A LARGER ROLE FOR THE PRIVATE SECTOR IN HEALTH CARE? A REVIEW OF THE ARGUMENTS

Carol Propper
Professor of Economics, University of Bristol

Katherine Green
CMPO, University of Bristol

April 1999

CMPO Working Paper No. 99/009

Centre for Market and Public Organisation
University of Bristol
Department of Economics
Mary Paley Building
12 Priory Road
Bristol BS8 1TN
Tel: 0117 954 6943 Email: cmpo-office@bristol.ac.uk

EXECUTIVE SUMMARY

The public sector is the dominant financier of health care in most OECD countries. But in the last two decades the extent of private finance has increased in most of these countries, and private finance now accounts for around a quarter of all health care finance. On the delivery side, the dominance of the public sector is much less strong and mixed public and private provision is common. Many recent reforms in health care have sought to increase the role for the private sector in health care provision.

Against this backdrop, this paper examines the case for, and the empirical evidence to support, an increase in the role for the private sector in finance and delivery. The paper starts with a brief overview of the current position. It then examines the case and evidence on the finance side, and then the case and evidence on the delivery side. The evidence used is drawn primarily from the experience of OECD countries other than the USA, both because the American experience is better known and because the USA is an outlier in terms of the level of private finance and delivery within this group of countries. Nearly all of the recent reforms, which have sought to increase the role for the private sector, have been in countries where the public sector plays a greater role in both finance and delivery than in the USA.

The conclusions from this review are the following. First, it seems likely that reforms that increase the role for the private sector in financing health care will increase health care expenditure. High shares of private finance in the overall financing of health care are accompanied by higher costs, and systems which have high shares of public finance appear to have been better at cost containment. But lower cost does not necessarily mean better health care. The higher expenditure that accompanies private finance may in part reflect lower access costs and higher quality. Second, systems that rely heavily on private finance for health care tend to be less progressive than those that use public finance. Third, the argument that a marginal increase in private finance will necessarily lead to the evolution of the public sector into a 'poor service for the poor' is not strongly supported by empirical evidence. High levels of private finance do not appear to be associated with later lower growth of public finance. And while those who buy supplementary private finance in systems where individuals have public cover are less supportive of spending on public services, the evolution of their attitudes is not necessarily very different from that of users of the public system. Fourth, recently implemented reforms intended to promote competition on the delivery side in systems which have high level of public sector involvement in the delivery of health care appear to have been

accompanied by increased debate over the appropriate role for the public sector in the finance of health care.

But these conclusions come with a caveat. Whilst there are strongly articulated arguments for and against an increased role for the private sector, the evidence to support many of these arguments is relatively weak. Much of the evidence at system level is from time series data in which there are relatively few independent data points. At the micro level, the residual role for the private sector on the finance side in many countries seems to have meant that the private sector has received little attention. While this may be redressed as a result of recent reforms which have sought to increase the role for the private sector in delivery, many are too recent for clear evidence of their effects to emerge.

1. RECENT TRENDS IN THE PRIVATE ROLE IN FINANCE AND DELIVERY

Health care financing throughout the OECD is dominated by the public sector. Only in the US is health care predominantly privately financed. However in recent years against the backdrop of a concern with cost containment there has been a trend for the share of government finance to fall. In 16 out of the 24 countries in Table 1, the public share of total expenditure fell 1980-94.

TABLE 1: PUBLIC SHARE OF TOTAL EXPENDITURE ON HEALTH (%)

	1970	1980	1990	1994	Absolute Change 80-94
Australia	56.7	62.9	68.1	68.5	5.6
Austria	63	68.8	66.1	63.4	-5.4
Belgium	87	83.4	88.9	87.9	4.5
Canada	70.2	75.1	74.6	71.8	-3.3
Denmark	86.3	85.2	82.3	83	-2.2
Finland	73.8	79	80.9	75.2	-3.8
France	74.7	78.8	74.5	78.4	-0.4
Germany	69.6	75	71.8	73.5	-1.5
Greece	53.4	82.2	84.2	75.8	-6.4
Iceland	81.7	88.2	86.8	84	-4.2
Ireland	81.7	82.2	74.7	76	-6.2
Italy	86.9	80.4	78.1	70.6	-9.8
Japan	69.8	71.3	77.1	79.1	7.8
Luxembourg	91.8	92.8	98.5	98.8	6.0
Netherlands	84.3	74.7	72.4	77.6	2.9
New-Zealand	80.3	83.6	82.2	76.9	-6.7
Norway	91.6	98.4	94.5	94.5	-3.9
Portugal	59	64.3	54.6	55.8	-8.5
Spain	65.4	79.9	78.7	78.6	-1.3
Sweden	86	92.5	89.7	83.4	-9.1
Switzerland	63.9	67.5	68.4	71.8	4.3
Turkey	37.3	27.3	35.6	58.1	30.8
United Kingdom	87	89.4	84.1	84.1	-5.3
United States	37.8	42.4	40.8	44.3	1.9
Average	72.5	76.1	75.3	75.5	-0.6

Notes
1. 1994 data for Greece taken from 1993, 1994 data for Luxembourg taken from 1992.
2. 1970 data for Greece taken from 1975.

Source: Organisation for Economic Co-operation and Development (OECD) Health Data 1996

Finance for public health care is raised by a mixture of general taxation, social insurance (payroll tax) contributions and local tax. Examples of systems in which general taxation dominates are the UK and Denmark. An example of a country that uses earmarked social insurance contributions is the Netherlands. Private finance is usually raised by insurance premiums and/or out of pocket payments. Private insurance can be used to provide supplementary cover to public cover where those covered are offered no tax breaks (e.g. the UK) or initial cover for those without comprehensive public cover (e.g. the Netherlands) or cover against public sector co-payments levied on prescription medicines,

dental care etc. (e.g. France, Denmark). Out of pocket payments can be predominantly co-payments with the third party usually paying the major share of the bill (e.g. the UK, Netherlands, US and Denmark) or can amount to substantial use of the private sector on a fee-paying basis (e.g. Italy, Spain and Portugal).

While the public sector plays a key role in finance, the provision (i.e. supply) of health care varies widely in terms of a public-private mix. In the OECD delivery spans from being nearly 100 percent in the public sector (e.g. Sweden) to being substantially the role of the private sector (e.g. Switzerland, the US). Even where finance is predominantly social insurance or tax based, countries may use mainly private providers. Canada, for example, has predominantly public finance but private providers.

Table 2 illustrates the mixture of public and private finance and provision in the OECD. In most countries there has been an increase in the private sector share of hospital beds 1980-92 (OECD 1996). But it is worth noting that in nearly every single OECD country the *total* number of hospital beds per 1000 population has fallen 1980-95 (Saltman and Figueras, 1998). This may reflect the increasing use of cost effective alternatives to inpatient hospital care, changes in technology and increased reliance on primary and social care.

TABLE 2: CLASSIFICATION OF COUNTRIES BY PUBLIC/PRIVATE MIX OF PROVISION AND FINANCE IN HEALTH CARE

Public/Private Mix	**Country**	
Mainly public provision, public finance	Denmark Finland Greece Iceland Ireland Italy	Norway Portugal Spain Sweden United Kingdom
Mixed provision, public finance	Australia Austria Belgium France	Germany Japan Luxembourg New Zealand
Mainly private provision, public finance	Canada	
Mixed provision, mixed finance	Netherlands	
Mainly private provision, private finance	Switzerland United States	

Source: Organisation for Economic Co-operation and Development (OECD) 1994

Besley and Gouveia (1994) identified three basic 'types' of health care system. Type I: Finance and delivery by the private sector (e.g. the US); Type II: Public finance and (substantial) private delivery (e.g. Germany, Canada, the Netherlands); Type III: Public finance and delivery (e.g. Sweden, UK). In general, many recent reforms have aimed to move type III systems towards type II systems: in other words aiming to increase the role for private provision alongside substantial state finance.

2. ARGUMENTS FOR PRIVATE FINANCE

Government intervention in the finance of health care is widespread. It is an accepted fact that markets for health care and insurance deviate from the theoretical ideal of a perfectly competitive market. First, the need for health care is highly unpredictable and costly for the individual. One solution is insurance, but information failures in the market for insurance occur as insurance companies cannot observe the underlying health status of individuals. Individuals with identifiable pre-existing conditions may find it difficult to get insurance coverage at all. Second, neither the patient or the doctor has an adequate incentive to economise when a third party (such as an insurance company or the public sector) is paying the bill (moral hazard), creating a tendency for over-consumption. Third, informational asymmetry between suppliers and users of health care means patients must rely on the specialist advice of doctors in making health care choices. Therefore equity concerns over universal access to health care, and a concern with cost containment, support high levels of government intervention in most health care markets. As these arguments are well known we do not rehearse them in detail here (see Besley and Gouveia (1994) for a comprehensive discussion), but instead we take as given a high level of government intervention and focus on arguments for a mix in finance and a possible increase in the role of the private sector.

2.1 Crowd out arguments

At one end of the spectrum, it is argued that any public insurance 'crowds-out' private insurance: so any increase in public intervention will simply reduce private activity. This concern is widespread in the literature on social insurance programs. Theoretical analyses of asset-tested social insurance programs typically suggest that they will crowd out private savings, and substantial crowd-out has been estimated in the case of social security and private savings (e.g. Feldstein 1974) and other forms of government asset-tested programs. In health care systems where the government does not provide universal health insurance, partial alternatives generally exist, which offer free or subsidised coverage to particular groups. In the US for example, one option which is politically popular is free or subsidised coverage for children. But extension of coverage to new groups may not necessarily be welfare improving. As the eligibility for public coverage expands, individuals may drop their private coverage and switch into public programs. This may substantially reduce the gain from public insurance, as the cost of the program rises without commensurate increase in insurance coverage. So the gain from expanding public sector intervention will depend critically on the extent to which

public eligibility will cover just the uninsured, or will 'crowd-out' existing private insurance coverage.

The crowd-out argument applies less in systems where for political reasons there is universal health insurance coverage, since expansions in public coverage are not a policy issue. But there are economic arguments which suggest that even in these systems, the existence of private finance may be welfare increasing.

2.2 The political economy of mixed systems

Besley and Coate (1991) argue that systems in which there is de jure universal provision, but in which richer individuals are de facto allowed to 'opt-out' can redistribute income from rich to poor, even when the provision is financed by a non redistributive mechanism such as a head tax. They advance a model in which there are two groups of individuals: the rich and the poor. All individuals pay for the public service. The public sector provides a homogenous good of a given quality level. If this quality is not 'too high', richer individuals will pay for a higher quality of the good in the public sector, so the provision of the publicly funded good will go only to the poor. Universal provision of a quality high enough to induce both rich and poor to participate is not welfare improving because of the efficiency loss which arises whenever a good is provided 'in-kind'. The choice for the government is the quality of the public sector. The implications of this model is that if in-kind transfers are being used for redistibutive purposes then to achieve this without reducing social welfare requires the existence of a private alternative for which the rich can opt.

An alternative relationship between public and private finance to the 'opting-out' model is the 'top-up' model. Under these arrangements, individuals can increase the amount of health care they consume via market purchases. Examples are European National Health type systems in which individuals are entitled to public care even if they buy private insurance, but also the US Medicare program where the government coverage can be supplemented with so called Medigap policies. Gouveia (1997) examines the implications of 'top-up arrangements'. In his model, individuals pay taxes and consume health care when sick. Taxes are a positive function of income, so the rich pay more. The public sector provides a certain amount of health care (depending on total taxation). Private health care is supplementary to this public care. If individuals vote in their own interest, Gouveia shows that voters with very high and very low incomes prefer lower levels of public

provision, while middle income voters prefer higher levels of public provision. The rich prefer less since they disproportionately pay the taxes for higher public provision and will buy private supplementary care as well. The poor prefer less because health care demand increases with income. There will thus be a coalition in favour of lower public services composed of the poorest and the wealthiest voters in the population.

A consequence of this is that any proposal to ban the private health care sector will be opposed by a majority of voters. The rich will vote against a ban since under a mixed system the level of public service is lower, so they will pay lower taxes. The poor will also vote against a ban since in a public only system government provision will be higher than they would want. So, at least from a static perspective, banning supplementary insurance would be welfare reducing.

For a given budget, opting out may actually benefit those who remain in the public sector. If the rich 'opt out' into privately financed care, this will reduces the level of demand on the public sector. So there will be an increase in the per capita resources left for those who stay in the sector. In the UK for example, it is argued that individuals who use the private sector for treatment reduce waiting lists for those who remain in the public sector. So opting out will increase the welfare of both users of the public system and those who are permitted to opt out.

But the dynamics of the process may be somewhat different. If the wealthier receive less of their health care through the public system, their commitment to preserve the system by public tax payments may decrease. In addition, without the presence of the 'sharp elbows' of the middle classes to keep up service quality, the quality of the public service may fall. A fall may lead to lobbying for lower taxes for the public scheme and reductions in nominal health care budgets. If opting-out does depend on the quality of the public sector, reductions in the budget will lead to less use of the system by richer individuals. This will in turn lead to further calls for reductions in the budget. So attempts to cut public sector quality may lead to the public sector becoming a 'poor service for the poor'.

An alternative view is that government attempts to suppress private finance where there is excess demand for public care may generate longer waiting lists for the public plan. As lists grow, increasingly less wealthy individuals may begin to value the diversification benefits of private insurance more highly than the redistribute benefits of the public plan. So a lack of private finance will bring about a decrease in the political support for the public system.

In general, it is well established that the dynamics of models in which there is both public and private finance are actually quite complex[1]. Therefore a number of different possible outcomes may exist, each with a different level mix of public and private finance and quality of the public sector (e.g. Stiglitz 1974). Clearly a key issue is the relationship between support for the public sector, the level of public funding and use of the private sector and we examine evidence on this below.

2.3 The impact of the private sector on public sector efficiency

There are arguments which focus on the relative efficiency of the private sector and/or the impact of an expansion of the private sector on the efficiency of an existing public sector (Besley and Gouveia 1994, Globerman and Vining 1998). These contribute to the view that private financing systems are less able to hold down costs, and so increasing the role for private finance will reduce the real value of nominal health care budgets. First, it is argued that an increased role for private financing within a predominantly publicly funded system will erode the monopsonistic purchasing power of public plans and lead to higher prices for factor inputs. Second, it is argued that introducing greater private finance into a predominantly publicly financed system will lead to a fragmentation of the public plan and a reduction in administrative economies of scale.

While public plans may be able to hold down input prices by virtue of their monopsonistic position, such actions are not welfare maximising. Over time, the cost of such actions will either be that staff are of poor quality, or that employment contracts emerge which allow staff to earn money elsewhere. But such contracts may mean individuals are given weak incentives to perform well in the public sector. Evidence of such employment contracts are seen in the UK NHS. UK hospital doctors employed full time within the public sector are allowed to work up to 10 percent of their time in the private sector with no monitoring. Individuals who have part-time contracts are allowed to work unlimited hours in the private sector. Such contracts give little incentive to exert effort within the public sector. Furthermore, 'moonlighting' may mean individuals work more hours than they should and so the quality of the care they provide falls. It has also been pointed out (Globerman and Vining 1998) that some of the lower costs of the public sector reflect not monopsony power, but the genuine lower costs of public sector capital.

[1] Technically because preferences may not be single peaked

While it is true that large public plans tend to have lower administrative costs than private plans, a focus on only 'administrative costs' is incorrect. A valid comparison is one which compares all the costs associated with a publicly financed and a privately financed scheme, including the costs of rationing demand (Danzon 1992). Danzon argues that the profit motive means that private health insurance has built in incentives to minimise its total overhead costs. Public health insurance on the other hand, constrains the total budget but ignores real social costs including the time patients must wait for treatment and the lost productivity that results. So a comparison of only overhead costs is misleading.

Other possible interactions between the public and private sectors where the private sector is a provider as well as a funder of care are considered below in the section on the case for an increase in the role for the private sector in delivery.

3. INCREASING THE ROLE FOR THE PRIVATE SECTOR IN FINANCE: EMPIRICAL EVIDENCE

3.1 System level evidence

Given these arguments it is first instructive to look at evidence at the macro level. Does a high level of private finance lead to higher cost levels and, perhaps as importantly, to a higher growth of costs? The generally received wisdom is that a higher share of public financing in total health care financing is associated with lower nominal health care expenditures as a percent of GDP. Globerman and Vining (1998) found that the simple correlation between the share of public financing and health care expenditure as a percent of GDP in 1992 was -0.41. In effect this indicates a higher public share in health care expenditure supports a lower share of health care expenditure in GDP. This implies that public insurers are able to control health care expenditures better than private insurers. As possible confirmation Besley and Gouveia found that between 1981-1990 the largest reductions in the public share of health care financing came from countries with a dominant public financier in an NHS type system (e.g. UK, Portugal, Greece). Sweden and Denmark also managed to bring down the total share of expenditure on health care in GDP. However not all such NHS systems reduced costs: Norway and Finland are examples of countries with NHS type systems where the relative price of health care has substantially grown.

Econometric analysis by Gerdtham *et al* (1992) suggested that finance mix was one of 5 variables that contributed significantly to explain differences in per capita health care expenditures across OECD countries. The proportion of public financing to total financing had an expenditure elasticity of -0.23. This again points to an association between lower expenditure on health care per capita and a higher share of public finance.

However the simple correlation between the public-private mix in finance and growth in expenditure are not robust to more detailed analysis. For example, Globerman and Vining examine the relationship between financing mix and health care cost growth and find that once other influences on health care specific inflation rates (e.g. number of doctors, use of inpatient beds) are controlled for, funding mix becomes less important. Although there is still a negative relationship between cost inflation and the share of public expenditure in health care funding, much of this relationship is due to the USA. Without the USA in the sample, there is no relationship between funding mix and cost inflation. They further argue that the US data is misleading, in that no adjustment is made for the higher quality of care, including speed of access to services, that is available in the US system.

It is worth noting that countries with mainly private providers, such as the US, the Netherlands and Switzerland, are amongst those with the highest levels of health care expenditure in GDP.

3.2 The relationship between private finance, use of the public sector, and attitudes

The dynamics of the relationship between private financing and the evolution of the public system turn on the relationship between the quality of the public sector, use of the public and private sector, and political support for the public sector. The argument that private finance will lead to a downward spiral towards a 'poor service for the poor' depends upon the premise that support for public sector financing is negatively associated with private demand and the demand for a privately financed alternative is affected by the quality of the public sector. To what extent is this true in practice?

There are several possible relationships between support for public finance and use of private health care. Users of private health care services may be less supportive of public services than others on ideological grounds or because they simply see little personal return from public services they do not use. Alternatively users of private services may be frustrated with the level of service available from the public sector, although ideologically they may prefer higher state spending to achieve higher service levels and quality for all. This suggests use of the public or private sector may affect attitudes. Users dissatisfied with the level of service in the public sector may switch to the private sector. Users of the private sector may like the quality of service they receive and no longer see themselves as potential beneficiaries of the public service, and in turn lessen their support for state provision.

Empirical evidence from the UK suggests that those who use the private sector are in general less supportive of public financing of health care. Users of private health care services and more particularly users of private medical insurance are less supportive of increases in expenditure on the NHS or the equity goals of the NHS (Burchardt, Hills and Propper 1999, Hall and Preston 1998). There is also evidence from the UK that the *quality* of the NHS is associated with use of the private sector: longer waiting lists have been found to be linked with higher levels of demand for private medical insurance (Besley *et al* 1996), though not with *use* of the private sector (Burchardt, Hills and Propper 1999). Besley *et al* and Calnan, Cant and Gabe (1993) also find evidence of a link between dissatisfaction with the quality of the NHS and private insurance purchase in the UK. Both

stress that it is dissatisfaction with the quality of service, rather than the concept of public provision, which drives people into the public sector.

But there is considerably less evidence that attitude change is associated with private use. Burchardt, Hills and Propper (1999) find that use of private health care in the UK did not seem to result in clear cut changes in attitudes towards the NHS over a 5 year period. Furthermore, the changes in attitudes of both private and public health care users were very close. So it appears that it is use of a service which leads to attitude change and not whether that individual uses a public or a private service.

At a more general level, Globerman and Vining (1998) looked for a relationship between an increase in private finance and a subsequent erosion of support for the public sector, and so lower future levels (or slower growth) of public expenditure on health care. They find no association between lower relative growth of public finance in health care and past levels of public expenditure in the OECD. Their results suggest that increasing private finance will not necessarily erode support for the public sector.

3.3 The impact of private health care financing on equity

Demand for health care is income elastic. Therefore in systems in which the private sector is either a supplement to or an alternative to public care, it would be expected that richer individuals use more private care. Evidence from the UK where the private sector care is used both to top-up NHS care and as an alternative to NHS care (e.g. dentistry) indicates this to be broadly true. Burchardt and Propper (1999) find users of health care in the UK to be richer with other linked political characteristics (older, male, Tory etc.). But even in the UK system use is by no means restricted to this specific user group. For example Burchardt, Hills and Propper (1999) find that in 1995 approximately 70% of private health care users were in the top 2 income quintiles, by implication 30% were in the bottom 3. The same authors also find considerable flows in use between the 2 sectors. Those individuals with private medical insurance use their NHS, GP and NHS out patient facilities as much as those without. This implies that in such a system even those with private insurance switch between sectors.

Wagstaff , van Doorslaer and others (1992) have studied the larger picture: the relationship between the public-private mix in finance and equity in the finance and delivery of health care. These authors adopt 2 equity yardsticks. The first is that financing of health should generate a distribution of burdens according to ability to pay. The second is that delivery of health care should be according to need.

In terms of equity on the finance side the results they find are as expected. Table 3 shows the extent of departures from proportionality in the payments for health care. A negative figure indicates a regressive system and a positive figure a progressive one. The table shows that those countries with NHS type systems where public funding for health care is financed from general taxation (such as the UK and Portugal) have the highest levels of progressivity. Countries which operate systems funded by social insurance where funding is predominantly public (Type II) display some low levels of regressivity (e.g. the Netherlands). Type I systems with substantial or even dominant private financing systems have the highest levels of regressivity (e.g. the US).

TABLE 3 : EQUITY IN THE FINANCE OF HEALTH CARE

Country	Year	Index of Progressivity (Kakwani)
Denmark	1981	-0.015
France	1985	-0.072
Ireland	1987	0.034
Italy	1987	0.022
Netherlands	1987	-0.034
Portugal	1980	0.063
Spain	1980	-0.023
Switzerland	1981	-0.117
UK	1985	0.032
US	1981	-0.145

Note: The Kakwani index is a measure of departures from progressivity. The index is bounded between -2.00 and 1.00. A positive value indicates a progressive system.

Source: Wagstaff and van Doorslaer (1992)

While systems that rely heavily on private finance for health care tend to be less progressive than those that use public finance are, the impact on progressivity of an expansion of private finance will depend on the form of that expansion. Allowing richer individuals to 'opt-out' of contributions to public insurance is likely to decrease the progressivity of a given financing system. On the other

hand, an expansion of supplementary private finance, where individuals cannot 'opt out' of taxes for the public sector but buy additional private cover, will not be more regressive, as those individuals who buy the supplementary private finance will essentially be paying twice for their health care. This is clear, for example in the UK, where the distribution of private financing is progressive rather than regressive as the demand for private medical insurance in the presence of mandatory public insurance is highly income elastic.

While there is a clear relationship between equity in the finance of health care and the share of public finance, there is no clear relationship between the mix in finance and equity in the *delivery* of health care within a single country. Van Doorslaer, Wagstaff and others (1992) have examined the relationship between the regressivity of the financing system and the equity in the delivery of health care. Table 4 shows the extent of departure from equal access for equal need in several OECD countries. A negative figure indicates the system is 'pro-poor', and a positive figure that the system is 'pro-rich'. The table shows that Type I countries such as the US and Type III countries such as the UK both displayed an anti-poor distribution of health care benefits. On the other hand, Switzerland was a country with a regressive financing structure but with a pro-poor distribution of benefits. So there appears to be no clear relationship between funding mix and equity in terms of receipts of benefits.

TABLE 4: EQUITY IN THE DELIVERY OF HEALTH CARE

Country	Year	Index of progressivity in delivery of health care (HI)
Denmark	1981	-0.055
Ireland	1987	-0.076
Italy	1987	-0.036
Netherlands	1987	0.025
Spain	1980	0.146
Switzerland	1981	-0.043
UK	1985	0.013
US	1981	0.028

Note: The HI Index summarises the overall pattern of distribution. The index is bounded between -1.00 and 1.00. HI is negative when there is inequity favouring the poor and positive when there is inequity favouring the rich.

Source: van Doorslaer and Wagstaff (1992). Data unavailable for France and Portugal.

3.4 Does private finance erode the efficiency of the public sector?

There is very little evidence on the impact of private finance on the efficiency of the public sector. It is certainly clear that in NHS type systems there has been an expansion in private sector employment of physicians. Some of this expansion is due to an increase in private finance, but some the consequence of an increased role for the private sector as deliverer of care. In the UK full time NHS consultants cannot earn more than 10% of their salary from private practice work; those who are part-time can earn as much as they wish. In 1984 the proportion of NHS consultants undertaking at least some private work was estimated to be 85%, and evidence shows this to be an increasing practice (Calnon, Cant and Gabe 1993).

A similar rise has occurred in another publicly financed health care system, Sweden. Although the proportion of the population with private insurance is currently only about 1%, it is estimated that over 20% of physicians are engaging in some form of private practice. There is an increasing trend of private contracting, whereby counties offer short term private contracts to other physicians, health practitioners and private medical groups. There is also documented growth of private medical practice entirely outside the social insurance and contract system, where people pay for care 'out of pocket' or by private health insurance. Estimates range from 200-600 doctors working outside the social insurance system (Rosenthal 1992).

Some of this rise in demand will have an impact on the ability of the public sector to produce health care. A House of Commons report (1990) finds that in the UK the private sector makes use of staff who have been trained in the public sector but makes a negligible contribution to training costs. The audit commission (1995) showed that the 25% of consultants that did most private work carried out less NHS work than their colleagues. Evidence from Globerman and Vining (1998) suggests in New Zealand and South Africa temporary shortages of physicians and nurses in the public sector has been caused by their being 'bid away' by private payers. This created inefficiencies for the public plan by making it more difficult to utilise capacity at planned rates. While such a shortage may be temporary, dual employment in both sectors may result in public sector contracts which give poor incentives for effort, and so have longer run effects.

There are no studies of the impact on an increase in private finance on the administration costs of public plans, but comparisons of the overheads alone, as argued above, are likely to be misleading. In

fact, when the costs of rationing excess demand are included as costs of the public system, one study found administrative costs of the Canadian system to be very similar to those of the US health care system (Danzon 1992).

As evidence of the extent of 'crowd-out', Cutler and Gruber (1996) examined the extent arising from expansion of the US Medicaid program to pregnant women and children over the 1987-1992 period. They estimated that approximately 50 percent of the increase in Medicaid coverage was associated with a reduction in private insurance coverage. This occurred largely because employees took up employer based insurance less frequently. There was also some evidence that employers contributed less for insurance and that workers dropped their coverage of dependants. The applicability of these results to other systems is limited by the fact that the extent of 'crowd-out' will be a function of the specific design of the public program and the existing nature of private coverage.

3.5 Evidence from health care reforms intended to increase private finance

Most recent health care reforms have sought to increase the role of the private sector in supply, and these are examined below. But there have been reforms on the finance side intended to promote the role of the private sector. The primary example is the 'basic public benefit package' type reform where the state health insurance is reduced to a 'core package' and individuals are free to buy more from a regulated private insurance market. The intention of these reforms is (i) to limit the role of the state and (ii) to indirectly affect provider behaviour by generating financial pressure through competing private players. The Dekker and Simons proposals in the Netherlands provide the best example of this type of reform.

After initial attempts in Holland to provide comprehensive basic health insurance for all citizens through 'managed competition' between private insurers proved to be unsuccessful, in 1995 the Netherlands began to implement a new set of health care reform proposals. These were aimed at reforming the financing system and the incentive structures within it, keeping the segmented health care financing system largely intact. Finance has been split into three 'levels'. First, national health insurance (AWBZ) has been restricted to cover chronic care only. This remains publicly financed by social insurance contributions. The administration of this level has been entrusted to a regional single payer with government regulation of both prices and supply of services. Second, all citizens should have access to basic curative care. This is publicly financed through mandatory health insurance

payments. Sickness funds and private health insurers provide insurance cover and compete for subscribers. The role of the government here is to promote managed competition (the intention of the original Dekker proposals). To motivate insurers to purchase cost effective care on behalf of their customers the government has changed financing to increase the financial risk borne by the (private) health insurers. To ensure universal access to private health insurance, insurers must operate policies of open enrolment and implement some kind of risk equalisation scheme. At the third level, supplementary insurance can be purchased privately for 'amenity' care and inexpensive care, from sickness funds and private insurers. This is privately financed and no regulatory regime has been imposed. Following the recommendations of the Government Committee on Choices in Health Care (the Dunning Commission) this third 'compartment of care' should cover all health care services that cannot satisfy the criteria for inclusion in the 'basic benefit' package[2].

On one hand, early evidence shows that in the Netherlands the effect of competition may have already induced cost savings. Increasing financial accountability has provoked significant price competition among sickness funds; in 1997 the cheapest sickness fund charged a 40 percent lower flat premium than the most expensive one, whereas in 1996 this margin was 10 percent (Schut and Hermans 1997). The condition of 'equity' as equal access to appropriate or cost effective care appears to have been fulfilled in the regulated competitive system; the system of compulsory health insurance ensures each citizen now has access to a very broad benefits package.

On the other hand, in their assessment of recent European reforms Saltman and Figueras (1998) suggest that, in general, reforms on the finance side that attempt to indirectly affect providers behaviour by generating financial pressure through individual patient based demand or competing privately accountable players does not work well, financially or socially. Attempting to incorporate privately accountable payers within what was to remain a publicly accountable funding structure has generated deficits and political controversy in Israel. Successive Dutch governments have struggled to introduce competitive funding while still maintaining a high level of solidarity. Specifically, van de Ven and Schut (1995) point out that in the Netherlands attempts to introduce competition between insurers created a challenge to the maintenance of solidarity because of difficulties in developing a suitable sensitive risk adjustment formula for capitated payments. In addition, definition of the 'basic benefits' package has not been uncontroversial.

[2] The Dunning Commission specified the criteria for inclusion in the basic benefit package as medical necessity, proven effectiveness, efficiency and non-affordability.

Type III to type II reforms aimed at increasing private delivery while keeping primarily public finance have also included measures to increase private finance. In the UK tax relief was given to those over age 60 purchasing private medical insurance from 1990, though this was later withdrawn in 1997. Entitlement to free glasses in the UK has been increasingly limited to special groups from 1985 onwards, and charges for sight tests and dental check-ups were introduced in 1989. Baggot (1998) found in 1995 the proportion of NHS dental care funded from out of pocket payments was just under 30%. However evidence suggests the overall proportion of private out of pocket payments as a percent of health care finance remained stable at 9% in both 1985 and 1992 (Wagstaff and van Doorslaer 1992, van Doorslaer *et al* 1996). In addition Propper (1998) finds that post-reform the UK remains one of the most progressive financing structures. More micro evidence suggests some impact of the rise in user fees and change in eligibility: evidence from one eye hospital finds that referrals for glaucoma fell by 19% following the introduction of charging for eye tests (Laidlaw *et al* 1994).

In New Zealand the share of private expenditure which is out of pocket has grown from 10.4% to 16.7% between 1980 and 1995 (Scott 1998). It is argued that the now substantial charges for general practice consultants are a significant barrier for access, and therefore a blow to the New Zealand health service equity principles.

4. ARGUMENTS FOR A MIX IN DELIVERY

The aim of much recent health care reform has been to increase the role for the private sector as the deliverer, rather than alter the role for the public sector as the financier of care. This has been part of a broad movement from type III to type II systems. The general argument is that these reforms retain equity in the financing of health care, whilst promoting efficiency in its delivery through the introduction of competition. In some cases, reforms have not significantly changed the incentives on the finance side. In other cases, reform packages have also incorporated the promotion of competition on the finance side, extending the role for private finance. Lessons for competition in finance have been discussed above. Here our focus is the impact of increasing the role of the private sector in delivery.

The central arguments made for a mixed system in provision are that first, monopoly public provision is inefficient and competition will improve efficiency, and second, that the private sector will help inject competition. In some reforms the role envisaged for the private sector has been limited: for example in Sweden competition was to be between ‘arms-length’ public providers. In other reforms (e.g. the UK and New Zealand) publicly funded health care buyers were allowed to buy care from both public and the private health care providers. The argument for increased competition and change in ownership is in tune with the broad international trend across all sectors of the economy for a greater role for the private sector[3].

For any given public-private configuration, private supply can have the following impact on the public sector. First, the private sector can provide supplementary employment for individuals whose wages may be kept artificially low in a public sector large enough to exercise monopsony power. The employment contracts that can result from this (discussed in section 3.4) may interact with attempts to increase the role for the private sector. If buyers of health care know that placing contracts with private providers will mean an increase in demand for labour concurrently employed in the public sector, they may be reluctant to employ the private sector for fear of the effect it will have on output in the public sector.

---

[3] Much of the literature from other sectors in the economy shows that the extent of competition faced by suppliers may be as important as ownership. Private suppliers who are monopolists may have as few incentives for efficiency as those that are publicly owned (Armstrong, Cowan and Vickers 1994). If this is the case, to be welfare improving, a larger role for private sector suppliers must also be accompanied by competition between suppliers. This competition may take the form of competition in the market, or competition for the market (for example, competition for contracts to be a monopoly supplier), or pseudo-competition (e.g. yardstick competition) through regulation.

Second, private sector suppliers may act as efficiency comparitors to the public sector. Such comparisons are direct where private and public sector suppliers compete. Increasing direct competition between suppliers, both public and private, underlies the quasi-market reforms in the UK and in New Zealand. But even where there is no direct competition, comparison with the private sector may be helpful. The private sector can act as a 'benchmark' for the public sector (this is the same idea as 'yardstick' competition between geographically separate monopolists). Public hospitals can be compared to private ones in terms of costs or output.

The extent to which comparisons will be helpful depends on the similarities between the patients treated by the two sectors and the range of activities that are undertaken within the two types of provider. If case-mix is very different (for example if all the patients treated by the private sector are healthier) then comparison is difficult unless good adjustment can be made for case-mix. If the range of services provided within hospitals in the two sectors is very different, then comparison of costs may be misleading. Many costs in health care are joint and it is not easy to identify the costs associated with one particular service. For example, where private finance is limited, private hospitals may operate in niche markets, focusing on particular procedures. Comparison of a hospital which does only cold elective surgery with one which provides a wide range of accident and emergency services and 'high-tech' medical services will be misleading unless the higher costs associated with these activities can be clearly identified. The role of the private sector as an efficiency comparitor can therefore be seen to be related to the role played by private suppliers in the health care market. The more the private sector operates in niche markets, the less it is likely to be useful. The greater the role for the private sector, the more comparison will be helpful.

5. EVIDENCE ON THE IMPACT OF INCREASING THE ROLE FOR THE PRIVATE SECTOR IN DELIVERY

We focus on reforms in three countries: Sweden, New Zealand and the UK. In all three (although Sweden to a lesser extent) the reforms are centred around a purchaser/provider split. In Sweden the reforms aimed to separate the role of purchaser and provider at a local level. The political boards in Stockholm county council have been given responsibility for purchasing services at the district level by contracting with county council hospitals, over which they do not have direct management control. At a national level, two committees have been set up to examine priority setting, and the financing and organisation of health services. In New Zealand publicly owned ‘hospital and community services’ (previously Crown Health Enterprises), community agencies and private hospitals compete for contracts with a single national purchaser, the Health Funding Authority (HFA). A national health committee was established to identify those core services which were to remain publicly provided. In the UK self governing NHS trusts and other private providers compete for contracts and resources from District Health Authorities and GP fund holders. In addition the introduction of competitive tendering for many non-clinical services has allowed the private sector to bid for work previously undertaken by the public sector.

It is worth noting that all these reforms took place against a backdrop of a prior increase in the use of the private sector. In Sweden the largest private health insurer, Skandia, reported a 300% growth in individuals covered by its group policies between 1985-1990 (Rosenthal 1992). OECD health data (1996) finds that in New Zealand the share of total health care expenditure accounted for by private insurance premiums has risen from 1.9% in 1985 to 6.5% in 1993. It is estimated that in 1996 over 38% of the New Zealand population held some form of private insurance. In the UK there was a 58% increase in the number of patients treated by private hospitals between and 1981 and 1993, and a 440% increase in day cases. The corresponding increase for acute and general NHS in-patient cases was 25% and 160% respectively (Nicholl, Beeby and Williams 1989(a) and 1989(b), Williams and Nicholl 1994). Nicholl, Beeby and Williams (1989b) estimated that in 1986 16.7% of all residents of England and Wales who had non-abortive elective surgery as in-patients were treated in the private sector. In this year 28% of hip replacements were performed in private sector along with 16% of varicose vein operations. Estimates by Yates (1995) suggest these figures will increase throughout the 1990’s.

5.1 Has competition promoted efficiency ?

Van de Ven (1996) finds that the introduction of competitive elements in Sweden appears to have resulted in a substantial increase in physicians productivity. This even led some to believe that there was an over capacity in hospital provision; the number of hospital beds in Sweden more than halved between 1980-1995. The same author also points out that in the Netherlands the introduction of selective contracting on the delivery side in the early 1990's has already resulted in a reduction of the prices for medical equipment of between a quarter to a third.

On the other hand, Ashton (1996) finds that in New Zealand, by 1996, competitive purchasing for most services had been minimal. Incumbent providers were seen to get the contracts with few private providers winning bids. The anticipated 20-30% savings from market led competition never materialised. Instead costs have escalated by this amount. CHE's failed to operate at a profit and many received extra funding to cover operating losses. Contract negotiations generated enormous transaction costs. From 1995 to 1997 the cost of running the regional health authorities has increased by 40% and the Ministry of Health's costs have grown 11% since 1994/95 (The Press 1996). Hornblow (1997) reports that hospital waiting lists for many procedures have become longer, by as much as 50% in some cases. The proposed 'booking system' on a points basis according to severity of illness would not even include some of these on the current lists to be treated.

In the UK the evidence on efficiency increases is patchy. Barnett and Malcolm (1997) suggest that the existence of larger population concentrations, greater ease of travel and easier entry for new providers in the UK may mean that up to 75% of providers might have potential for competition. Prices appear to be lower in some competitive markets and there is some evidence that costs may be lower too (Propper and Soderlund 1998). Propper, Wilson and Soderlund (1998) also provide evidence that hospitals are charging GP fund holders less by cost shifting to the more passive DHA buyers.

5.2 Has the Role of the Private Sector increased ?

The overall level of private sector delivery has risen little. The real growth in private health care delivery has been in niche markets. In Sweden, where only 1% of the population are covered by private insurance, 25% of coronary bypass surgery in 1988 was performed in the private sector, via

county contracting (Rosenthal 1992). This trend may account for the sizeable proportion of private beds in Sweden. In addition there is growing interest in private health insurance market, especially for small businesses.

Health services in New Zealand are all contracted by the Health Funding Authority who may purchase them from private or public providers. In reality an increase in the role for private providers has only been seen in the area of elective surgery. Rankin (1998) finds that in 1993 31% of all surgical operations were performed in private hospitals in New Zealand. However evidence shows while private participation has grown in a number of areas the overall level is less than expected. Scott (1998) finds that over 92/93-95/96 total inpatient discharges and day patient discharges from the private sector increased by 5.0% and 6.1% per annum respectively. The elective nature of the work of medical specialists in their private capacity has not supported the development of large acute capability in the private sector. In part, this is due to lower unit costs for professional services in the public sector relative to those offered in the private sector. Economics of scale also prohibit duplication of such high cost care in both sectors. It appears that public and private insurance and provision arrangements appear to be compliments, not alternatives.

Similarly, in the UK a significant area of growth of private sector delivery has been elective surgery. Private health insurance is mainly for cover of procedures of this type. Laing (1996) estimated that the private sector share of UK hospital based health care increased from 7.5% in 1984 to 20% in 1995. However there has been little increase in the use of the private sector for publicly funded acute care. The real development has been in private delivery of non-acute long term care. In 1995 long term care for the mentally ill and mentally handicapped was predominantly delivered by the private sector but predominantly publicly funded.

In general the lessons from these reforms is that a significant increase in the role for the private sector in health care delivery has only materialised within specialist or niche markets. In acute care, the private sector specialises in certain surgical procedures. In long term care the role for the private sector in delivery has been larger, at least in the UK.

5.3 Has a 'level playing field' been created?

It is argued that for the private sector to be given a real chance to compete with the public sector and for any real comparisons to take place, a 'level playing field' must be created. Public sector providers must not be subsidised; however if a level playing field is to be created between the public and private sectors, private hospitals must bear the true cost of their work. Mercer (1998) points out that in New Zealand when an operation goes wrong the private hospital currently send the patients back to a public sector emergency room or intensive care unit. In addition the effect of 'cream skimming' by private hospitals must be reflected in the public hospital's revenue. When a private hospital 'cream skims' the cheap and simple operations it deprives the public hospital of this work, making its high-tech, high risk work effectively more costly. For example when the Health Funding Authority contracts out cheaper (say hip replacement) operations to a private clinic it makes the public hospital's orthopaedic surgery for trauma victims more expensive. This may lead to increased payment for this care by the public sector.

Obviously private providers will specialise in markets for which the private sector has found it can best match resources to production. In turn, it has been suggested that the public sector and the private sector should find suitable procedures to match resources and co-ordinate their activities. But the commitment to universal access in health care of most OECD governments limits their ability to 'choose' which procedures to provide (see below). Moreover, the lack of a level playing field makes efficiency comparisons more difficult.

5.4 Unexpected Consequences

In their assessment of European health care reforms, Saltman and Figueras (1998) find experience has shown that the greater the reliance on market mechanisms, the greater the need for an invigorated state role. Countries such as Sweden have found that the lower down in the public sector they decentralise power over the health system, the more important it becomes to have a central structure to monitor and evaluate performance and prevent opportunistic behaviour. Similarly in New Zealand the original public purchasers, the Regional Health Authorities (RHA's), have since been amalgamated into one central purchaser, the Health Funding Authority. It is suggested that with growth of the private sector the state would be better placed to monitor outputs and outcomes, focus on initiating broad strategic objectives for the entire health care system and regulate public and private providers to make sure that objectives are achieved.

One consequence of the reforms to the delivery side has been an increased concern over the role of the state on the finance side. Specifically, reforms on the supply side have been accompanied by greater discussion over the 'core services' that should be state funded. Discussion over levels of strategy and delivery have sharply thrown into focus the question of what publicly funded basic entitlements amount too. Reform on the delivery side has been accompanied by a move from implicit choices previously made by individual physicians to explicit choices made by a centralised public political process.

The Netherlands, New Zealand and Sweden have all established official bodies to examine priority setting more systematically as a direct consequence of the reforms. In Sweden the government appointed a parliamentary commission to consider the role of the health care system in the welfare state and to propose fundamental ethical principles that can serve as a guide for open discussions about priority setting in health and medical care (The Swedish Parliamentary Priorities Commission 1995). In New Zealand the advisory committee on core services failed to provide the RHA's with any specific guidelines on which services they should purchase. In the Netherlands the Dunning Commission has been so reluctant to restrict access to care that 95-100% of services have been defined as 'basic' and therefore to be included in the social insurance.

Other OECD countries including Finland, Norway and Spain have established official commissions to examine priority setting. In the UK there has as yet been no policy forum but several 'back door' policies have been implemented . For example, many local health authorities have refused to pay for IVF treatment and tattoo removals.

In general it appears that any successful move towards greater involvement with the private sector certainly requires clarification of the role to be played by each sector. An understanding of which kinds of public-private mix will add value is essential. Scott (1998) suggests that it is important to assist any strategy that allows for clarity of public entitlement to care and to then focus on further ways in which the role of private care can be defined in relation to this. Only greater transparency of the government's 'core entitlements' will make it possible to develop appropriate supplementary insurance policies and clarify the roles of the public and private sector.

6. IS THERE A CASE FOR A GREATER PRIVATE SECTOR ROLE IN HEALTH CARE?

This paper has reviewed the arguments and the evidence for increasing the role for the private sector in health care systems in which the state is the dominant financier. Whilst the arguments are well defined, empirical evidence to support or refute them is surprisingly weak. In health care markets in which the state has a dominant role in finance, surprisingly little attention has been paid to the role of the private sector. Most evidence on the finance side is from macro level data in which there are relatively few independent data points. At the micro level, the residual role for the private sector on the finance side in many countries seems to have meant that the private sector has received little attention. While this may be redressed as a result of recent reforms which have sought to increase the role for the private sector in delivery, many are too recent for clear evidence of their effects to emerge.

The following conclusions can be drawn from the body of evidence that exists. First, reforms that increase the role for the private sector in financing health care are likely to increase health care expenditure. High shares of private finance in the overall financing of health care are accompanied by higher costs, and systems which have high shares of public finance appear to have been better at cost containment. But lower cost does not necessarily mean better health care. The higher expenditure that accompanies private finance may in part reflect lower access costs and higher quality. Second, systems that rely heavily on private finance for health care tend to be less progressive than those that use public finance. Allowing richer individuals to 'opt-out' of contributions to public insurance is likely to decrease the progressivity of a given financing system. On the other hand, an expansion of supplementary private finance, where individuals do not 'opt out' of their payments for the public sector, will not be more regressive as individuals who take up supplementary private finance will essentially be paying twice for their health care.

Third, the dynamics of mixed systems are such that different equilibria can emerge. But the argument that a marginal increase in private finance will necessarily lead to the evolution of the public sector into a 'poor service for the poor' is not strongly supported by empirical evidence. High levels of private finance do not appear to be associated with later lower growth of public finance. And while those who buy supplementary private finance in systems where individuals have public cover are less supportive of spending on public services, the evolution of their attitudes is not necessarily very different from that of users of the public system. Finally, recently implemented reforms intended to promote competition on the delivery side in systems which have high level of public sector

involvement in the delivery of health care appear to have been accompanied by increased debate over the appropriate role for the public sector in the finance of health care. In many of these cases, public opinion has been such that the state has been unable to retreat far from its existing finance position.

REFERENCES

Armstrong. M., Cowan, S. and Vickers, J. (1994) *Regulatory Reform: Economic Analysis and British Experience*, Massachusetts: MIT

Ashton, T. (1996) 'Health care systems in transition: New Zealand, An overview of New Zealand's health care system', *Journal of Public Health Medicine* 18(3), pp. 269-273

Audit Commission (1995) *National Report: The Doctors' Tale; The work of hospital doctors in England and Wales* London: HMSO

Audit Commission (1996) *National Report: The Doctors' Tale Continued; The Audits of Hospital Medical Staffing* London: HMSO

Baggot, R. (1998) *Health and Health Care in Britain* (2nd ed.), Basingstoke: Macmillan

Barnett, P. and Malcolm, L. (1997) 'Beyond ideology: the emerging roles of new Zealand's crown health enterprises', *International Journal of Health Services* 27(1), pp. 89-108

Barnett, P. and Malcolm, L. (1998) 'To integrate or deintegrate? Fitting public health into New Zealand's reforming health system', *European Journal of Public Health* 8, pp. 79-86

Besley, T and Coate, S. (1991) 'Public Provision Of Private Goods And The Redistribution Of Income', *American Economic Review* 81(4), pp. 979-984

Besley, T. and Gouveia, M. (1994) 'Alternative systems of health care provision', *Economic Policy* 19, pp. 200-258

Besley, T., Hall, J. and Preston, I. (1996) *Private Health Insurance and the State of the NHS.* IFS Commentary No. 52. London: Institute for Fiscal Studies. Forthcoming in *Journal of Public Economics*

Burchardt, T. (1997) *Boundaries between Public and Private Welfare: A Typology and Map of services,* CASEpaper 2. London: LSE Centre for Analysis of Social Exclusion.

Burchardt, T., Hills, J. and Propper, C. (1999) *Private welfare and public policy,* York: Joseph Rowntree Foundation

Burchardt, T. and Propper, C. (1999) *Does the UK have a private welfare class?* University of Bristol, Centre for Market and Public Organisation; Working paper 98/006

Calnan, M., Cant, S. and Gabe, J. (1993) *Going private; Why people pay for their health care,* Buckingham: Open University Press

Cutler, D.M. and Gruber, J. (1996) 'Does Public Insurance Crowd out Private Insurance?', *Quarterly Journal of Economics* 111, pp. 391-430

Danzon, P.M. (1992) 'Hidden Overhead Costs: Is Canada's system really less expensive?', *Health Affairs* (Spring) pp. 21-43

Feldstein, M. (1974) 'Social Security, Induced Retirement, and Aggregate Capital Accumulation', *Journal of Political Economy* LXXXII, pp. 905-926

Gerdtham, U.G., Sogaard, J., Jonsson, B. and Andersson, F. (1992) 'A pooled cross-section analysis of the health care expenditures of the OECD countries', in P. Zweifel and H. Frech (eds.) *Health economics worldwide,* Dordrecht: Kluwer Academic Publishers

Globerman, S. and Vining, A. (1998) 'A Policy Perspective On "Mixed" Health Care Financial Systems Of Business and Economics', *Journal Of Risk And Insurance* 65(1), pp. 57-80

Gouveia, M. (1997) 'Majority Rule And The Public Provision Of A Private Good', *Public Choice* 93, pp. 221-244

Hall, J. and Preston, I. (1998) 'Public and Private Choice in UK Health Insurance', *Institute for Fiscal Studies* Working Paper Series, W98/19

Ham, C. and Brommels, M. (1994) 'Health Care Reform in the Netherlands, Sweden, and the United Kingdom' *Health Affairs* (Winter), pp. 106-119

Hornblow, A. (1997) 'New Zealand's health reforms: a clash of cultures', *British Medical Journal* 314, pp. 1892-1894

House of Commons Public Accounts Committee (1989/90) *28th Report: The NHS and Independent Hospitals*, London: HMSO

Laidlaw, D.A.H., Bloom, P.A., Hughes, A.O., Sparrow, J.M. and Marmion, V.J. (1994) 'The sight test fee: effect on ophthalmology referrals and rate of glaucoma detection. *British Medical Journal* 309, pp. 634-636

Laing, W. (1996) *Laing's Review of Private Health Care* London: Laing & Buisson.

Malcolm, L. (1997) 'GP budget holding in New Zealand: lessons for Britain and elsewhere', *British Medical Journal* 314, pp. 1890-1892

McTurk, L. (1998) 'Key Issues faced by Providers of Public and Private Hospital Care in New Zealand' *Health Care Review On-line: Private/Public Sector issues in the Provision of health Care in New Zealand*. http://www.enigma.co.nz/hcro_articles/9804/vo12no6_001.htm

Mercer, L. (1998) 'Level Playing Field Good for Public Patients', *Health Care Review On-line: Private/Public Sector issues in the Provision of health Care in New Zealand.* http://www.enigma.co.nz/hcro_articles/9804/vo12no6_002.htm

Nicholl, J.P., Beeby N.R., and Williams, B.T. (1989a) 'Comparison of the Activity at short stay Independent Hospitals in England and Wales, 1981 and 1986', *British Medical Journal* 298, pp. 239-242

Nicholl, J.P., Beeby N.R., and Williams, B.T. (1989b) 'Role of the private sector in elective surgery in England and Wales', *British Medical Journal* 298, pp. 243-247

Organisation for Economic Co-operation and Development (OECD) (1992) *The Reform Of Health Care: A Comparative Analysis of Seven OECD Countries,* Health Policy Studies No. 2, Paris: OECD

Organisation for Economic Co-operation and Development (OECD) (1994) *The Reform Of Health Care Systems; A Review of Seventeen OECD Countries*. Health Policy Studies No. 5, Paris: OECD

Organisation for Economic Co-operation and Development (OECD) Health Data 1996

The Press (1996) Health Woes [editorial]; 9, August 9th

Propper, C. (1998) *Who Pays for and Who gets Health Care? Equity in the Finance and Delivery of Health Care in the United Kingdom,* Nuffield Occasional Papers, Health Economics Series: Paper No. 5. London: Nuffield Trust

Propper, C. and Soderlund, N. (1998) 'Competition in the NHS internal market: An overview of its effects on Hospital prices and Costs', *Health Economics* 7, pp. 187-197

Propper C, Wilson, D. and Soderlund, N. (1998) 'The Effects of regulation and competition in the NHS internal market: the case of GP Fund-Holder prices', *Journal of Health Economics* 17(6), pp. 645-674

Rankin, D. (1998) 'The Role of the Private Sector In Health Service Delivery', *Health Care Review On-line: Private/Public Sector issues in the Provision of health Care in New Zealand.* http://www.enigma.co.nz/hcro_articles/9804/vo12no6_003.htm

Rosenthal, M.M. (1992) 'Growth of private medicine in Sweden: The new diversity and the new challenge' *Health Policy* 21, pp. 155-166

Saltman, R.B. and Figueras, J. (1998) 'Analysing the Evidence on European Health Care Reforms', *Health Affairs* 17(2), pp. 85-108

Schut, F.T. (1996) 'Health Care systems in transition: the Netherlands. Part I: Health care reforms in the Netherlands: miracle or mirage?', *Journal of Public Health Medicine* 18(3), pp. 278-284

Schut, F.T. and Hermans, H.E.G.M. (1997), 'Managed Competition Reform in the Netherlands and its Lessons for Canada' *Dalhousie Law Journal* 20(2), pp. 437-469

Scott, C. (1998) 'Clarifying Public and Private Sector Roles in the 'Reformed' New Zealand Health Care System' *Health Care Review On-line: Private/Public Sector issues in the Provision of health Care in New Zealand*. http://www.enigma.co.nz/hcro_articles/9804/vo12no6_004.htm

Stiglitz, J.E. (1974) 'The demand for education in public and private school systems', *Journal of Public Economics* 3, pp. 349-385

The Swedish Parliamentary Priorities Commission; final report (1995) . *Priorities in Health Care. ethics, economy, implementation*. Stockholm: Department of Health. SOU: 5

van de Ven, W.P.M.M. (1995) 'Regulated competition in health care: With or without a global budget?', *European Economic Review* 39, pp. 786-794

van de Ven, W.P.M.M. (1996) 'Market orientated Health Care Reforms: Trends and future options', *Social Science and Medicine* 43(5), pp. 655-666

van de Ven, W.P.M.M. and Schut, F.T., (1995) 'The Dutch Experience with Internal Markets' in M. Jerome-Forget, J. White and J.M. Weiner (eds.) *Health Care Reform through Internal markets: Experience and proposals*, Washington: Brookings Institution, pp. 95-118

van Doorslaer, E. and Wagstaff, A. (1992) 'Equity in the delivery of health care: Some international comparisons', *Journal of Health Economics* 11, pp. 389-411

van Doorslaer, E. *et al* (1996) 'The redistributive effect of Health Care finance in 12 OECD countries', Equity working paper #8, Rotterdam: Erasmus University

Wagstaff, A. and van Doorslaer, E. (1992) 'Equity in the finance of health care: Some international comparisons', *Journal of Health Economics* 11 pp. 361-387

Williams, B.T. and Nicholl, J.P. (1994) 'Patient Characteristics and Clinical Case Load of Short Stay Independent Hospitals in England and Wales 1992/3', *British Medical Journal* 308, pp. 1699-1701

Williams, B.T., Nicholl, J.P., Thomas, K.J., and Knowelden, J. (1985) 'Differences in duration's of stay for surgery in the NHS and private sector in England & Wales', *British Medical Journal* 290, pp. 978-980

Yates, J. (1995) *Private Eye, Heart and Hip*, London: Churchill Livingstone