

Priorities of Health Policy: Cost Shifting or Population Health

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Health Policy: Cost Shifting versus Population Health and Social Justice

Abstract

The theme of this paper is that recent and proposed health policy in Australia has focused upon issues of relatively minor significance while failing to adequately address problems which have a significant and adverse effect upon mortality, the quality of life and the fairness of the distribution of health services. More specifically, the paper comments upon some recent initiatives, which appear to be more concerned with the distribution of income and costs than with fairness or efficiency in the health sector. These are contrasted with five problem areas which require urgent reform but which have been largely neglected or insufficiently addressed.

Request

It is difficult to find papers comparing the importance of policy initiatives—actual and potential—across a very broad spectrum of possible interventions and strategies in the health sector. The present paper is one perspective on this broad question. It is to date based upon imperfect information and I would, therefore, be grateful for any (preferably constructive!) comment or suggestion relating to any of the topics or assertions that have been made in the paper.

1. Introduction

The theme of this paper is that recent and proposed changes to the financing and delivery of health services in Australia have focused upon issues of relatively minor significance while failing to adequately address major inequities and system deficiencies. An intriguing question—not discussed in the paper—is how such drastic failures could continue year after year with relatively little comment and no decisive policy commensurate with the magnitude of the problems. The current state of our health services could justifiably be described as a ‘silent crisis’; service delivery is highly inequitable and inefficient; patients are dying unnecessarily and avoidable medical errors are imposing huge financing and human costs on the community. While this occurs, health policy at the political level has been focussed upon cost shifting between the states and Commonwealth, between public and private sectors and between the well off and the poorer members of society. Reforms addressing the larger issue have progressed at glacial speed or they have stalled altogether.

In Section 2 there is a brief overview of the economist’s analytical framework in order to introduce two preliminary issues, viz, the role of social values in health system reform and the constraints created by the limited availability of resources. Two commonly made but wrong inferences from this later constraint are discussed. Section 3 is concerned with recent policy and, in particular, the changes to private health insurance (PHI) which have been introduced since July 1997. In contrast with the *relatively* inconsequential (and possibly negative) impact of these policies, five major problems are outlined in Section 4, each of which has received insufficient or no attention. The consequence of this policy failure has been avoidable death, disability and unfairness and probably on a very large scale.

Options for future policy are discussed and highlighted throughout the paper. In the final section I argue that the optimal health system—entirely public, largely private or one of the myriad combinations of these polar options—is the system which is most likely to address the deficiencies in the health sector and that this, in turn, may depend upon the willingness to create appropriate economic and other incentives

2. Resources, Values and the Economic Framework

The discipline of economics provides a framework for the analysis of options when resources are scarce which must, as a matter of logic, be implicitly or explicitly adopted if social welfare is to be maximised. The framework focuses attention upon the benefits which might be obtained when resources are used in a particular way, and the benefits which might have been obtained if they had been used somewhere else—the (opportunity) cost. Social wellbeing is maximised when the benefits exceed (opportunity) costs in every setting and on every margin where choice is possible.

While this statement is tautologically true the focus upon choice highlights two important facts. First, choices generally do exist; the economy is flexible and choices are driven by individual and social preferences. Technical inevitabilities are rarely encountered. Secondly, and more fundamentally, it is necessary to define 'benefits'. In principle, the abstract framework is consistent with an almost unlimited number of value systems. For example, in the context of an intensive care department with limited capacity, benefits and costs might be measured by lives saved and lives lost. In this simple example the cost benefit formula would translate into a policy of providing ICU beds to those most likely to live.

Social objectives in the health sector are clearly more complex and the nexus between objectives, policies and the optimal health system is more problematical. Nevertheless, an important conclusion which should be parenthesised by the economic framework is that there is not a single 'best' health system; rather, there are various options which are more or less consistent with different social goals.

This conclusion is illustrated in Table 1 using two highly simplified but archetypal social objectives, viz, the egalitarian desire for equal access to health or health services and the social objective of maximising individual choice. As shown, the first of these objectives is more easily achieved through a compulsory public system with defined benefits and constrained choice. The second objective is most likely to be achieved in a less constrained and competitive private system which responds to individual preferences, as described and generally prescribed by economic theory for less complex markets and social objectives.

Table 1 Choice, values, system

Objectives/Social Values	Option which maximises likelihood of success
Equalise access, outcome	Universal (monopoly) Public Insurance/Financing
Maximise choice; diversity + safety net	Pure private (competitive) scheme
Both of the above	Mixed public-private scheme

Conclusion 1: The form of the optimal health scheme depends upon social objectives and disagreement about these translates into differences with respect to the funding and delivery of health services

While the two objectives in Table 1 are archetypes they broadly correspond with two important but conflicting ‘world views’, that is, with different ethical beliefs about the appropriate supply and financing of health services. The social values underpinning the competitive market model are well articulated and well labelled. The ‘liberal’ or ‘libertarian’ value system emphasises the importance of individual responsibility and freedom of choice. It is the prevailing value system in most aspects of life and there is generally a presumption that, in the absence of some compelling argument, liberty and choice should be maximised. Those expounding liberal values generally believe that some constraint upon choice, in the form of compulsory taxation, is justifiable to finance a limited number of public goods and that at least basic medical services should be provided for the medically and financially indigent. With this ‘world view’ fairness generally equates with a vertical redistribution of income to help the most needy.

In contrast, the value system underpinning the public model is less clearly articulated (at least in Anglo Saxon countries). The financing and provision of services to the entire population is often characterised as ‘middle (and upper) class welfare’ and contrasted with the less intrusive ‘safety net welfare’ which is all that is required to help those who cannot help themselves. This interpretation of egalitarianism does not, however, correctly represent the values which underpin the public health insurance system. These are nicely described in a report of a commission of enquiry into Canadian Medicare as follows:

Canadian Medicare is far more than just an administrative mechanism for paying medical bills. It is widely regarded as an important symbol of community, a concrete representation of mutual support and concern... it expresses the fundamental equality of Canadian citizens in the face of death and disease... as the Premier of Ottawa pointed out... 'There is no social program that we have that more defines Canadianism'".

Evans R and Law M¹

The social value or world view embodied in this quotation does not correspond with the simple notion of fairness and equity for the indigent. Rather it corresponds with a desire to 'remove health and health care from the economic reward system' in the same way as all citizens are, in principle, given equal protection by the law. A close analogy is the desire to have public parks which may be accessed by all members of the community without payment. The objective is not a redistribution of income or the provision of a safety net. Rather, with this view access to public parks is one of the consequences of belonging to the community; it is a shared benefit and, as such, engenders a feeling of sharing, participation and belonging. Pay parks are possible, but a fully informed community might reject this option. Its citizens may wish to live in a community where the Arts flourish, where its sportsmen and women are a source of national pride, where parks are free for all citizens, where an acceptable standard of living is guaranteed after retirement and where all citizens have access to the same range of medical services. In European countries the term 'solidarity' is used to describe this value system. Unfortunately, in English, there is no commonly used and understood word for the concept. ('Communitarianism' is the closest translation.) The consequence of this is a degree of confusion in the expression of social values as both sides of the debate attempt to appropriate the word 'equity' to bolster their arguments. It is clearly desirable that the debate should not be derailed by linguistic ambiguities.

Conclusion 2: Health policy should be informed by a careful evaluation of the social values held by different groups of the community with respect to different elements of the health system.

While it is ultimately the responsibility of the government to decide which of these values should be embodied in policy, it is desirable for the government's decision to be informed by evidence concerning the community's values and the strength of preferences for different values systems

¹ Evans R and Law M, 'The Canadian Health Care System, Where are we and how did we get there', in Dunlop and Martens, *An International Assessment of Health Care Financing*, Economic Development Institute of the World Bank, Seminar Series, 1995.

by different groups in the community. This research has not, to date, been carried out satisfactorily in Australia.

Conclusion 3: The choice between public and private funding of health services depends upon social values and, in particular, the strength of liberal-libertarian versus solidarity-communitarian values as they apply to the health sector.

The emphasis upon choice conflicts with two commonly held technocratic beliefs about the inevitability of particular ‘problems’. First, the common perception that the country cannot, or shortly will not be able to afford health services is unambiguously false, at least in the foreseeable future. In the USA, per capita expenditures are about double the Australian level and the US Health Care Financing Agency (HCFA) has projected a doubling of these expenditures relative to GDP by 2030. This is technically possible. The relevant question is whether or not we obtain commensurate benefits from these expenditures and if, as a society, we chose these benefits in preference to the benefits foregone. If Australians could spend 25 percent of GDP upon health services this option would probably be embraced enthusiastically if it resulted in an illness free life expectancy of 120. Optimal expenditures are entirely a function of the benefits we obtain and are not driven by technological imperatives.

Conclusion 4: There is no immediate limit to the optimal level of health expenditures. It is technically possible to increase present expenditures very significantly. The optimal level depends upon the costs and benefits of the various health services. Increased health expenditures should be embraced if they improve health and health related objectives sufficiently.

A similar argument applies to the second non-problem—the impossibility of funding health services through public taxation. Arguments of the form ‘the Government can’t afford to pay’ are also unambiguously false. The government share of the health bill is smaller in Australia than in most developed countries. Likewise taxation is relatively low. This implies that Australia could significantly raise its level of public funding without exceeding the tax burden which is presently experienced in most comparable countries. More fundamentally, however, the form of financing health services is flexible and is a matter of social choice. It is likely that this will be influenced by the relative costs and benefits arising from the choice, but in the health sector the known costs and benefits associated with public and private health care are not compelling. Privately funded

health care is often a little more expensive, but countries with a strong preference for liberal-libertarian values might sensibly opt for a relatively larger private scheme even if it is more expensive. The principle of paying more for what is wanted is not controversial!

3. Recent Policy Issues

Public debate has recently focused upon three issues, namely the high and rising cost of pharmaceuticals, the support for bulk billing of GP services by pensioners and health care card holders and the measures adopted to support private health insurance. The comments below do not purport to be an exhaustive analysis of these subjects but are included to contrast the subject matter of the policy debate with the more substantive problems which will be discussed in the following section. Pharmaceuticals and PHI are discussed more fully in Richardson and Segal (2003).

Pharmaceuticals

Pharmaceuticals are included in the Pharmaceutical Benefits Scheme (PBS) after a detailed review of their effectiveness and cost effectiveness. This process does not, by itself, reduce expenditures. Rather, it ensures that drugs whose effectiveness is low in relation to their cost will not be adopted. Cost effective drugs may be exceedingly expensive and they may also be overused if doctors prescribe them for purposes or at thresholds not tested before their introduction. Partly for this reason the PBAC has sometimes negotiated a price-volume trade-off—if the demand for drugs exceeds the initial expectation then the price will be lowered. However the principle method for controlling expenditures has been the use of copayments which have progressively risen through time. Evidence suggests that these will reduce demand but there are two important caveats. First, the policy will impact disproportionately upon lower income, non health care card holders. There is little evidence that this group will discriminate between effective and less effective drugs and at least one study suggests that, perversely, the greatest impact will be upon life saving drugs which have a relatively small immediate effect upon symptoms (Richardson 1991; Reeder and Nelson 1985). For wealthier patients, the pharmaceutical copayment will not reduce demand significantly as patients will pay the copayment. Overall the policy will have relatively little affect upon national costs or benefits. Rather, it will shift costs back from the taxpayer to the patient; that is, the major effect is likely to be upon the distribution of income with the healthy-wealthy gaining at the expense of the less healthy-less wealthy.

Bulk Billing

Similar comments to these apply to the proposed policies with respect to bulk billing. As announce, the rebate for services bulk billed to pensioners and health care card holders may be separated from other benefit payments. Doctors providing these services will be permitted, for the first time, to directly bill the Health Insurance Commission for other (non bulk billed) patients and to charge an 'over-the-counter' copayment. Benefits—rebates—for these latter services need not be indexed. The likely effect is that governments will preserve 'equity' by the appropriate indexation of the rebate for pensioners and health care card holders but will achieve a reduction in costs for the government by the non-indexation of general services; that is, there will again be cost shifting from the public to the private sectors. To facilitate this it is proposed that private health insurance should be permitted to reimburse medical costs, initially if they exceed \$1,000. (Average out of pocket expenditures in 2001/02 were a little in excess of \$600.) In subsequent years, this threshold could be lowered or removed in response to the predictable demand for insurance of the out-of-pocket expenses which the policy will have created. The policy 'reform' might also be recommended to achieve deregulation and competition (irrespective of the highly equivocal evidence of the benefits of these policies in the health sector). As with pharmaceuticals, the proposals are about the distribution of costs and not about an improvement in the delivery of health services.

In other countries there has been experimentation with an alternative policy, viz, the creation of single 'budget holders' who receive additional payment to cover the cost of pharmaceuticals prescribed by doctors. When doctors are the fundholders, or when they are a part of the fundholding group, they are forced to compare the cost to the fund holder with the benefit to the patient. Overseas evidence suggests that this approach may achieve a non-discriminatory reduction in the cost of pharmaceuticals. Importantly, and unlike the effect of a copayment, the effect of not prescribing a drug in such a scheme will be assessed by a qualified practitioner and this judgement, in turn, may be reviewed as part of an overall audit of the practitioner's decision making by peer practitioners.

Conclusion 5: Proposed and actual policies towards pharmaceutical expenditures and bulk billing have had a common element. Both represent cost shifting from the government to the public and the only reduction in societal expenditure will have potentially harmful effects. The changes do not follow the principle that the decision to reduce service use should be made by, or in conjunction with, a medically qualified person capable of evaluating the consequences of the decision.

Private Health Insurance (PHI)

In the last one and a half decades there has been a concern that declining private health insurance will have an adverse effect upon the public hospital system. The argument has been as follows:

'PHI is primarily purchased to cover the costs of private hospitalisation. Consequently, as PHI declined through time, fewer patients have been able to afford the cost of private hospitals, and this has created an excess demand for public hospital beds. The increasing length of queues is a confirmation of this problem'.

The argument is plausible, logically consistent and wrong. Between 1985/86 and 1999/2000 private hospital separations rose from 25.9 to 34.3 percent of the total—private hospitals increased their share of admissions by 32.4 percent! There was a similar expansion in the share of bed days in private hospitals throughout the 1990s. These simple and readily available statistics contradict the conventional wisdom propagated by the media and some politicians. It is true that queues in public hospitals have increased but this is entirely attributable to the increasingly draconian budget caps upon public hospitals throughout the 1990s. That is, queuing in the public sector has been primarily a result of supply side and not demand side factors. The simplicity of the statistics contradicting the conventional wisdom calls into question the analytical capacity of media commentators.

Conclusion 6: Media analysis of the relationship between PHI and queuing in the public system highlights an important system failure; viz, the failure of the media to exercise rudimentary critical skills in their analysis of PHI and hospital queuing.

In response to the 'problem' of falling PHI and the demand side problem for public hospitals (which did not exist!), the government introduced three enduring policy changes. In July 1997 individuals with an income above \$50,000 and families with a combined income above \$100,000 who did not purchase PHI became liable for a 1 percent tax surcharge upon their incomes. In December 1998 a 30 percent rebate on PHI premiums was introduced and in September 1999 lifetime community rating was enacted which has the effect of reducing future premiums for those who have held PHI from the age of 30. Beyond this age future premiums will rise with the age at which PHI is purchased.

The evidence demonstrates that these policies, and particularly the last policy, have succeeded in increasing PHI membership. However it has created an industry which, along with the platypus and echidna could be Australia's entrants into the world's strange but true contest. Australia would almost certainly win! First, the surcharge results in a negative price. Individuals and families above the income threshold avoid an increasingly large tax payment as their income rises; that is, if they purchase PHI they will have a greater income at the end of the year than the individuals and families above the threshold who do not buy PHI. This is analogous to supporting the automobile industry by placing a surcharge on wealthy families who fail to buy an Australian car. It would be difficult to find any other support scheme which uses the income tax system to coerce the purchase of a particular product. It would be equally difficult to find a produce where the price is negative.

Secondly, (and predating the recent legislation) the use of PHI to cover hospital bills generally results in a greater, not smaller, out of pocket expense. Public hospitalisation is free. Those with PHI must pay a copayment. (In a perverse way there is a type of equity in these two anomalous outcomes. The wealthy are paid to take PHI but financially penalised if they use it!)

Third, lifetime community rating has a perverse dimension. Insurance is generally purchased to reduce risk and uncertainty. In the health sector these arise because of the risk and uncertainty of ill health and the cost of medical care. Prior to lifetime community rating this uncertainty depended upon possible events in the following 1-3 years. After the change it depended upon the next 1-30 years. Events in 30 years are more uncertain than events in 3 years and, consequently, the legislation increased risk and uncertainty. Predictably, people responded to the uncertainty by buying insurance. Thus, to encourage the uptake of insurance the government increased the very thing insurance is designed to reduce, viz, risk and uncertainty.

Taken together, the changes introduced since July 1997 have created an extraordinarily complex and perverse set of incentives. The ethical basis of the free market and the liberal-libertarian model is that choices should be determined by individual's preferences in relation to real

(opportunity) costs. The surcharge subverts this process and coerces choice and the strength of the coercion is based upon economic class. There is no justification for this in the economic theory of the efficient market.

Despite this conclusion, it is a legitimate function of government to determine the balance between public and private delivery and the distribution of health care costs. As described earlier the preference for private sector funding and provision (*albeit* in the context of compulsory core insurance) is consistent with a legitimate and defensible world view, viz, the liberal-libertarian belief that in a free society individuals should be encouraged to take responsibility for their own lives. In particular, the 30 percent subsidy is the orthodox approach to encouraging an industry which has a special claim for protection and, private health insurance does not compete on a 'level playing field': it competes with a public sector which is free at the point of service. There are, however, two important caveats. First, and as noted above, the measures taken have destroyed any nexus between potential benefits and the price paid by wealthy individuals. Secondly, the 'product' is unlike usual insurance where the benefit—a payment after an adverse event—does not impinge upon other individuals. PHI is purchased to avoid queues and to select the best possible doctor. With fixed capacity, avoiding queues imposes a longer queue on others. Selection of the best doctor reduces the access to such doctors by public patients. Consequently, the important debate should be about the 'right' to purchase preferential care *at the expense of those who do not have PHI*. In a liberal democracy there is a presumption that individuals may spend their own income as they wish. For the individual there is probably no more important context for exercising this 'right' than in the context of preserving life and its quality. There is, therefore, a head-on-head conflict between the liberal-libertarian 'right' of the individual to spend his or her income on health care and the communitarian-solidarity based 'right' of each individual in a community to have equal access to high quality medical care. The latter goal must necessarily be achieved by imposing some constraint upon income based preferential care to a particular group in the community. In Australia this 'penalty' has taken the form of requiring full taxation and payment of the Medicare levy by those who are likely to use Medicare services less because they have purchased private health insurance and, consequently, are more likely to use private services.

Conclusion 7: The public debate over Private Health Insurance is commonly misleading. The contentious issues do not only concern the most effective way of ensuring access to health care (with the erroneous presumption that public monies not spent on health services represents wasted resources). Rather, the contentious issues include the right of the individual to spend their own income on whatever they wish without coercive financial penalties.

Distributional Effects

PHI policy is consistent with the other policies discussed here in one important respect. The policies are likely to have a limited effect upon the delivery of health services. Rather, they are about the financing of health care and the public-private balance in the health system. The balance, in turn, affects the distribution of health care costs between different households. Copayments have distributional effects for two reasons. First, they shift costs from the government to individuals who use health services. As government payments are met by progressive taxation, copayments redistribute the cost of health care from wealthy-healthy taxpayers to unhealthy, less wealthy citizens. Secondly, as copayments have a disproportionate effect upon the use of services by low income households, the proportion of the government subsidy returned to high income households rises.

The redistributive effects of PHI are more complex. Low income households which purchase PHI unambiguously pay more for hospital and health services. Their taxes and the Medicare surcharge are unchanged and the purchase of PHI leaves them out of pocket. For wealthier households, which are liable for the PHI surcharge, the effects are conceptually ambiguous as they depend upon the assumption made about the surcharge in a counterfactual world in which PHI did not result in a surcharge exemption. The surcharge was created specifically to permit an exemption for those who purchased PHI and the removal of the exemption might therefore be accompanied by the removal of the surcharge.

Finally, as noted earlier, the proposed changes to bulk billing represent a structural change which will facilitate the transfer of medical insurance costs from the public to the private sector.

Conclusion 8: Recent and foreshadowed legislative policy initiatives with respect to bulk billing, copayments and PHI, all concern the financing of health services. A common feature is that each of the proposed or implemented policies assists with the transfer of expenditure from the public to the private sector. In the long term this will imply a reduction in the cross subsidy from healthy high income to unhealthy low income households. This effect occurs immediately with copayments. The transfers are more complex in the case of PHI.

4. Five major problem areas

Each of the five sets of issues below has two common elements. First, they are directly concerned with health services and not the distribution of costs and incomes. Secondly, they have received insufficient attention and represent opportunities for the significant improvement of the health sector.

Efficacy and cost effectiveness

In common with all other health systems the majority of the services provided in Australia have not been evaluated and there is no ongoing process for the elimination of cost ineffective services. In 1987 Chassin et al estimated that between one third and one half of services in his study were 'inappropriate' in the sense that they had no beneficial, or a detrimental affect upon health. An additional one third to one half of the procedures considered had equivocal benefits. Likewise, Brook (1993) estimated that 51 percent of angiography and 42 percent of coronary artery bypass graft procedures were unnecessary. Other studies by the US Health Care Financing Agency and the OECD have likewise concluded that only a small number of services have been evaluated for efficacy. An even smaller number have been evaluated for cost effectiveness. There has been relatively little research into these issues in Australia. However, Segal (2000) demonstrated that in the context of diabetes the cost of obtaining a life year varied from \$70,000 (drug therapy) to \$2,400 for behavioural programs. Comprehensive diabetes care was estimated to have a negative cost per life year, ie the program saved life and saved cost.

With respect to this issue the Australian record is comparatively good. It has led the world with the introduction of mandatory economic evaluations for the drugs and services to be subsidised

through the PBS and the Medical Benefits Scheme respectively. However the failure of other countries does not indicate that Australian procedures are satisfactory. The overwhelming majority of the services which were accepted before the introduction of mandatory economic evaluations have not been assessed and, with the passage of time, there is a need for the reassessment of services and drugs. Drugs are commonly used in a way which differ from the usage tested and at threshold levels in clinical trials. Actual usage patterns requires evaluation and, potentially, regulation. The scale of present evaluation activities is inadequate. In an industry absorbing 9 percent of the GDP—the country's largest industry—there should be ongoing and large scale evaluation and re-evaluation of the cost effectiveness of the services provided. A failure to do this almost certainly ensures that there will be widespread and significant inefficiency in the level and mix of services.

Conclusion 9: There should be a significant increase in the scale of evaluation studies to permit, not simply the assessment of the costs and benefits of new drugs and procedures but sufficient to permit the evaluation and re-evaluation of services already funded under Medicare.

Practice Variations

In 1982 John Deeble and I used data from the first full year of compulsory health insurance, (Medibank), to determine the level of service use in each of Australia's statistical divisions. An example of the results is shown in Table 2

Table 2 Practice Variations 1976

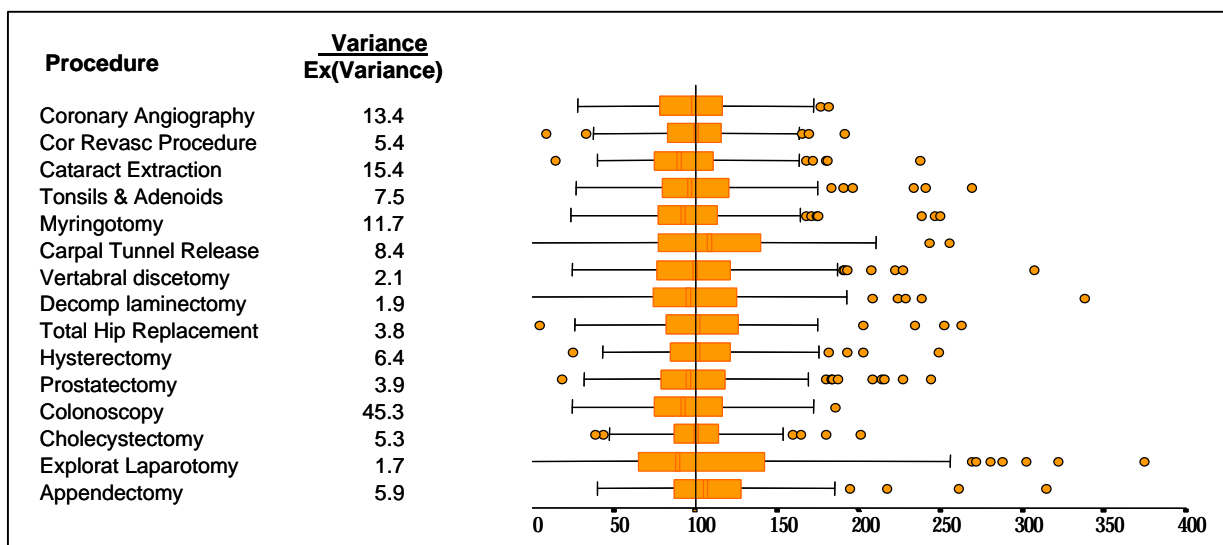
Consultations per capita			
Statistical Division	GP/(GP)	Q(Spec)	Total
Sydney	5.1	2.3	7.4
Tasmania	3.1	1.3	4.4
Darwin	1.1	0.5	1.6
Sydney/Darwin	4.6	4.6	4.6

Source: Richardson and Deeble (1982)

Huge variations in service use were detected even between the relatively large geographical units used in the study. Within these units small area variation would have further increased the discrepancies. These differences do not appear to have diminished with time. Thus, for example, Richardson and Robertson found startling variation in the use of well defined hospital procedures

even after standardisation for age, sex and population. In this study data were collected for a 2 year period for each of Victoria's statistical sub-divisions. Procedural rates were expressed as a percentage of the rates which would be expected from the State average service use per age-sex cohort and from the demographic characteristic of the Statistical sub-division (SSD). Results are summarised in Figure 2. The bar, lines and circles give an indication of the frequency distribution of the procedure utilisation rates (ie the 25 and 75th percentiles (bars), two standard deviations (lines) and outlying SSDs). The results reveal an 8 to 10 fold variation in service use. Part of this is attributable to the random variation that would be expected because of the uncertainty of the episodes of ill health. Using state-wide data the ratio of actual to expected variance was calculated. This is reported in the column of numbers to the left of the bar diagram. For the first procedure, coronary angiography, the observed variance was 13.4 times greater than expected, ie actual variance was 1,340 percent of the expectation. This extraordinary result is reproduced for all of the procedures examined.

Figure 1 Standardised Rate Ratios for Various Operations in the Statistical Local Areas in Victoria, Compared to the Rate Ratios for All Victoria



Source: Richardson (1998)

A second example of uneven service delivery was also published by the same authors. This related to the likelihood of obtaining a high tech procedure—angiography of revascularisation—after a heart attack. Results shown in Table 3 indicate that in the 14 days following the heart attack, men and women admitted to a private hospital were 2.2 and 2.27 times more likely to receive angiography than their counterparts at a public hospital. They were 3.43 and 3.86 times more likely, respectively, to undergo revascularisation (coronary artery bypass surgery angioplasty, stent). These discrepancies did not diminish significantly in the following 12 months. The same study identified statistically significant differences in the likelihood of a procedure between men and women, young and old, urban and rural populations.

Table 3 (Likelihood of procedure after admission to a private hospital) , (Likelihood as a public patient)

	Angiography	Revascularisation
Within 14 days		
Men	2.20	3.43
Women	2.27	3.86
Within 12 months		
Men	2.16	2.89
Women	2.22	2.84

Source: Robertson and Richardson 1999.

Taken together these studies suggest that there is a highly erratic pattern of service delivery across Australia and between social groups. One of three conclusions is inevitable. Some groups are under-serviced; some groups are over-serviced or both of these problems occur to different sub-groups of the population. This indicates both allocative inefficiency (more health could be obtained with a redistribution of existing resources) and significant inequity to those with poor access to health services or a different form of inequity to those persuaded to undergo procedures where risks exceed likely medical benefits. Government has shown almost no interest in this type of result. There has been recognition of an 'urban-rural' discrepancy but, 20 years after the demonstration of a more complex pattern than a simple urban-rural dichotomy remarkably little has been achieved.

Conclusion 10: Significant variation in the use of services has been allowed to continue more than two decades after it was identified. Service patterns indicate a serious misallocation of resources. Despite this there has been very little health services research targeting this issue and documenting the extent and consequences of the problem.

Conclusion 11: Variation in service use is inequitable for two reasons. First, some populations receive less beneficial care than others. Second, these under serviced populations cross subsidise others' greater use of services.

Conclusion 12: Outside NSW there appears to have been little interest in the extent of the inefficiency and inequity in the allocation of health resources. Adequate information cannot be obtained without a very significant increase in the funding of health services research.

Access to health services clearly affects the quality of life and, very commonly the likelihood of life itself. Australia has a wealth of administrative databases which could be employed to determine the outcome of different treatment regimes. This has not occurred for two reasons. First there is insufficient funding of health services research by at least an order of magnitude. Second, concern over the privacy of records has been elevated to such a level that easy and routine data linkage to determine who lives and who dies does not seem to be a possibility. It is extremely doubtful that this concern in the bureaucracy would reflect the preferences of a well informed population. Patients almost certainly die and suffer serious disability because of the interpretation and implementation of our confidentiality laws.

Conclusion 13: Data linkage, while regulated by law, should be used routinely to determine the affect upon mortality and the quality of life of different levels and patterns of medical and hospital servicing. Concerns over privacy should not be so elevated that patients die because researchers have been denied access to linked datasets. Such records should also be used to alert patients when certain trigger events are recorded in their databanks, when alternative treatment pathways are available and to inform them how services may be accessed.

The public would almost certainly decry current practice if they were aware of the likely consequences.

Lack of coordination

The health system at present consists of a series of financially independent programs—('silos'), which are poorly linked to other health services or programs. There appears to be universal agreement that a sensible health scheme cannot be built upon the current Federal-State division of financing, responsibilities and powers. The fact that there appears to be little hope of a resolution of this most elementary problem represents a fundamental failure of government in Australia.

Two case studies are used below to illustrate what gold standard allocative efficiency would imply for the use and coordination of services. They indicate the distance that health services reform must travel in Australia before we have gold standard delivery.

The first case study is real. A Seattle based 'pure' Managed Care company,² Ethix, was asked to establish a health scheme for a small town close to Seattle. Routine surveillance of the medical claims over the first two years of the new scheme highlighted an anomaly. There were excessively large numbers of youths receiving surgery for spinal injuries. Further investigation found that the problem was attributable to a toboggan run on the outskirts of the town which had a tree stump half way down the slope. Youths were crashing into the stump and damaging their spine. The health scheme paid for a bulldozer to remove the stump.

Medicare does not pay for bulldozer services. However in the circumstances described here it should do so. More generally, the vignette illustrates two of the characteristics of gold standard delivery, namely, routine data surveillance to locate problems with any aspect of social or medical behaviour which might be modified to improve health and, secondly, the flexibility of funding which is needed to adopt the most cost effective solution to the identified problems. In contrast, in the Australian health scheme a problem of this sort would not be detected by the health system—there would be neither the will nor the means to do so. If such a problem was eventually identified the response would be accusation, blame shifting and, possibly, litigation.

Conclusion 14: The key challenge is to establish a single payer with flexibility and incentives to purchase the most cost effective services. Services should not be determined by historical boundaries and budgets.

² Companies such as Ethix do not deliver or purchase health care. Rather they specialise in the creation of systems in which a purchaser may request a health scheme with particular characteristics and a company such as Ethix will translate this into one or more options.

The Ethix case study illustrates the effects of financial flexibility. The second case study is a hypothetical scenario constructed by Stephen Duckett to illustrate gold standard coordination and processes.

‘A woman with dizziness is concerned about her health. She rings the *state call centre* which advises her to visit her *local health team*. She is able to see the GP quickly who asks her a series of questions from the *relevant research based protocol* and undertakes a clinical examination. The GP emails the results to a local specialist... who orders some further investigations consistent with the *state research based care path*... Advice of (an) impending admission is automatically *conveyed electronically to the GP and the social worker in the referring health team*. The social worker contacts the hospital to *discuss discharge planning*... The specialist... suggest a number of *sources for information about the patient’s condition*. The *patient contacts the call centre for further information*... The case is *randomly selected by the hospital audit committee* for quality review. The committee suggests some slight *changes to the state-wide protocol committee*.’

(Duckett 2000 p204)

Parts of this scenario correspond with some practice in Australia. But the events in italics would be unusual. It appears to be serendipitous whether a particular problem of a particular person and a particular part of Australia results in a response which even partially mirrors the gold standard response in this scenario.

The key elements of this scenario relate to information access and transferral. It illustrates the role of evidence based medicine, routine service review, the adaptation of protocols, universal electronic transfer of all information and the absence of financial barriers.

Conclusion 15: Significant effort needs to be directed to the coordination of services. To facilitate this there should be universal use of electronic data systems for patient notes and information transfer. Evidence based protocols and clinical paths should be adopted when available and relevant. Feedback and error learning must be a routine part of the system.

Quality of Care

Results from the ‘Quality in Australian Health Care Study’ (QAHCS) suggest that the quality of health care in Australia is a problem which overshadows all others. In the initial study, reported in 1995 (Wilson et al 1995) medical records for more than 40,000 admissions to 28 hospitals in NSW and SA were individually examined to determine whether or not an adverse event (AE) was

associated with the admission (prior to or during the episode of hospitalisation). A judgement was made concerning the consequences of the AE and whether or not it might have been avoided. By extrapolating results the authors estimated that about 470,000 admissions were associated annually with an AE and that these would have resulted in 18,000 deaths and 50,000 cases of permanent disability. In a subsequent report Wilson et al (1999) estimated that in 50 percent of the AEs in the QAHCS had a high preventability score. Sixty percent of deaths could have been avoided. In this latter study, incidence and not prevalence scores were reported as part of the effort to standardise the methodology with the earlier Harvard Medical Practice Study (HMPS) reported by Bronnen et al (1991). This reduced the annual rate of AEs to 10.6 percent of admissions. Some of the sentinel events following the publication of the QAHCS are reported in Box 1. Box 2 reproduces a number of its key recommendations.

Box 1 Response to QAHCS

1995	QAHCS published
1996	Taskforce established on QAHC
1998	Health ministers ask Advisory Group for report
1998	Interim Report
1999	Report of the National Expert Group 'Actions identified by the taskforce... need to be implemented at all levels of the health system ...'

Box 2 Recommendations of the Interim Committee 1998

Recommendations

1. Health Ministers continue to foster safety and quality
2. Health Ministers support the need for national action
3. Establish the Australian Council for Safety and Quality in Health Care
4. Provide \$17.4 m over 4 years (sic) to support implementation

By 1998 an interim report had been delivered to the Health Ministers. The 1999 report—4 years after the publication of the QAHCS recommended that 'actions identified by the taskforce... need to be implemented at all levels of the health system'. By 2001 NSW had passed legislation which, *inter alia*, created the Institute of Clinical Excellence. By 2002 the Victorian Quality Council Plan had been established. In 2003 the updated version of this plan set as its goals, *inter alia*, the establishment of a framework, the involvement of consumers and education. By 2003 NSW was training hospital managers in quality assurance methods, carrying out surveillance of atypical

procedure rates of delivery. It had linked area health managers bonus payments to the conduct of quality assurance programs.

Despite these activities in 1999 an editorial in the Medical Journal of Australia commented that:

‘Welcome though (various initiatives) are, the pace of change nevertheless seems slow given the stark message of the original study four years ago... 50,000 Australians suffer permanent disability and 18,000 die at least in part because of their health care.’

(MJA 1999, 170, pp404-405).

The MJA editorial is an understatement of the inadequacy of the response. If the results from the QAHCS are not discounted then medical errors have been responsible for the death of more Australians per annum than the average annual death rate of Australian soldiers in World War 1 (15,800). Permanent disabilities per annum approximate the annual rate of casualties in The Great War (62,500)

In Table 4 below the death rate from AEs is compared with mortality rates from other causes which are of particular social concern. To be conservative and to take account of undetected bias, the AE rate reported in a 1995 study is reduced by 50 percent. Preventable deaths are assumed to be 50, not 60, percent of deaths associated with an AE. The table indicates that the resulting, conservative number of deaths from AEs in 1999 were about 40 percent higher than the number of deaths from AIDS, suicide, motor vehicle accident, accidental falls, homicide, drowning and poisoning combined.

Table 4 Perspective: Causes of death, 1999

Cause	No of deaths
AIDS	122
Suicide (intentional self harm)	2,492
Motor vehicle accidents	1,741
Accidental falls	520
Homicide	300
Accidental drowning/submersion	278
Poisoning by drugs/medications	1,015
Subtotal	6,468
All deaths from adverse events ⁽¹⁾	9,000
All preventable adverse events⁽²⁾	4,500

⁽¹⁾ 50 percent of reported estimate

⁽²⁾ assuming 50 not 60 percent are preventable

In Table 5 some equivalent events are listed. The unnecessary death rate is about the same as would occur if the Bali bombing occurred every week of the year, year after year. By 1998 when

the health Ministers asked the Quality of Care Advisory Group for a report at least 13,500 Australian would have died and 37,500 permanently disabled. By the time the 1999 report was recommending the implementation of various policies at least 18,000 would have died. By the time of the NSW legislation the cumulative national death rate would have reached 27,000. The Victorian Strategic Plan to develop a framework was published after the death of at least 31,500.

Table 5 Events equivalent to avoidable AE deaths*

Cause
1 in 10 customers in restaurants poisoned each year: annual deaths 4,500
13 Jumbo jets crash each year, each with 350 Australian passengers killed
45 Bali bombing type attacks, each with 100 Australians killed each year
'September 11' every 8 months : only Australians die

*assuming preventable deaths = 25% QAHCS (1995)

Considering the shock and outcry associated with the Bali bombing it might have been expected that the publication of the QAHCS would have caused a seismic shock throughout Australia with both Parliament and the public crying out for immediate reform. Journalists would have been expected to dramatise the implications of the study and, at the policy level, the expected response of government might have been to immediately pass legislation to ensure that any action which could reduce the death disability from AEs would be immediately taken. It might have been expected that almost unlimited funds would have been dedicated to the problem. In stark contrast, and at all levels, the response appears to have been sedate, cautious and incremental. There appears to have been greater concern that our health system might be perceived as providing imperfect care and endangering patients than with the fact that this was true. Three years after the publication of QAHCS the interim committee was calling for the establishment of a council, calling upon the health ministers to *provide \$17.4 m*—less than \$1 per person—to help *foster safety*, to *endorse the need for action*. This response was inadequate by orders of magnitude. It is as if no one truly believed the results from the QAHCS But no subsequent study has been funded to validate or refute the results.

The inadequate response is all the more puzzling because the evidence suggests that a reduction in AEs would be spectacularly cost effective. The interim report from the national expert group estimated the potential savings from preventable adverse events in 1995/96 would be \$4.17 billion. Consequently, expenditures of this amount could be justified if they eliminated the unnecessary AEs.

Prima facie, there are a large number of highly effective activities which could be mandated and implemented in less time than it takes the typical committee to produce an interim report. Some suggestions are as follows.

Minimum Staffing Requirements: There is no regulation of minimum staffing requirements for hospitals commensurate with the risk and complexity of the procedures carried out in the hospital. For example, there is no requirement for the presence of a doctor in the hospital after significant surgery. (How many Australians know this?) This extraordinary situation could be overcome in the 1-2 weeks which it requires to reschedule medical staff.

Accreditation: Many health professionals believe that a significant number of small hospitals are dangerous. This has been believed for decades. But no decisive action has been taken. How many hospitals have been closed because of sub-standard safety? With full knowledge of the QAHCS results, hospital accreditation remains voluntary. There will clearly be self-selection. Low quality, dangerous hospitals will opt not to seek accreditation and poorly qualified doctors will seek out these hospitals. Accreditation should be compulsory. Multiple accreditation teams could have the power to randomly inspect hospitals and the power to immediately close down hospitals judged to be dangerous, as occurs with restaurants found to have sub-standard hygiene.

Information Transfer: Patient notes are carried around hospitals on 19th Century clipboards. It is known that this causes significant error. The use of electronic records would significantly reduce errors. They may also be used to obtain feedback or warning when inappropriate procedures are contemplated, for example, by the administration of dangerous combinations of drugs or by the omission of a drug from the therapy regime or carelessness on a particular day. The full computerisation of such a system should be easily achievable within 1 to 2 years. Likewise X-ray films are misplaced or lost in hospitals. Deaths result from decision making on the basis of insufficient evidence. Legislation could ensure the use of digital technology to ensure immediate access of results. Once again this might take 1 to 2 years.

Hospital Systems: Hospital systems in Australia often appear to be ramshackle or antique. There are no required pathways or mandatory discharge criteria or financial incentives for the optimal treatment of patients. These changes could, once again, be effected within 1 to 2 years.

Queuing: The airline industry operates a highly efficient computerised system of booking and queuing which may be accessed by travel agents throughout the world. By this standard most hospital queuing systems—if they exist—are rudimentary. It is possible and desirable for the public hospital system to be connected to advise patients or their doctors of available times for treatment nation-wide, in the case of serious conditions, and region or hospital specific availability

in the case of less serious procedures. Queuing and scheduling should be operated using publicly known criteria. Cancellation of an available time should result in an upgrading of a patient's priority plus an automatic explanation of the reason for the cancellation.

Conclusion 16: Queuing should be regulated by a nation-wide prioritising system based upon explicit criteria. This would increase efficiency and, for the patient, increase choice and certainty.

The private system would have greater difficulty in operating such a system because of the patient's attachment to a particular doctor. Private health insurance organisations could, however, offer a similar service to patients who are willing to accept treatment from contracted providers.

Doctor Accreditation: Private practice patterns are already subject to scrutiny in Australia. But the chief purpose is to detect medical fraud. Legislation could require the examination of practices to detect those which deviate significantly from evidence based guidelines constructed by the relevant Royal Colleges. When there is a known relationship between the number of procedures carried out by a doctor and outcomes there could be critical annual rates which trigger the provision of information to the doctor, the mandatory review of the doctor's practice and the dis-accreditation of the doctor for the conduct of these procedures. The appropriate systems could be established in 1 to 2 years.

Information and Error Learning: It is not compulsory for hospitals or doctors to include system feedback in order to facilitate error learning after an AE or system failure. That is, the most important means for improving quality and reducing patient risk is not compulsory and is presumably ignored in large numbers of hospitals. Legislation could ensure the universality of this critical system reform. Adverse events could be linked to doctors and appropriate threshold levels could be installed which sequentially trigger, information feedback to the doctor concerned, review by an appropriate body and finally dis-accreditation of the doctor. Evidence suggests that the first of these steps will commonly be sufficient to effect satisfactory change.

Protection from Litigation: Adverse events are unlikely to be reported if there is a massive financial incentive to hide the AE. For this reason there should be legislative protection of doctors from the financial outcome of litigation arising from adverse events. The review and consequences for the doctor should be based upon medical criteria and uncoupled from the social mechanism for compensating patients.

System Audit: All of the above measures and, to date, the majority of those contemplated represent process measures of success. However their objective is to reduce adverse errors and for this reason, record analysis of the form conducted by the QAHCS should be an ongoing feature of the system. The QAHCS research was relatively expensive, but these costs are infinitesimal in relation to the importance of the surveillance, the costs and deaths averted and the likely increase in patient health.

Public Information: There is no legitimate reason for information relating to hospitals and individual doctors to be withheld from the public. 'Choice' in the absence of information is a charade. In parts of the USA, and most notably New York, severity adjusted mortality rates are available for every hospital and for every doctor. This has not resulted in a significant change in the pattern for public demand but it has galvanised doctors and hospital staff to review and upgrade their procedures.

Conclusion 17: Information should be publicly available with respect to the safety record of hospitals and medical staff.

Conclusion 18: As a matter of highest priority, legislation should be passed requiring extensive system reform to reduce the incidence of adverse events. The required changes should be fully funded (or they will not occur) and should include the use of state of the art IT, minimum staffing requirements and system feedback on both individual hospital and individual doctor performance. Doctors should be given comprehensive protection against the results of successful litigation. The review of doctor performance should be uncoupled from compensation to the patient.

Financial incentives are one of the most effective, non-coercive ways of achieving required outcomes. There has been very limited use of this powerful instrument and the financing of medical services has generally been perceived as a reward for providers doing what they chose to do rather than an opportunity for influencing what is done. This is an important missed opportunity.

Conclusion 19: The payment of service providers should incorporate the principle that society will pay for what it wants rather than for what it is given.

Thus, for example, if society wishes to encourage bulk billing (which clearly benefits patients but lessens provider control over their incomes) then the rebate (benefit) for services that are bulk billed should be increased relative to the rebate for other services and the differential increased, until the target level of bulk billing is achieved. Likewise, if society wishes providers to adopt evidence based medicine, hospitals to install clinical pathways, some procedures to be encouraged and others discouraged, then payment for the desired service or process should be increased relative to the reward when these services or activities do not occur. Guidelines for the implementation of such measures should be designed and approved by the Royal Colleges.

It may be objected that differential payment represents financial coercion and the denial of a doctor's right to 'clinical freedom'. However the patient's 'right' to (generally accepted) best practice and safe medical care should trump the doctor's license for (possibly arbitrary) medical practice.

5. Conclusions

The conclusion from this paper is that the chief focus of policy reform has been the financing of health care and the respective responsibilities of the two levels of government and the private sector. Changes associated with private health insurance and copayments have little significance for the quality of medical care. They are, however, of pivotal importance for the medical professions' control over their own incomes. The blame and cost shifting between levels of government not only fragments the system but it distracts attention from the need for the very significant reforms which would undoubtedly have an impact upon mortality and the quality of life. There is no shortage of problems calling for solutions. To the contrary, throughout the health system there is a need for significant reform to the organisation and delivery of health services.

Only some of the needed reforms have been referred to in this paper. There is also a major agenda for determining the substitution possibilities between allied health professionals, nurses, doctors, health clinics and hospitals. (Why does Australia, a relatively young country, use hospitals more intensively than much older countries while, at the same time, believing there is a crisis in the access to hospital services?) There is a large agenda relating to the cost effectiveness of different services and procedures. Access and service use by different groups has received little attention. There is a huge untapped potential for using administrative data as the basis for research into the consequences of service use.

None of these issues are likely to be resolved while government remains disinterested in them and, using the criterion of revealed preferences, government has had very little interest. In the

USA six Federal agencies alone spent \$US 1,658 million in 2002. Benchmarking against this, at current exchange rates (0.65) and scaling these expenditures down in relation to the size of the US and American economies Australia would be spending about \$AUS 130 million on HSR. Australia does not currently spend a fraction of a fraction of this amount. As a major initiative the NHMRC is to provide \$10 million pa for HSR—or about 7.7 percent of the US benchmark³. Without sensible research and, therefore, research funding it is unlikely that system reform will fully exploit the various opportunities for improving the system.

There are various options for the macro reform of the health system and the corresponding reform of financial incentives, and the roles and responsibilities of the various players. In particular, Dick Scotton has cogently argued for the adoption of Managed Competition. A partial movement in this direction could be achieved by transferring responsibility for the purchase of health services to the various health regions (see Segal et al (2002)). There has been no attempt to review this large topic here. Rather, the paper has reviewed the ‘micro’ elements of such reform. The most appropriate ‘macro’ model for the health system is the model which maximises the likelihood of implementing satisfactory solutions to the numerous problems facing the system including those that have been discussed above.

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The agencies and their expenditures are as follows: Agency for Health Care Research and Quality \$US 300 million; National Centers for Health Statistics \$US 127 million; Extra Mural Prevention Research CDC \$US 18 million; Centers for Medicare and Medicaid Services \$US 55 million; Veteran’s Health Administration \$US 371 million; National Institute of Health \$US 787 million.

References

- Bronnen TA, Leape LL, Laird N et al 1991, 'Incidence of adverse events and negligence in hospitalised patients: Results of the Harvard Medical Practice Study', *New England Journal of Medicine*, 324:370-376.
- Reeder CE and Nelson AA 1985, The differential impact of copayments on drug use in a Medicaid population, *Enquiry*, 22 (4) pp 396-403.
- Richardson J 1991, The effect of consumer copayments in medical care, Background Paper No 5, National Health Strategy.
- Richardson, J 1998, 'The healthcare financing debate' in *Economics and Australian Health Policy*, eds G Mooney & RB Scotton, Allen & Unwin, Sydney.
- Richardson J and Deeble J 1982, Statistics of Private Medical Services in Australia 1976, HRP, ANU.
- Richardson J and Segal L 2003 (forthcoming), Private Health Insurance and the PBS: How Effective has Recent Government Policy Been? Working Paper, Health Economics Unit, Monash University, Melbourne.
- Segal L, Donato R, Richardson J, Peacock S 2002, 'Strengths and limitations of competitive versus non-competitive models of integrated capitated fundholding', *Journal of Health Service Research Policy*, vol 7, Supplement 1, July, pp S1:56-64.