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Insurance and the Financing of Healthcare

by

Moore McDowell

Policy Paper No. PP89/5

October 1989

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PART 1: INTRODUCTION

In recent years the financial position of the health sector has steadily deteriorated. At first the problem appeared to be confined to the tax-financed public health sector. More recently, however, it has become clear that the private sector is in similar difficulties. These difficulties reflect the rise in demand, increased technological complexity, the rise in supply costs and institutional inadequacies in the health-care sector.

Obvious factors affecting the demand growth for health-care in any economic system are:
(a) income per head; (b) demographic factors; (c) changes in fundamental medical technology, as new treatments come on stream.

The increased complexity of medical care is expected to increase the demand for health-care indirectly through another mechanism. Asymmetry of information between the consumer (the patient) and the supplier (the health professional) increases. This is widely believed to lead to an increase in the quantity and quality of medical treatment even when the marginal benefit to the patient is low or zero and is certainly less than the marginal cost. This is usually referred to in the literature as physician-induced demand.

Physician-induced demand is influenced by the methods adopted to finance medical treatment. Zero costs to the patient and to the doctor at the margin are obviously an incentive to prescribing more treatment. The existence and the pricing of health insurance are for this reason matters of policy importance independent of considerations of equity.

An increased level of "output" of health care requires that expenditure on it (by someone) has to rise. If it is supplied at below cost government spending has to rise. Political considerations of income distribution make some form of tax-financed health-care for the
less well off inevitable. Unless tax financed health care is made available independent of ability to pay, a fee-financed sector is inevitable (and may remerge anyway). To the extent that it is priced to cover full costs, it is unrealistic to expect patients to meet soaring per unit costs of treatment on an out of pocket, pay as you use basis. Those who want or feel they will have to pay for private care are likely to insure against the potentially catastrophic wealth consequences of modern treatment. The shift to tax and insurance financed medicine increases the problem of the incidence of physician induced demand by uncoupling supply, demand and price (1). Moreover, a tax/insurance financed system is bound to exhibit excess demand and queues unless the Government is willing to meet any expenditures required by patient or physician on demand.

Hence, against a background of rising supply costs and income-induced demand, the question of market structures and institutions in both health provision and health finance assume crucial importance as determinants of the cost, quality and distribution of medical care.
PART 2: FINANCING HEALTH CARE: THE ROLE OF THE V.H.I.

The V.H.I. was established expressly to complement a state financed health service aimed at providing care for the less well off (2). Its quasi-monopoly position was established to ensure widely available insurance on a community rated basis which involves cross-subsidising higher risk groups from actuarially excessive premia charged to lower risk groups (3). This, it was felt, would be impossible due to adverse selection difficulties if the board faced competition. Officially, at least, this remains the reason for maintaining the V.H.I.'s monopoly today. Another (possibly the real) reason for the Government's apparent reluctance to contemplate a competitive health insurance market, is to be found in the Government's relations with the V.H.I. Under the terms of the 1957 Act which set it up, the V.H.I. is explicitly subject to Government control in matters affecting the Board's range of cover, its benefits and the level and structure of its premia. Furthermore, in terms of its operating procedures, it is very much dependent on the cost implications of Government policy with respect to the state-financed health sector. In particular, maintenance expenditure by the Board is partly dependent on the level of state support from the Exchequer for public beds in the public and voluntary hospitals. In recent years it has, on government instructions, extended benefit cover to medical expenses which are not properly considered insurable risks: normal maternity expenses and drugs for established chronic illnesses such as asthma. The rescue package of January, 1989, involved a substantial move to eliminate these charges.

This relationship is not that of a regulatory Government with a state protected health insurance agency. It resembles more a relationship between a Government and a body charged with raising the necessary revenue on a semi-voluntary basis to finance a sector
of a state health service. Evidence that this is indeed the case may be found in the assertion of the Secretary of the Department of Health that the V.H.I. is "an arm of Government social policy"(4).

The present financial crisis of the VHI, a crisis within a crisis in the health care system in general, is to a considerable extent the consequence of this government interference in the insurance financed sector of the health system. To that extent it will disappear with the removal of these inappropriate burdens from the VHI.

This will not solve all the VHI’s problems, unfortunately. The well publicised problems of the costs of the expensive private hospitals point to a twofold failure of the VHI as an insurer. Its underwriting clearly leaves a lot to be desired if it consistently fails to charge premia which cover disbursements, allowing for investment income. Further, it has had to date little success in using its bargaining power to contain hospital and professional costs. Again, however, there is reason to suspect that the intervention of the government has not helped. In the first place, the government has restricted the VHI’s freedom to set its premia. In the second, public rhetoric to the contrary notwithstanding, the VHI has at the margin been a net contributor to the cost of running the public health service in the face of government spending reductions. This is, of course, inconsistent with acting to control the growth of costs in the hospital system. Hence, the economic efficiency of the Board’s operations has to be looked at in a broader context than its financial returns. Equally, its present problems should not be used uncritically to suggest that insurance finance of healthcare, even on a community rated basis, is fatally flawed.

There is, however, evidence that the VHI is facing a serious problem as an insurer arising from its continued operation of a community rated premium system. Until recently the annual report of the V.H.I. contained some very useful data on the non financial side of its operations, namely a table giving the age profile of its subscribers. This was discon-
continued in 1984. When data for the financial year 1983-4 are compared with the population figures from the census of 1981, the following picture emerges:

<table>
<thead>
<tr>
<th>AGE</th>
<th>V.H.I. 1983/4 %</th>
<th>POPULATION 1981 %</th>
<th>(1)-(2)</th>
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<tbody>
<tr>
<td>0 - 14</td>
<td>31.3</td>
<td>30.3</td>
<td>+1.0</td>
</tr>
<tr>
<td>15 - 19</td>
<td>8.7</td>
<td>9.5</td>
<td>-0.8</td>
</tr>
<tr>
<td>20 - 24</td>
<td>5.7</td>
<td>8.1</td>
<td>-2.4</td>
</tr>
<tr>
<td>25 - 34</td>
<td>15.5</td>
<td>13.8</td>
<td>+1.7</td>
</tr>
<tr>
<td>35 - 44</td>
<td>14.8</td>
<td>10.4</td>
<td>+4.4</td>
</tr>
<tr>
<td>45 - 54</td>
<td>10.5</td>
<td>8.7</td>
<td>+1.8</td>
</tr>
<tr>
<td>55 - 64</td>
<td>7.9</td>
<td>8.3</td>
<td>-0.4</td>
</tr>
<tr>
<td>65 - 74</td>
<td>4.2</td>
<td>6.9</td>
<td>-2.7</td>
</tr>
<tr>
<td>75 +</td>
<td>1.4</td>
<td>4.0</td>
<td>-2.6</td>
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In the early 1980s the V.H.I.'s subscribers' age profile was biased (relative to that of the population) towards the age groups in which the incidence of sickness is lower. Even if population mortality rates applied to the insured population (unlikely, since the insured population has a higher average income than the population as a whole, and mortality is negatively correlated to income) the average age of the subscribing population would rise relative to that of the population as a whole. Given a higher survival rate of higher income groups, this trend is likely to be enhanced. The average incidence of illness in the insured population will rise as the insured population ages. Hence the costs of the V.H.I. are predicted to rise more rapidly than health costs for the country as a whole.
over the next 10 to 15 years. On average, therefore, V.H.I. subscriptions will have to rise relative to the average cost of medical treatment.

Not only does this mean a perceived fall in "value for money" for any given premium, but it increases the degree of cross-subsidisation between age groups within the V.H.I. Other things being equal, this should mean that the VHI will start to experience the consequences of adverse selection: a fall in the numbers choosing to join the V.H.I. and/or a fall in the level of cover opted for on average. This will further worsen the Board's financial position since, by and large, new subscribers are in the young adult age group which, on community-rating, subsidises the older members.
PART 3: THE ROLE OF INSURANCE IN FINANCING HEALTHCARE

Given the evidence that all is not well with the voluntary insurance sector of health-care, and that this appears to reflect more than transitory problems of finance, it’s not surprising that the question of the role and structure of insurance financed health care should become a matter of policy debate. The debate centres on two issues: the scope for voluntary insurance in the health system, and the structures which are appropriate, given whatever role is assigned to voluntary insurance.

It seems to me that three pertinent questions arise here. The first is whether or not and to what degree the health system should depend on insurance finance. The second is whether or not community rated insurance should be the norm in the insurance financed sector. The third is whether, given a decision to opt for community rated insurance, competition in the health insurance market is compatible with community rating.

By the time this paper is read, the leaked report on health finance may have been made public. At the time of writing no hard information on its contents is available. As a result, the most recent published attempt at an authoritative analysis of this aspect of health-care finance in Ireland remains the E.S.R.I. policy paper on the subject which appeared last autumn (5). The author concluded amongst other things that private insurance is unsuitable as the principal method of financing health-care on a national basis. The likely gaps in coverage that would emerge unacceptable political and social problems, or else would give rise to a level of free riding on the system that would threaten its financial viability. Experience in the U.S.A. does not fully support that line of argument, but it is probably the case that political considerations of an ideological nature rule out primary reliance on private insurance here as in the U.K. In addition, pressure for a degree of harmonisation of health and social security arrangements among the member
states of the E.C. makes it unlikely that such a change in this country's health finance arrangements could be put on the political agenda. To that extent, sustainable or not, Brian Nolan's criticism of the role of private insurance is irrelevant. To the extent, however that it may be taken as ruling out ANY expansion of the insurance sector, it is open to serious questioning as to the degree to which the evidence he cites supports his view that insurance ought not play a substantial role in health finance, and that increased competition in the health insurance market may not be desirable.

The first problem here is to separate arguments of efficiency from those of equity. Let us assume that we have to look at tax finance and insurance finance from an efficiency viewpoint first. That enables us to analyse the finance methods in terms of the response of supply to demand, and in terms of costs per quality adjusted unit of treatment. The most obvious consequence of tax finance is to divorce completely demand for medical treatment from willingness to pay for it. To the consumer, healthcare is a free good, and the only limit to demand is zero marginal utility. Marginal utility depends on ex ante perceived benefit which for most of us will mean whatever the professionals advise us as being "necessary"(6). Unfortunately, it is in the medical profession's interest, and consistent with their "ethical" bias, to prescribe treatment expense as long as it can be justified as being in the patient's interest. Prescription control is left to bureaucratic regulation, or to hospital managements attempting to meet budgetary targets. Resource allocation in the face of excess demand is left either to rationing by queuing or to selection on some other basis by doctors and/or hospitals.

Insurance finance of any kind will bring resource allocation and cost control more into alignment with conventional notions of economic efficiency than a tax financed system, although clearly at the expense of the incomes of those who benefit from the ineffective performance inherent in the tax financed system. It has to be said, however, that the
mode of insurance finance chosen is very important in determining the degree to which it is superior to taxation. A community rated, unrestricted cover, zero coinsurance system, for example would offer only a small possibility of improving the performance of the health service. That improvement would depend on the economic interest of the insurer in monitoring the activities of the healthcare suppliers in order to ensure financial profitability. Even then, adverse selection and moral hazard problems might make such a system financially non-viable. Further, the incentive to monitor depends to a considerable degree on the presence or absence of competition in the insurance market, and, as we shall see, community rating is difficult to reconcile with competition (7).

A basic requirement, unfortunately, for efficient resource allocation in a market is that the consumer has to pay at least a proportion of the cost of the resources he is preempting for his own benefit. Hence, health insurance contracts, if they are to be compatible with any substantial improvement in resource allocation relative to tax finance, must link costs to the consumer to the cost of treatment, both intramarginally (through premium structure) and marginally (through benefit ceilings or through coinsurance). Further, the cost relationship should be known ex ante and not be a random one as is the case at the moment under VHI contracts.

In short, for an insurance sector to have a useful role to play in the financing of the healthcare system the structures of the insurance sector are of prime importance. In no small measure it is the failure of the present system in Ireland to meet the basic requirements for economic efficiency which is responsible for the financial difficulties into which it has fallen.

That still leaves the question of the extent to which we should rely on an insurance system unanswered. That question cannot be fully answered outside the context of social equity, since it is not possible for a full insurance finance system based on voluntary
subscriptions to provide a health care system which is truly universal. It is not, in my judg­ement at least, politically feasible to enforce insurance cover regardless of income. Hence, any insurance system will offer less than 100% cover to the population, with those on lower incomes constituting the overwhelming majority of people without cover.

Two things need to be said, however. First, the view that gaps in coverage would be so large as to be unacceptable, exemplified by the 1988 ESRI paper, is open to serious question if it is accepted that in an insurance finance system the state would still step in to provide a safety net care system. Pace Brian Nolan, it seems to me that an unbiased examination of the USA would lead to the conclusion that the combination of Medicare, Medicaid and the variety of private, voluntary health cover plans does cover the vast majority of US citizens. It is noteworthy, too, that faced with a reduced availability on a dependable basis of a public health service, Irish households are indicating an increasing willingness to seek and pay for health insurance. This rise in the numbers of those insured seems to be concentrated in strata of the income distribution which up to now depended on state provision.

The second is to consider the consequences for costs of adopting the alternative, a largely or totally tax-financed system. It is true that there is plenty of evidence that the US system is not succeeding in curbing sufficiently the growth in the costs of the healthcare system. Nevertheless, one should ask, before rejecting continued or extended reliance on insurance here, whether it is credible to suggest that a shift in the USA to a British style health service would succeed in the USA where it has failed in the UK in controlling medical costs more effectively than private competitive insurers. The acknowledged failure of the VHI to date in the same area arises not from its being an insurer, but from its being a non-competitive insurer with a state monopoly which has been consistently abused by its political masters for their own ends. In the main this has
reflected the continued actions of government to use the terms and conditions of supply of state agency services to redistribute income in an off budget fashion.

Finally, if the insurance sector does not expand to meet the predicted increased demand for health-care, the burden on the already overloaded tax financed sector is bound to increase. If the Government does not dramatically increase tax based funds to the health sector, the quality of service must decline through congestion. Leaks have led us to believe that the commission on health funding is leaning towards reducing the role of insurance. Unless this is accompanied by an increase in government spending the only result will be to spread the misery more evenly.

For the moment let us assume that a significant role for insurance is to be maintained. The second major question to be faced is whether that insurance should be community rated. What does community rating involve? In effect, neither the age-related actuarial risk of illness nor, broadly speaking, the insured's personal health experience is taken into account in determining the appropriate premium to charge. The immediately obvious effect of this is to introduce a large element of cross-subsidisation. The general presumption seems to be that it is socially desirable that those less likely to experience episodes of illness should subvent those who are more at risk. Not only is the logic of this open to question, but it has serious implications for the overall cost and level of health insurance cover. The fact that any insurance scheme transfers resources ex post between groups of people by its nature does not mean that the ex ante basis of the insurance contract should be designed actuarially to transfer wealth between identifiable sub-groups of the population. To do so is to increase incentives for adverse selection. Adverse selection exists where any individual uses information about the probability of any event befalling him which is not in effect available to the issuer of insurance. Given the cost of acquiring information on any individual's risk exposure, the insurer relies on past experience
with groups and assigns an ex ante risk rating to any individual based on the experience of the most relevant group. That risk rating reflects the mean riskiness of the group. The broader the group classification, the greater the dispersion of individual risk around the mean risk, and the greater the number of people in the group for whom, at an actuarially fair group-related premium, the attractiveness of insurance is either reduced or increased. The former are those who have private information that their risk is less than that of the group; the latter are who are aware of higher risk factors. Lower risk people will take out less insurance; higher risk people will take out more. To deal with this the insurer has to raise the average premium. Consequently, when the group is the whole community the average premium will, ceteris paribus, be higher than for any other premium rating structure.

A decision to move from community rating to experience rating is bound to be politically controversial since it will raise issues of redistribution through the cost of health insurance. The first of these arises because it will mean that those who are at a higher risk of illness through their medical history will on average pay higher premia than those at lower risk. It may well be the case that public perceptions of "fairness" reject such an arrangement. It has to be faced that if this is so it is tantamount to rejecting the principle of insurance for health purposes on ethical grounds.

Against this view it can be argued that (a) the overall cost of insurance will fall under experience rating for reasons already outlined; (b) it would still be open to competitive insurers to offer contracts which did not raise premia after illness (i.e., not including loadings or no-claim bonuses) to new customers with clean bills of health. They would, however, be more expensive. Again, it is interesting to note that in the U.K. market both types of contract are available.
The second argument against experience rating on distributive grounds is that it is regressive in terms of income. It is well established that there is a negative cross-section correlation between illness and income, cet. par. Consequently, the average cost of insurance per unit of cover would be lower for those in the higher income groups ex post. It is conceivable that ex ante an insurance company might load premia for those in the lower income groups if experience proved that poorer people turned out to be a significantly worse risk. In a system in which insurance was expected to finance the bulk of health-care, as in the U.S.A., this argument would carry more weight than in the case of Ireland or the U.K., where it is a complement and supplement to a national health service. The health-poverty linkage reflects the illness experience of those at the lower end of the income distribution, to whom the insurance financing of health-care is not supposed to apply. Even if it were the case that public policy envisaged the extension of insurance to the lower end of the income distribution, it would be economically more efficient to subsidise the disadvantaged groups than to prohibit experience rating. Once again, the U.K. seems to have accepted this point in that the Government announced in January, 1989, that tax incentives for health insurance for the elderly were to be introduced.

A third argument against experience rating is that it would raise insurance costs for the elderly. It should be remembered, however, that age invariant premia are a substitute for saving. Presumably, were it not for the relatively preferential tax treatment of health insurance, it would be in the interest of any insurer, even the V.H.I., to make lower average cost, age related insurance contracts available to new, younger customers if they demanded them. If tax treatment did not change, one would assume that in a competitive market the age-premium relation would not change either, unless, that is, the V.H.I. is performing inefficiently at present.
The third major policy question is whether in the event of a decision that health insurance should be community rated there can be competition in the health insurance market. The problem is that if new entrants are permitted to compete with the VHI without any restrictions they will offer lower cost insurance to better risk sections of the population. Consequently, to survive the VHI would be obliged to abandon the cross-subsidisation implicit in community rated cover. On the face of it, it seems that competition and community rating are incompatible. Certainly, that is a view put forward by the VHI.

It is not correct. It is quite easy to specify entry conditions to the market which if rigorously enforced would result in competitive supply of community rated insurance (8). It would, however, involve a direct role for Government. 'At an ideal level imagine the government seeking tenders for health cover for a randomly selected sample of, say, 10,000 households drawn from the entire population. In a manner equivalent to oil companies bidding for rights to explore for oil in areas of the Irish continental shelf, a market price reflecting the expected cost of supply of the service would rapidly emerge. In principle, the health of the entire population could be financed by insurance using this or a similar scheme. All the Government has to do is to specify first of all that the only legally enforceable health insurance contracts are those based on a community rating with the company obliged to take any applicant at a preposted price per unit of cover. A weaker version would involve restricting tax shelter status to schemes meeting community rating criteria. As regards inability to pay, the Government could either reimburse or pay directly the premia costs of lower income groups up to an agreed level of cover.

Under such a scheme the benefits of competitive insurance would be restricted to those which would flow from the companies' interest in adopting adequate and efficient monitoring procedures, and in arriving at cost effective contracts for the supply of care from hospitals and health professionals. This would certainly be an improvement on the present
position, but would not exhaust the possible benefits to be derived from a less restrictive form of competitive health insurance which I have outlined elsewhere (9).

PART 4: CONCLUSION

I have never found it easy to understand why it should be accepted that there should be one and only one form and method of financing of health care as a matter of enhancing the economic efficiency of the system. Only if one assumes that the level of expenditure on and consumption of healthcare should not be permitted to be determined by individual choice does a monolithic structure become a necessity. The problem at the moment is that the availability of care to those in need is not considered sufficient. Arguments about how to finance the existing system are really arguments about regulating access to it. Faced with the uncomfortable reality that demand for healthcare, on a secular upswing anyway, is exacerbated by the consequences of supplying it at a zero price to many consumers, and that the overall capacity of the system to deliver has been reduced by cutbacks in the state financed sector, the Government is being advised to respond by trying to redistribute access from those who can and will pay for it to those who can't or won't.

Whether one should adopt insurance rather than taxation as the only, or a major, or a supplementary method of financing healthcare is in the end of less importance than the problem of ensuring that the supply of healthcare should increase so as to enable demand to be met and to guarantee a minimum acceptable level of healthcare to those who are felt to be in need of some public support. Under present circumstances this is obviously dependent on more resources and more effective use of resources in the health sector as a whole. Any action which discourages households from spending on healthcare runs against this requirement.
Restricting insurance financed access to hip replacements will not increase, and may well reduce, the number of such operations. It will certainly, however, redistribute them. It will redistribute the misery of the waiting lists. Electorally, this may be a well worthwhile exercise in the politics of envy (although I doubt it), but it does nothing to tackle the underlying problem. That remains the Government's apparent inability to find tax revenues to finance an increased supply of healthcare while being unwilling to face up to the fact that the zero price method of allocating the short supply simply exacerbates the excess demand.

It is only in the context of a presupposition that it is socially unacceptable in principle that one individual should be able to purchase more or better care than another that the need for a unified health finance system has credibility. If, instead we start from the position that it is a social requirement either to supply a basic acceptable level of healthcare to those unable to pay, or to help them pay for it, then there is no reason why we should not have one, two or many methods of financing the health service. What is certain is that the perceived injustice of the present system arises from a fundamental failure of finance: that failure is the result of a system which simultaneously reduces expenditure on supply while increasing the level of excess demand.
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(7) S. Feigenbaum: "Competition and Performance in the Non-Profit Sector - the Case of U.S Medical Research Charities": JOURNAL OF INDUSTRIAL ECONOMICS, VOL 35 MAR 1987, pp241-253; non profit monopolies, even in medicine, remain monopolies and incur inefficiency costs.