agree to accept the Medicare rebate as payment in full, and may not charge the patient beyond that payment. The proportion of services “bulk billed” rose from 49% in 1985/6 to 72% in 1997/8. Of those services billed directly to patients, about one-third were billed at the scheduled fee (hence requiring a 15% co-payment). Billing above the schedule was largely confined to certain specialties and regions, and particularly to insured inpatients in private hospitals (see below) (Deeble 1999:4).

On its face, the Australian system appears to represent a creative attempt to find a balance across the three major sources of health care financing within a system that provides universal coverage of a comprehensive range of services and goods. In practice, however, this on-going attempt has resulted in an unstable system marked by economic uncertainty for private payers, be they individual patients or insurance funds, and by a series of policy changes in response to

perceived problems. There was a steady decline in the percentage of the population who take up private insurance, from 80% in 1970 to 50% in 1984 to 30% in December 1998 (Hall 1999: 99).

This decline can be attributed to at least three related factors: premiums that were escalating at rates well above the CPI; a perception that the benefits from taking out private insurance did not warrant the cost; and the fact that private insurance for medical services covered only the gap between the Medicare benefit and the agreed schedule of fees, leaving the patient at risk for an unknown potential charge above the agreed schedule. In the late 1990s, in an attempt to staunch the flow away from private insurance and to preserve the blended tripartite structure of finance, the Liberal-National Party coalition Commonwealth government sought to address each of these disincentives. Somewhat paradoxically, these responses involved unprecedented levels of public subsidy.

First, to deal with the disincentive created by rising premiums, the government introduced a 30% refundable tax credit for private insurance premiums available to all, effective January 1, 1999. Second, to deal with the disincentive for low-risk individuals to take out insurance at community-rated premiums, and the attendant exacerbation of the risk pool, a system of “lifetime health cover,” was instituted, effective July 1, 2000. Under this system, individuals are guaranteed a premium set at a given percentage of the “base rate premium” offered by the fund for their entire lifetime, as long as they maintain continuous coverage.⁶ Third, to deal with the lack of incentive for people to take out coverage for treatment as private patients in public hospitals, the Commonwealth-State agreements of 1998 for the first time allowed preferential access to public hospitals for private patients. Fourth, to deal with the residual uncertainty for patients facing unknown out-of-pocket charges beyond that covered by private insurance, the legislation establishing the 30% rebate provided that, in order to qualify for

the rebate, plans had to offer “no-gap” or “known gap” coverage by July 2000.⁷ This required the funds to negotiate with physicians to ensure that their charges would either be according to the Medicare schedule or would exceed the schedule by a set amount. To secure these agreements, the legislation required each physician to enter into a contract with the fund in order to receive remuneration. This provision caused fierce controversy within the medical profession, as to whether contracts between physicians and insurers should be resisted as a leading wedge for managed care arrangements. After the leadership of the Australian Medical Association (AMA) survived a vote of no confidence, and after protracted negotiations between the AMA and the Minister of Health and Aged Care, the rules were changed to allow for mechanisms other than contracts to implement “no gap” or “known gap” provisions.

As noted above, these changes led to a dramatic reversal of the decline in take-up of private insurance. But it appears that a very large public subsidy (estimated at A\$2.19 billion per year in 2000, equivalent to about 6% of total public spending on health care) was necessary to achieve this result, and essentially provided a windfall gain to those who already had private insurance – on balance a highly debatable use of public funds. Duckett and Jackson (2000: 441) have shown, for example, that directing an equivalent expenditure toward public treatment in public hospitals could fund a shift of about 47-65% of private hospital patients into the public sector.

As in the Netherlands (although on a different model), the Australian attempt to harness both public and private insurance in the cause of achieving universal coverage, has found it necessary to tightly regulate private insurers in order to overcome incentives that could lead to perverse outcomes. Both Australia and the Netherlands sought, in different ways, to modify the

regulatory framework in the 1990s, and both appear to have had difficulty in reaching a stable equilibrium.

Pursuing the Issues: Some Empirical Analyses

As the above discussion shows, each way of drawing the public-private boundary, has its own particular dynamic and its own challenges. Parallel public and private systems may be associated with long public-sector waiting times. Systems of co-payment may deter utilization. Group-based systems require tight regulation to ensure common standards of care. A sectoral system is subject to technology-driven shifts of services from public to private sectors (and potentially *vice versa*), as well as to the disproportionate effects of fiscal swings. All of these effects, moreover, will be conditioned by the role of private insurance (as opposed to out-of-pocket payments) as a mechanism of private finance. And nations that have sought as a matter of deliberate policy to foster regulated competition between public and private insurance have found this to be a volatile project.

By illuminating the different dynamics of various models, these case studies can inform broader comparative analyses of health care systems in a number of ways. First, they can suggest certain research questions for systematic empirical analysis. Second, they can help to interpret the results of broad aggregate analyses of the relationships between public and private spending and the effects of those relationships – in particular, hypotheses that increases in private finance may “crowd out” public spending and/or erode political support for the publicly-financed system. In this section we present empirical analyses of data bearing first upon the particular issues raised in our cases, and second on broad system-level effects of shifts in the public/private balance that can be illuminated by an appreciation of national differences in the way in which the boundary is drawn. In investigating these trends, we are cognizant that, while aggregate analyses

of the sort we present in this section cannot resolve complex issues of causality, they are suggestive of patterns of association worthy of further exploration.

The Effect of a Parallel Private Sector on Public Sector Waiting Lists:

In nations such as Britain and New Zealand, in which a privately-insured system exists as an alternative to the public system for the provision of certain services, and in which both patients and providers can move between the two systems, lengthy waits for publicly-insured services have been the subject of considerable public concern and political debate. In Canada, however, in which such a parallel system is effectively banned for physician and hospital services, waiting times have occasioned similar concern and debate. What light can cross-national data shed on the association between the existence of a parallel private system and waiting times in the public sector?

There are essentially two competing hypotheses as to what this association might be. The first hypothesis would suggest a negative correlation between the prevalence of private insurance and waiting lists for publicly-insured services, since the private alternative would reduce demand for publicly-insured services. The second hypothesis would suggest a positive correlation, for one or more of the following reasons: (a) because providers are drawn to the private system from the public system, to the extent that the former is more lucrative, thus reducing the supply of publicly-financed services; (b) because providers have an incentive to maintain lengthy waits for publicly-financed services in order to increase demand for privately-financed services; or (c) because the privately-financed services also require the provision of some publicly-financed services, such as back-up services to deal with complications, and hence consume resources in the publicly-financed sector. The finding of a positive or negative association can lend support to

one or the other of these hypotheses, although it cannot in itself discriminate among the sub-hypotheses about the dynamics behind the association.

As noted above, analysis of data across regions in Britain lends support to the second of the above hypotheses: there appears to be a positive correlation between the prevalence of private insurance and the size of waiting lists for NHS services. When waiting times have declined in the UK, it has been in response to infusions of public funding, such as the “Waiting List Initiative” of the late 1980s and early 1990s, and mechanisms to change incentives within the public sector (Ham 1992:71; Klein 1995:237; Hamilton and Bramley-Harker 1999). The waiting-list effects of a system that allows physicians to practice in parallel public and private sectors were also demonstrated by a Canadian study of experience in Manitoba during a period in which cataract surgery was offered on private basis, albeit subsidized by medicare. A study by the Manitoba Centre for Health Policy and Evaluation found that, by the time this practice was disallowed in 1996, waiting times were, not surprisingly, lowest for privately-provided services (about 4 weeks), higher for services provided by surgeons who practiced only in the public sector (10 weeks), but highest of all (23 weeks) for publicly-financed services provided by surgeons who practiced in both sectors (DeCoster et al. 1998).

A simple examination of cross-national data, as shown in Table 1,⁸ also suggests a positive association between the level of insurance coverage for services provided in a parallel private system and the size and length of public-sector waiting lists. Although gathering reliable data on waiting lists is notoriously difficult; and differences in methodology in different jurisdictions makes cross-national comparisons problematical (O’Brien 1998), we note that the pattern suggested by data gathered from national sources are consistent with data from the 1998 Commonwealth Fund International Health Policy Survey, as also shown in Table 1.

Table 1: Private Health Insurance and Public Sector Waiting Lists and Waiting Times, Selected Nations, Late 1990s

	% of Population on Waiting Lists, 1997-1999 average	% Reporting Waits of More than 4 months for elective surgery, 1998	% of Pop. with Private Hospital Insurance Covering Co-pay/ Parallel Care*
CANADA	0.7%	10%	NA
NEW ZEALAND	2.1%	21%	37% (1996/97)
ENGLAND	2.4%	29%	11.5% (1998)
NETHERLANDS	0.5%	NA	NA
AUSTRALIA	0.8% (1997 only)	13%	31.2% (1999)

* Excluding private room/extra amenities insurance. The design of the Canadian and Dutch systems obviates the possibility of private insurance for co-payments or parallel private care.

Sources: See Appendix. Reported waits of more than four months are taken from Donelan et al. (1999:210).

Data both from national sources and from the cross-national Commonwealth Fund survey suggest that in England and New Zealand, which allow for parallel private systems and for private insurance for these costs, waiting lists are larger and waiting times are longer than in Canada and the Netherlands, where patients may not move back and forth between publicly-financed and privately-financed systems. The Australian case is intriguing, however. In Australia, as noted above, the parallel “private” hospital system is publicly subsidized, in that patients are reimbursed at 75 percent of the scheduled fee for physician services. In such a system, one might expect a greater demand for private care and hence an exacerbation of the

phenomenon of longer public waiting lists/times that we observe in Britain and New Zealand. Yet Australian waiting lists and times are similar to those in Canada.⁹ However, it must be remembered that in Australia private insurance coverage is limited to 100 percent of the scheduled physician fee (as well as the hospital charge), and private patients must pay out-of-pocket for charges above that amount. More important, until 1998, after the above data were collected, state hospitals were prohibited from offering quicker access to patients treated on a private basis. More recent data are needed to determine whether public-sector waiting lists/times increased as a result of the relaxation of this prohibition in 1998.

The differences shown in Table 1 reflect differences in the political economy of waiting lists in these five nations. Notably, in the UK, Australia and New Zealand, specialists are employed on a salaried basis in the public sector and a fee-for-service basis in the private sector. Thus specialists have a strong incentive to divert their energies to servicing private patients for extra marginal gain. They may even have an incentive to maintain long waiting lists in the public sector to generate demand for services on a private basis. The Netherlands, in contrast, has a relatively small number of people on waiting lists while allowing a significant role for private insurance. But the Dutch group-based model of private insurance, as discussed above, is not one that allows individuals to seek quicker care in the private sector than is available in the public sector. Each of these systems contrasts with Canada, where co-payments for publicly-insured physician and hospital services are banned; and private insurance that might support a parallel private sector is effectively prevented through a combination of regulatory disincentives and outright prohibitions.

Not only do parallel private systems not appear to reduce pressure on the public system, but they may also in one respect increase it. Evidence from the UK suggests that parallel private

systems may attract healthier patients and perform relatively less complicated procedures, thereby increasing the average complexity and dependency of patients continuing to use the public system. Martin and Smith, for example, found evidence that length of stay in NHS hospitals was longer in areas with high levels of private inpatient facilities, suggesting that the private facilities “cream off” the less complicated cases, leaving the local NHS facility with a relative complex case mix (Martin and Smith 1996: 294-95).¹⁰ Australian data similarly suggest a higher average complexity of cases, within case-mix group, in public than in private hospitals (Duckett and Jackson 2000).

In summary, international evidence such as that presented in Table 1 provides no grounds for believing that the existence of a privately-insured sector parallel to the public sector reduces overall waiting lists or times. There is a complex political economy of waiting lists that requires much more research. But while there is more to be learned about the factors that generate public-sector waiting lists and about the appropriate public policy response, it appears that private alternatives are not the solution.

Co-payment, “Bundling” and Utilization:

Most nations allow or impose co-payments for at least some publicly-financed services, although the scope and magnitude of these co-payments varies greatly. Co-payments for out-of-hospital pharmaceuticals, at least for upper-income recipients, are very common, while there is much greater variety with respect to co-payments for physician and hospital services. The extensiveness and the variability of co-payments potentially provide rich ground for comparative analysis. Our case studies suggest several lines of inquiry, especially with regard to ambulatory care. Among the nations reviewed above, all require co-payments for pharmaceuticals outside hospitals for at least some beneficiaries of public coverage. As for physician and hospital

services: Canada and Britain effectively ban co-payments for publicly-financed physician and hospital services, while Australia and New Zealand make extensive use of co-payments for ambulatory physician services by limiting public subsidy to a proportion of the medical fee schedule, and the Netherlands experimented with the imposition of co-payments for ambulatory physician services in the late 1990s. Australia bans private insurance for ambulatory physician care; New Zealand does not. However, the principal reason for paying for private insurance in New Zealand is to insure against the costs of private hospital treatment; few would incur the cost of private insurance for ambulatory care, unless they also wished to access the private hospital sector. New Zealand, indeed, stands out in international perspective as a case in which co-payments for family doctor services are particularly extensive; and in which utilization of those services is also low in international perspective, as discussed above.

One case like New Zealand does not constitute evidence of a cross-national trend, and carefully designed sector-by-sector comparisons would need to be done to investigate further the effects of co-payments for ambulatory care, with or without private insurance, on a cross-national basis. Such studies could complement the large existing literature based on national data. Much of this literature relates to the US experience (and typically to the generally healthier population segments not covered by governmental health insurance) and derives mostly from the 1970s and 1980s.¹¹ These studies generally suggest a deterrent effect of co-payments on utilization, with negative effects on health outcomes for some lower income groups and some types of illnesses. Private insurance, moreover, may mediate utilization. The use of Medicare by individuals with and without private “Medigap” coverage for elements not covered by Medicare have shown that individuals with Medigap use 24 percent more health services funded by Medicare than those without such coverage (Christensen et al. 1987).

A classic Canadian study using Saskatchewan data from the 1970s showed that utilization declined among lower income groups but actually increased among upper income groups during a period in which co-payments were in effect (Beck and Horne 1976). Commenting on this study, Barer, Evans and Stoddart have argued that these results can be attributed to the behaviour of physicians, who sought to compensate for declining demand from lower-income individuals by inducing higher levels of utilization by less price-sensitive upper-income individuals (Barer et al. 1979:33-34). While this explanation remains a matter of debate among health economists, the empirical results suggest that the responses of providers as well as patients need to be taken into account in understanding the effects of co-payment regimes.

US and Canadian studies have also provided suggestive evidence that cost-sharing for out-of-hospital pharmaceuticals for low-income populations is associated with decreased utilization and, in turn, with adverse health outcomes (Soumerai et al. 1991; Tamblyn et al. 2001). Again, however, the institutional configuration of the public-private boundary, and its potential effects on strategic behaviour, must be considered. Since these studies typically measure adverse health outcomes in terms of subsequent usage of hospital (including emergency department) or nursing homes services, one cannot rule out the possibility that their findings reflect at least in part another type of strategic response by both patients and their doctors – to gain access, within hospitals, to pharmaceuticals that would require co-payments if provided outside hospitals. Given their serious implications, however, these studies provide dramatic grounds for further cross-national investigation of the impact of co-payments, taking advantage of the different incidence of co-payments in the hospital as well as the ambulatory sectors across nations.

As cross-national analysis of the effects of co-payment is undertaken, our emphasis on the way in which the public-private boundary is drawn in different nations suggests an added consideration. *Explicit* co-payments are not the only ways in which private payment may be linked to publicly-financed services. In particular, we draw attention to a form of *effective* co-payment through the “bundling” of goods and services, some publicly financed, some privately financed, in systems in which the public-private boundary is drawn along sectoral lines. For example, out-of-hospital pharmaceuticals may be privately financed, but be effectively “bundled” with publicly-financed medical services from the patient’s point of view if a visit to the physician results in a drug prescription. The cost of the prescription may affect whether the individual decides to seek publicly funded care. If individuals have supplemental private insurance, they may choose to use publicly-funded services more frequently.

Evidence from Canada suggests that individuals who hold private health insurance covering the privately-financed components of these bundles use more publicly funded medical care. Canadian provincial health plans differ considerably in their coverage of prescription drugs, although the trend has been to expand such coverage. As of 1999, all provinces had some form of drug plan to assist seniors with the cost of prescription drugs, although all involve some degree of co-payment. Eight provinces also have income-related co-payment plans for prescription drug coverage for the general population. For the most part, these provincial plans are not meant to replace private coverage, but to assist those who are unlikely to be able to afford such coverage and who are likely to have high drug costs. A study by Stabile that compared utilization of doctors and hospital services by those with and without private insurance covering drug costs found results similar to the US studies cited above. Stabile found that individuals with private insurance covering drug costs used 10% more publicly funded doctors' services than

those without such insurance. Interestingly, in the hospital sector in which almost all goods and services, including drugs, are publicly financed and private insurance is largely related not to services but to amenities such as private rooms, Stabile did not find evidence that use of in-patient hospital care differed by private insurance status (Stabile 2001).

Such findings suggest that private finance in the form of private insurance may under some conditions lever an *increase* in, rather than complementing or substituting for public expenditure. There is, in addition, a converse to this finding: it suggests that those without private insurance (likely to be those with lower incomes) are deterred from using publicly insured services due to the bundling effect. (Whether this finding should trouble us depends, of course, on the extent to which decreased utilization of these publicly-funded services has an adverse impact on health outcomes.) Together, these considerations require us to see co-payments in both a broader and a more nuanced perspective. Even in systems that formally ban co-payments for certain core services, such as Canada, may allow for effective co-payments in the form of bundled services. And the effect of co-payments on utilization, and their distributive effect, may depend upon whether or not private insurance is allowed to cover them.

Interpreting the effects of shifts in the public/private balance:

Considerations of the effect of parallel private systems on public-sector waiting lists, and of co-payment on utilization of publicly-subsidized services, arise directly from our comparison of the different ways in which the public-private boundary is drawn in different nations. But our perspective on the public-private boundary can also shed light on the interpretation of broad aggregate analyses of the relationship between public and private “shares” of total health expenditure over time – a matter that has received considerable attention by economists interested in the phenomenon of “crowding out.” Specifically, do public and private finance

represent independent sources of funding for health care, or do they tend to substitute, or crowd each other out? There is a considerable economic literature examining crowding-out of private funding by public programs, focusing primarily on the US health care arena (Cutler and Gruber 1996a, 1996b). The general conclusion is that private financing is often partially crowded out by increases in government financing. But the opposite may also be true: that is, increases in private expenditures, feeding back through the political system, may lead to a decrease in public expenditures. Without resolving the issues of causality implied by the concept of “crowding out,” we can look for associations between changes in the public and private shares of health care expenditure over time, and suggest ways in which our perspective on the location of the public-private boundary can help the interpret these results.

To examine the association between public and private health care expenditure over time, we examined the lagged effect of private spending on public spending, and of public spending on private spending. (Reversing dependent and lagged independent variables is a common way to address issues of causality.) We found a negative and significant correlation in both directions, as noted further below. We will report here the lagged effects of private on public spending, recognizing that what we are reporting is an association for which causality has not been established. We present this analysis as a prelude to the sectoral analyses that follow, in which we suggest the dynamics at work.

A study by Globerman and Vining (1998) examined the relationship between the public share of total health spending for selected OECD countries in 1980 and the subsequent change in the share of public health expenditures as a fraction of total government expenditures over the period 1980-1990, and found no effect. We have updated and refined this approach. Instead of measuring the private share of health care financing at a point in time and its effects on public

spending ten years later, we follow the relationship between private health care spending and public health care spending using one to three-year time lags over the period from 1980 to 1997. In particular we investigate how the ratio of private health expenditures to total health care expenditures is correlated with the ratio of public health expenditures to total public expenditures on all items. (We use the ratio of public health expenditures to total public expenditures to control for differences in the total fiscal capacity of governments across nations and time, within different political and economic contexts.) We do this using the share of private health expenditures as a percent of total health expenditures from the previous year as well as from two and three years previous and the share of public health expenditures as a percent of total public expenditures in the current year. The resulting equation is as follows:

$$\left(\frac{\text{public spending on health}}{\text{total public spending}}\right)_{it} = \alpha + \beta\left(\frac{\text{private spending on health}}{\text{total spending on health}}\right)_{it-j} + \delta_t + \gamma_i + \varepsilon_{it}$$

Here i represents a country and t represents a year. $t-j$ represent the lags of one, two and three years. δ_t are the time dummy variables and γ_i are the country dummy variables.

Examining the simple correlation between private share of health expenditures and public money devoted to health in 1997 we find no significant relationship between the two. This is true whether we use a one year lag (1996 private share), or a two or three year lag. These results are similar to those reported in Globerman and Vining. However, once we expand this analysis to use data from 1980 – 1997 we find quite a different result. Examining the changes in public and private spending within countries over time we find that private spending on health is significantly negatively correlated with public spending on health as a share of total public spending. This finding is consistent whether we use one, two or three year lags in private spending. The analysis controls for global shocks which might affect all countries (year dummy variables) as well as for static differences between countries (country dummy variables). The

remaining variation comes from the changes within a country over time – intuitively the best test of potential crowd out. The results from the different regressions are summarized in the first panel of Table 2.

Table 2: Regression Results: Lagged Effect of Private Health Care Spending on Public Health Care Spending

All Health Care Spending –Shares	Private expenditures – 1 year lag	Private expenditures – 2 year lag	Private expenditures – 3 year lag
1997 only	0.001 (1.221)	0.001 (1.325)	0.001 (1.623)
1980-1997	-0.001 (-5.575)	-0.001 (-3.351)	-0.001 (-1.859)
All Health Care Spending-- (log) Levels			
1997	-0.287 (-6.336)	-0.312 (-7.406)	-0.288 (-4.757)
1980-1997 (OLS)	-0.226 (-11.249)	-0.156 (-5.750)	-0.106 (-3.345)
1980-1997 (GLS)	-0.212 (-9.925)	-0.092 (-3.129)	-0.050 (-1.640)

Source: OECD 2000, data on health expenditures, 1980-1997, selected countries

Notes: T-Statistics in parentheses

Luxembourg and Iceland omitted from the analysis

Includes GDP as regressor.

Using shares of spending may not be ideal for examining crowd-out for two reasons. First, changes in total health care spending or total public spending (the two denominators) may be driving our results, when in fact it is relative changes in the two numerators that we are most interested in. The second reason involves a technical constraint: by dealing with ratios between variables and not the variables *per se*, the shares equation does not capture the independent effects of each variable. This restriction can be relaxed by using either levels of spending or the log of the levels of spending and controlling for the total level of public expenditure in a country (excluding public expenditures on health), the total level of health spending in a country (using the same lag as the private spending levels) and the level of GDP in a country. We do this by taking logs of the share equations and repeating the analysis using the log of actual spending levels. The resulting estimating equation is as follows:

$$\ln(\text{pubhs})_{it} = \alpha + \beta \ln(\text{privh})_{it-j} + \theta \ln(\text{pubsp} - \text{pubhs})_{it} + \pi \ln(\text{toths})_{it-j} + \tau \ln(\text{GDP})_{it} + \delta_t + \gamma_i + \varepsilon_{it}$$

The results, reported in the second panel of Table 2, support the hypothesis that private spending on health is associated with lower levels of public spending than would otherwise be the case. We examine the effect of lagged private expenditure on health (one, two and three year lags) on 1997 public expenditure on health and find that there is a negative correlation between private spending and public spending. We then expand this analysis to include data from 1980-1997 and include controls for country and year effects. We find that, looking at the changes in countries over time, increases in private spending on health care are correlated with declines in public spending, regardless of whether we use one, two or three year lags. An increase of 10 percent in the level of private spending is associated with declines of between 1 and 3 percent in the level of public spending in the future, controlling for other factors.

We use both ordinary least squares (OLS) and generalized least squares (GLS) to estimate our levels equations.¹² While OLS is more transparent, GLS allows us to control for

certain relationships that may not be captured by our variables. For a one year lag, the estimates are very similar. For two and three year lags the GLS results are smaller than the OLS ones, suggesting that part of our OLS estimate might be due to correlation in the errors. Among the things that could be captured in the error term, indeed, are differences across countries in the ways that they combine elements of the very models of the public/private boundary that we have presented in this paper. While these elements are shared to a greater or lesser degree by many nations, the distinctive ways in which they are combined in any particular nation, and the dynamics of that combination, are too individual and complex to be captured by any given variable. We speculate that the gross relationships that we find using OLS may be mediated by these distinctive national combinations, which are captured in the GLS results. In any event, as we move to longer lags, we believe the GLS estimates are our most reliable estimates of the true parameter.

These broad results need further investigation, informed by our review of the effects of the different ways of drawing the public/private boundary. It may be that the gross result is simply picking up a secular technology-driven shift from services that are heavily publicly-financed to services that have a large component of private finance. In most nations (other than the US), even those with parallel private systems, the hospital sector is largely publicly financed. The pharmaceutical sector, on the other hand, typically involves a more substantial private component in the form of co-payments for drugs provided outside hospitals. Hence an increase in the share of private finance in total health expenditures may reflect a shift across these sectors – a shift of care out of hospitals and a growing reliance on drug therapies as opposed to surgical interventions. The most extreme case in this regard is Canada, as discussed above, but the pattern may hold true across nations. Furthermore, this effect may be exacerbated by the

increased reliance on co-payments for publicly-funded programs of coverage for pharmaceuticals in many nations. In order to examine such effects, we investigate spending on hospitals and pharmaceuticals separately, using the methodology outlined above.

Table 3: Regression Results: Lagged Effect of Private Health Care Spending on Public Health Care Spending: Hospitals and Pharmaceuticals

Hospital Spending – (log) Levels	Private expenditures – 1 year lag	Private expenditures – 2 year lag	Private expenditures – 3 year lag
1996*	-0.034 (-0.167)	-0.0812 (-0.391)	-0.091 (-0.470)
1980-1997	0.127 (0.688)	0.008 (0.409)	0.006 (0.289)
1980-1997 (GLS)	0.010 (0.533)	0.004 (0.178)	-0.008 (-0.361)
Pharmaceutical Spending – (log) Levels	Private expenditures – 1 year lag	Private expenditures – 2 year lag	Private expenditures – 3 year lag
1996*	-0.170 (-0.955)	-0.179 (-1.062)	-0.151 (-0.856)
1980-1997	-0.105 (-2.986)	-0.067 (-1.869)	-0.043 (-1.150)
1980-1997 (GLS)	-0.027 (-0.893)	0.009 (0.292)	0.028 (0.860)

Source and notes: See Table 2

* We use the 1996 data for our cross-sectional analysis because hospital and pharmaceutical data were missing for some countries in 1997. Using the smaller sample in 1997 produces qualitatively similar results.

For hospital expenditures we find no correlation between public spending and lagged private spending in the OECD data. This result holds whether we examine spending across countries within in a single year (1996) or within countries over the time period 1980 to 1997. Using longer lags for private spending of two or three years we find no significant correlation between private and public spending. This suggests that, while the relative size of the hospital sector may be contracting, there is little evidence of a “crowding out” of public spending by private spending within the hospital sector.

On the other hand, when we examine the pharmaceutical market, we find more mixed results. Examining the correlation between public and private spending within a single year (1996) yields no evidence that increased private spending is associated with decreased public spending. When we expand our analysis to examine changes within countries over time, between 1980 and 1997, we do find a negative and significant correlation between lagged private spending and public spending, for both one-year and two-year lags. However, using further lags of three years or controlling for potential correlation in the error terms using GLS we no longer find a significant relationship.

These results, while suggestive, are not very robust and clearly need to be interpreted with considerable caution. They suggest that, to the extent that there is a “crowd-out” effect in the pharmaceutical sector, it is in the relatively short term. This is consistent, as we expected, with the fact that most public programs of coverage for pharmaceuticals involve private co-payments, and many nations increased the level of co-payment in the 1990s. In this sense the

substitution of private for public finance was a matter of deliberate policy design, nation by nation. If these co-payments also had a dampening effect on the utilization of pharmaceuticals under public programs, we would expect to see an effect on public spending. And we observe such an effect with one and two year lags – arguably once the effect of co-payment had registered with consumers but before they had become accustomed to it. Nonetheless, the very fact that this result is not significant in the GLS analysis, which controls for correlations in the errors, suggests that it might be mediated by the effect of other ways in which countries differ from each vary – such as the design of national programs of pharmaceutical coverage, the extent to which privately-financed drugs are “bundled” with publicly-financed services, and differences in the prevalence and regulation of private insurance.

The fact that the result for pharmaceuticals is not as strong as the overall result, and that we find no effect in the hospital sector, suggests that the apparent partial “crowd-out” of public by private spending in aggregate may be a combined effect of technology-driven shifts across sectors and deliberate substitution of private for public finance in the pharmaceutical sector – and indeed that these effects may be mediated by differences in the way national systems combine elements of more-or-less common models. In future work we think it important to test this hypothesis further by examining spending in other health care sectors (physicians, home care, long term care, etc.) and to relate our findings to differences in the mode of private finance.

If what we are observing is in part a technology-driven secular trend and in part a matter of policy design, we would expect to find a similar effect if we run our overall analysis in the other direction: that is, if we look for the lagged effect of public on private spending. And indeed when we do this we find that a decrease in public spending is associated with subsequent increases in private spending: estimating the relationship between private and public spending

yields a negative and significant correlation in either direction. In the end, what these various analyses suggest is that the dynamic relationship between private and public finance in the health care arena is a complex one, mediated by the design of systems, and that any attempt to capture aggregate effects runs the risk of over-simplification.

Private Finance and Political Support for the Public System:

The concern is often expressed that a decline in the public share of total health expenditure (and conversely a rise in the private share) will erode support for the public system as middle-to-upper income individuals opt for the private sector and no longer wish to support tax-funded health services. The example of the United States, in which the proportion of total spending paid for publicly is relatively low and in which various attempts to mobilize public support for universal health insurance over the past three decades have come to naught, is typically adduced in this regard. Data from some other individual nations also bear on this relationship. In Britain, Timothy Besley and his colleagues, drawing upon data from the British Social Attitudes surveys from 1986 to 1991, have shown that those who have private insurance in Britain are somewhat less likely than those who do not to support increased funding for the public system. But they also point out that holders of private insurance tend to fall into population categories that are less supportive of increased public health expenditures: they are more likely to be in upper income categories, more highly educated, and Conservative party voters. Besley and his colleagues therefore acknowledge that they cannot answer the question as to whether private insurance status *per se* leads to decreased support for the public system (Besley et al. 1996:35-37). In Canada, polling over the 1990s as the public share of health spending declined indicated *both* a growing support for increased public expenditures on health

care as a top public policy priority *and*, to a lesser extent, an increased willingness to consider private financing alternatives (Vail 2001).

Is there broader evidence for the relationship between private finance and political support for the publicly-financed system? Consistent cross-national public opinion data are unfortunately limited. There are, however, two sources of data that can be used to investigate this question on a broad cross-national basis. Robert Blendon's group at the Harvard School of Public Health has compiled 1998 polling data on system satisfaction from a sample of 17 European and North American nations.¹³ More recent data from a February 2000 survey are available for 17 nations, including 11 OECD nations (8 of which were also included in the Blendon study) regarding attitudes toward public expenditure in a number of categories, including health care.

Tables 4 and 5 present data for these two samples of nations, comparing levels of satisfaction with the health care system, and support for increased public expenditures on health care at the end of the 1990s with changes over the past decade in the absolute and relative levels of public expenditure. As shown in Table 5, both the level of public funding and the public share of total health spending are significantly correlated with aggregate levels of satisfaction with the system as a whole. The level of public funding is negatively correlated with support for increased public funding, although not significantly so. The dynamic effects of *change* in the level of public funding or the public share of total health spending are particularly interesting and here the data do not support the hypothesis that support for public spending will erode as public share declines. A decline in the public share over the 1987-97 period, in fact, is significantly correlated with *higher* levels of support for public expenditure, although it does not appear to be associated with satisfaction with the system as a whole.¹⁴ Changes in the nominal *level* of public spending

are not significantly correlated either with system satisfaction or with support for increased public expenditure.¹⁵

These findings suggest that constraints on increases in the *level* of public spending (which in many nations were absorbed in considerable part by providers in the form of income constraints) were less likely to fuel demands for increased public spending than were declines in the public *share* of health expenditures, which were experienced by consumers as increased out-of-pocket payments or insurance premiums. A decline in the public share did not affect overall satisfaction with the performance of the system, but governments may pay a political price for being seen to fail to fund their appropriate share.

[INSERT TABLE 4 ABOUT HERE]

Table 5: Correlations Between Changes in Public Per Capita Health Care Spending (Level and Share of Total Health Spending) 1987-1997 and Public Satisfaction with System, 1998, and Support for Increased Public Health Care Spending, 2000

Measure of Public Health Care Spending Per Capita, US\$PPP	Correlation with Satisfaction with Health Care System, 1998 (N = 16)	Correlation with Percent Favouring Increased Public Spending, 2000 (N=11)
Public per capita health care spending, 1997, \$PPP	.54*	-0.54
Public share of total health spending, 1997	.63*	.29
% increase in nominal public health care spending per capita, 1987-1997	-.46	-.34
Change in public health care spending as share of total health care spending, 1987-1997	-.13	-0.63*

* significant at $p = 0.05$

One might expect that the relationship between changes in the public/private balance of health finance and political support for the public system might depend upon the way in which the public/private boundary is drawn. It might make a difference, that is, as to whether increases in the share of private finance are experienced as an increased need to rely on a parallel private sector, as increases in co-payments, as reductions in eligibility for coverage by the public system, or as the discovery that services once provided in publicly-financed settings such as hospitals and doctors' offices have moved to privately-financed settings due to technological change. An examination of Table 4, however, suggests no such systematic relationship – the relationship between changes in the public/private balance of health finance and political support for the public system appears to be an exception to our general argument, in that it appears to cut across nations regardless of the way in which the public/private boundary is drawn.

LESSONS AND CONCLUSIONS

Any consideration of the impact of private finance on publicly-funded health care systems needs to take account of differences in the way the public/private boundary is drawn. In this paper we have set out four idealized models for the drawing of this boundary, and have assessed the experiences of four nations (Britain, New Zealand, the Netherlands and Canada) that exemplify these models, as well as a “hybrid” case (Australia). Our review suggests that different ways of drawing this boundary raise different issues and challenges:

1. Systems allowing for parallel publicly- and privately-financed sectors raise the question of whether a *parallel private system* can reduce pressure on the public system. Our review suggests that it does not: public-sector waiting lists and times are longer in nations with parallel private sectors, such as Britain and New Zealand, than in nations that draw the public-private boundary in other ways. A parallel private

- sector may in fact draw resources out of the public sector, and/or put in place incentives that have the effect of increasing waits in the public sector. Waiting lists for publicly-financed services are likely to respond to infusions of public, not private finance.
2. Systems incorporating private *co-payments* for publicly-funded services need to be carefully analyzed for their utilization effects and their distributional consequences in terms of who must incur the costs. Co-payments for ambulatory care in New Zealand, for example, have depressed utilization of family doctor services. Since co-payments in at least some sectors are a feature of most national systems, the potential for systematic cross-national analysis is compelling. Our review of experience in a few nations suggests the need for broader cross-national studies, which should take account of the extent to which co-payments are covered by private insurance, the potential for strategic behaviour in substituting services that do not attract co-payments (such as those provided in hospitals) for those that do, and the phenomenon of *effective* co-payments in the form of “bundling” of privately-financed with publicly-financed goods and services.
 3. There are relatively few examples of *group-based* systems that confine public coverage for a broad range of services to certain population groups, leaving the remainder to rely on private insurance. Experience in the Netherlands shows that it may be possible to build a system of universal coverage upon such a base, but also shows that tight regulation is required to ensure common standards of care.
 4. Systems employing *sectorally-based* distinctions between public and private finance are particularly vulnerable to the unintended effects of technologically-driven shifts

across sectors, and also mean that the effects of changes in the fiscal climate are concentrated on particular sectors. The Canadian experience highlights these effects in a particularly dramatic way, but, since the hospital sector is predominantly publicly-funded in most nations, these phenomena have broader relevance.

The insights gleaned from a review of particular national experiences under different public/private models can help in the interpretation of some broader cross-national trends. Most notably, they help to illuminate the dynamic effects between public and private finance – the extent to which one may “crowd out” the other. Following others such as Globerman and Vining, we have shown that, in aggregate across OECD nations, an increase in the private share of total health care expenditures is associated with a subsequent decline in public health spending as a proportion of total public expenditure (and vice-versa). Our national analyses suggested, however, that this overall relationship could be the result of different dynamics in different nations. One dynamic, most evident in the sectorally-based financing system of Canada but also at work to a greater or lesser extent in most nations, is “passive privatization” as technological change moves services out of hospitals to settings characterized by more mixed modes of finance. Another dynamic, most apparent in nations relying heavily on co-payments but also in effect to some extent in most nations in at least some sectors, is a deliberate substitution of private for public finance as co-payments are incrementally increased. These insights led us to test for “crowd-out” effects not only for the health system as a whole but within sectors. We found no substitution of private for public finance (or vice-versa) in the hospital sector, but did find suggestive evidence of an association in the pharmaceutical sector. These findings suggest that increases in the private share of health spending substitute in part for public finance (and *vice versa*), but this is the result of a complex mix of factors having as much to do with cross-

sectoral shifts as with deliberate policy decisions within sectors. These effects, moreover, are mediated by other factors, including, we suggest, the distinctive ways in which different nations combine elements of the various models for drawing the public/private boundary, and the resulting dynamics of their respective systems.

Our analysis also yields some caveats for political decision-makers who would seek to reduce public expenditures on health and/or enlist private sources of finance within an integrated plan for the health care system as a whole. Cross-national polling indicates that public satisfaction with the health system overall is associated with higher levels of public spending, and that reductions in the public share of health expenditures fuel demands for increased public spending. Moreover, deliberate attempts to integrate public and private insurance within a regime of regulated competition have encountered substantial political, economic and technical challenges. In the Netherlands, attempts to introduce market competition between social insurance funds and private insurers have continued to struggle with the difficulties of developing a risk-adjustment formula, and of maintaining the necessary coalition of political support for reform. In Australia, the attempt to build a system with a deliberate balance of finance from public sources, private insurance and private out-of-pocket payments resulted in dramatic policy vacillation in the 1970s and 1980s, and more recently (in the 1990s) required an escalating series of policy measures aimed at the public subsidization of private insurance.

The evidence presented in this paper is suggestive, not definitive; and more work is clearly needed to tease out the effects of private finance on public health care systems. Complexity and variability in the way the public-private boundary is drawn in different nations means that questions about the appropriate balance belie simple answers. But the evidence to date suggests that increasing the private share of total health care expenditures does not offer a

solution to the challenges facing publicly-financed systems. Indeed, a resort to private finance is on balance more likely to harm than to help publicly-financed systems, although the effects will vary depending on the form of private finance. For those who would seek to improve publicly-financed systems, the locus of reform efforts must remain the public system itself.

¹ The *National Health Service Act* (UK) 1977 c. 49, s. 83A(2) allows regulation to be made exempting individuals from user charges for a number of reasons.

² See Table 5 below. This trend may have troughed, however: Canadian data show the public share as 71.2 percent in 2000, identical to the estimated share for 2002 (Canadian Institute for Health Information 2003).

³ Including compulsory workers' compensation and accident insurance (about one-quarter of private health insurance expenditures).

⁴ The remainder of expenditures on private hospitals was borne by a variety of sources, including accident and injury insurance and other public programs.

⁵ In 2000, the annual maximum was A\$276 Commonwealth Department of Health and Aged Care 2001).

⁶ Any lapses in coverage must total less than three years (1095 days).

⁷ This provision was indeed the price of passage of the legislation in the Senate, and was insisted upon by an independent Senator who held the deciding vote.

⁸ Sources for the data in Table 1 are available on request from the authors. We would alert the reader to the following limitations of the data: For Australia, the best available data includes 79% of the public hospitals and excludes private hospitals. For Canada: No aggregate national data are yet available, although a number of projects aimed at gathering cross-provincial data are underway. Thus, we used data from a Fraser Institute survey of physicians. These data have

their limitations as they rely on reporting by specialists and are “subject to recall bias, hampered by a small response rate, and limited by the use of different respondents yearly” (Walker and Zelder 1999). The Netherlands, English and New Zealand data are for in-patient treatment only. The Canadian data do not distinguish between in- and out-patients and it is unclear whether the Australian data include out-patient waiting.

⁹ The differences between Canada on the one hand and New Zealand and England on the other may be somewhat greater if the Canadian data are, as may or may not be the case, inflated by including patients waiting for out-patient procedures. Similarly, differences between Canada and Australia could tip somewhat in one direction or the other depending on whether or not out-patient waiting is included in either or both of these data sets.

¹⁰ Because Martin and Smith’s case-mix control was only at the level of broad specialty group, it was not possible for them to determine whether this effect was due to the fact that the private sector specialized in relatively less complex procedures or whether, even within diagnostic group, it took less complicated cases.

¹¹ The most extensive and well-known of these studies is the RAND health insurance experiment, the results of which are extensively reported in Newhouse (1993). A thorough review of this study as well as other cost-sharing studies in the United States can be found in Rice and Morrison (1994).

¹² Using GLS allows us to control for potential autocorrelation within countries over time and heteroscedasticity across countries. That is, for regular OLS we make assumptions about unobservable components of the determinants of public spending. These assumptions are fairly strict. Using GLS allows us to be more flexible in how we assume countries differ in terms of their unobservable characteristics.

¹³ The question asked was "In general, would you say you are very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, or very dissatisfied with the way health care runs in your country?"

¹⁴ For the small sub-sample of eight nations which are common to the two samples, there is no correlation between levels of satisfaction with the overall health system and support for increased public spending.

¹⁵ The negative sign on these correlations is nonetheless at first blush surprising, until it is noted that the results are confounded by the fact that the highest proportionate increases in nominal public spending are concentrated in countries such as Greece, Portugal, Spain and Ireland, with relatively low absolute public spending levels, and the US, where satisfaction with the health system has historically been low.