

**The Reform of
Public Hospital Funding in Australia**

**Submission to the Senate Inquiry into
Public Hospital Funding**

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Public Hospital Funding in Australia

Submission to the Senate Inquiry into Public Hospital Funding

Terms of Reference and Principal Conclusions

To examine how hospital services may be improved within the legislative principles of Medicare, and in particular to report on:

1. **The adequacy of current funding levels to meet future demand for public hospital services in both metropolitan and rural Australia.**
 - There is no simple answer to the question ‘How much should the government allocate to hospital and medical services?’ In part, this is because the answer is a matter of social choice (see Terms of Reference 6). In part, it is because of a lack of understanding of what constitutes best (value for money) practice; and
 - Hospital and health policy must take account of both the short run problems arising from tightly controlled budgets and the long run need for cost effectiveness. Without considerable skill these two objectives are likely to conflict.

2. **Current practices in cost shifting between levels of government including medical services including the MBS, Pharmaceutical costs, outpatient clinics, aged and community care, therapeutic goods and the use of hospital emergency services for primary care.**
 - The most detrimental effects of cost shifting are likely to be (a) the impact upon allocative efficiency, ie a distortion of the pattern of spending from the pattern which would maximise health and other outcomes for a given cost; and (b) the adverse effect upon the quality of management and leadership as funders and particularly government authorities focus upon cost shifting rather than upon activities and practices that would increase efficiency, equity and population health; and
 - The effects of cost shifting between government authorities and from authorities to the public have not been properly investigated.

3. The impact on consumers of cost shifting practices including charges, timeliness and quality of services.

- Cost shifting to consumers in the form of increased co-payments will have a disproportionate effect upon the poor, but only a limited affect on total expenditures; and
- Cost shifting by the elimination of benefits has the potential to reduce government outlays but is likely to reduce allocative efficiency.

4. Options for re-organisation of State and Commonwealth funding and service delivery responsibilities to remove duplication and the incentives for cost shifting to promote greater efficiency and deliver better health care.

- The significance of duplication and cost shifting between the two levels of government should be quantified. Policy should not be driven by a perceived need to eliminate problems of an unknown magnitude;
- The COAG Trials should be broadened in scope and funded using a risk and equity adjusted formula (see also below); and
- Priority should be given to the development of risk adjusted/weighted capitation models for the equitable and efficient funding of health services.

5. How to better coordinate funding and services provided by different levels of Government to ensure the appropriate care is provided through the whole episode of care—both in hospitals and the community.

- In the absence of more fundamental reform, the National Coordinated Care Trials should be broadened in scope and extended in time and coverage;
- Options for patient empowerment should be explored;
- Additional models for priority setting at the regional level should be explored;
- The greatest potential benefit in terms of both health outcome and cost effectiveness, is likely to be through the better coordination of services and the achievement of allocative efficiency across the entire spectrum of health related sub-sectors of the economy;
- Allocative efficiency should take account of more than the sub-sector of the health industry that is funded by the government;
- Long run health sector reform should focus upon the achievement of allocative efficiency between and within health sub-sectors; and
- Options for the creation of a single funder for different population groups should be vigorously explored; and
- There is a compelling case for a broad based inquiry into the health sector which includes, inter alia, an examination of the option of Managed Competition.

6. The impact of the private health insurance rebate on demand for public hospital services.

- The relationship between PHI and the demand for public hospital care is complex. The decline in the percentage of the population with PHI has not been closely associated with an increase in the proportion of services offered in public hospitals;
- Pressure on public hospitals has been a result, not of an increase in demand for their services as a proportion of total demand, but of a significant decline in the proportion of their revenue obtained from private patients and the simultaneous imposition of budget caps by State governments.
- There is no firm basis for the calculation of the effect of the PHI rebate and any estimate must be highly speculative;
- The effect of the rebate upon hospital resources in the short run will most probably be less than the effect of a direct hospital subsidy;
- It is unequivocally untrue that private health insurance or private hospitalisation at their present levels are necessary for the viability of public hospitals; and
- The continued erosion of PHI would eventually force the public sector to accelerate the growth of public hospital capacity and, if necessary, increase taxation to pay for this. The desirability of this strategy and the use of a PHI subsidy is, in part, a political/social decision and not simply an economic issue; and
- Demand for PHI and the resources available for hospital services would increase if Private Health Funds could more easily offer full gap insurance. This would occur if default payments to non-participating doctors and hospitals were deregulated and permitted to fall to zero.

7. The interface between public and private hospitals, including the impact of the privatization of public hospitals and the scope for private hospitals to provide services for public patients.

- There is no well documented and reliable evidence indicating a difference in the administrative efficiency of public and private hospitals;
- Australian data suggest that private hospitals may be more likely to employ costly procedures and that the unit cost of such procedures may be significantly greater in the private sector;
- Private hospital care may cost the public sector more than public care; and
- These results imply that the expansion of private hospitalisation and the privatisation of public hospitals may significantly increase the cost of health care.

8. The adequacy of current procedures for the collection and analysis of data relating to public hospital services including allied health services, standards of care, waiting times for elective surgery, quality of care and health outcomes.

- Data needs and analyses should be determined and prioritised according to the importance of the problems they document;
- National reporting of hospital statistics and case level data are adequate for utilisation statistics and rate variation by states and territories. However, some of the data are subject to remediable problems of reliability;
- There is a need for the establishment of national performance indicators for public hospitals and associated services, including inpatient, outpatient and emergency department services. These performance indicators could be used for comparative purposes across institutions relating to efficiency, clinical outcomes and quality;
- Data are generally inadequate for the analysis of patient level outcomes and indications of service quality;
- There is a need for research comparing difference between costing data from case level clinical costing and cost modelled sites; and
- There is an urgent need for an increased level of routine analysis of existing administrative data. Data linkage and the modest extension of data sets may, potentially, lead to very significant benefits in terms of lives saved, improvements in the quality of life and the elimination of unhelpful procedures. These benefits may need to be compared with the possible costs that some assert will arise from the potential leakage of confidential information’.

9. The effectiveness of quality improvement programs to reduce the frequency of adverse events.

- Quality of care is not currently given serious attention. There are no explicit or comprehensive mechanisms for regularly reviewing and improving quality of care. Current incentives may encourage quality deterioration;
- Consideration should be given to the establishment of a statutorily independent body with similar responsibilities as the US ‘Advisory Council for Health care Quality’;
- The use of administrative data to monitor particular dimensions of quality should be explored; and
- Options for the incorporation of financial incentives for the improvement of quality should be canvassed. These include an elimination of default payments for private health insurance; the adoption of ‘normative DRG’s’ and differential medical payments for compliance with defined guidelines.

The Health Economics Unit (HEU)

The HEU of the Centre for Health Program Evaluation came into existence in 1991 as a result of an initiative by the National Health and Medical Research Council. It continues to represent the largest concentration of independent health economists in Australia (8 full time plus 7 part time research staff). In the nine years of its existence it has published 492 books, monographs, book chapters, journal articles, research reports, working papers, etc and has established the largest program of health economics teaching in Australia. Its research into the health system has included the seminal Australian study of Hospital Funding by DRG (Professor Dick Scotton and Helen Owens); the Impact of Co-payments (Professor Jeff Richardson); Calculation of DRG Cost Weights and the Extension of the DRG Classification System (Dr Terri Jackson and Jenny Watts); A Proposal for Managed Competition in Australia (Professor Dick Scotton); A Comparison of Public and Private Hospital Treatments for AMI (Professor Jeff Richardson and Dr Iain Robertson); The Development of Methods for Achieving Allocative and Technical Efficiency within the Government Sector (Dr Stuart Peacock); and the Evaluation of Coordinated Care (Leonie Segal). There have been numerous publications commenting on the health system and options for reform (Dr Stuart Peacock, Leonie Segal, Professor Jeff Richardson).

Preface

A satisfactory answer to the issues raised by the enquiry's Terms of Reference requires a significant research effort. The short term funding imperatives which now dominate the research environment in which we operate do not permit such an effort. The comments below draw upon past research and knowledge obtained in our capacity as academic health economists and as policy advisors to the health sector, including different departments.

General Comment

There is a pervasive lack of information about almost all of the important determinants of the cost effectiveness of the health system and the determinants of its future performance. For example, our understanding of the demand for hospital and health services is very imperfect (see below). The effectiveness of reforms such as the reorganisation of State and Commonwealth funding and responsibilities is largely speculative and, consequently, the evaluation of reforms is easily influenced by personal ideological positions. Most significantly, there is a very limited understanding of the effectiveness of the services that are delivered and the result of this has been a highly erratic pattern of service delivery to different populations across the country. One study for the OECD estimated that only 20-25 percent of services in common use have been adequately evaluated. A study by the US Office of Technology Assessment suggested that only 15 percent of services have been evaluated using a randomized control trial. Only the smallest fraction of medical services have been the subject of cost benefit analyses.

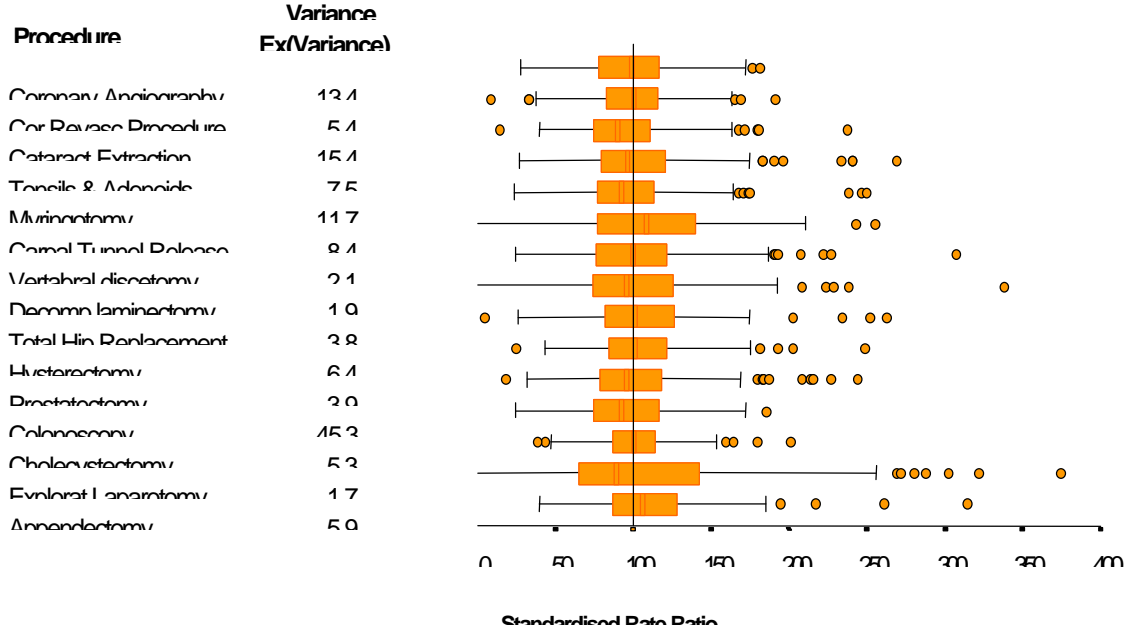
Perversely, despite the absence of the information needed for the cost effective running of a \$45 billion industry there has been almost no dedicated funding for health services research and the

large allocation of monies for 'health research' is largely controlled by and allocated to bio-medical researchers.

An unsurprising consequence of these informational deficiencies is that there are no universally recognized guidelines for the treatment of many conditions and individual clinicians have enormous discretion over the type and intensity of services they provide. Under these circumstances it is inevitable that, to a lesser or greater extent, practices reflect financial incentives, self interest and the availability of complementary facilities and competitive services. Cross National comparisons reveal four to six fold differences in the rate at which procedures are provided to populations and similar differences exist between small areas within countries (McPherson, 1990). This is illustrated in Figure 1.

The figure indicates the rate at which services are provided to small areas within Victoria. Rates are standardized for differences in the age/sex composition of the population and then indexed so that the State average rate of service provision is equal to 100. The figure reveals that, as in cross National comparisons, service delivery varies by 400 to 600 percent and more. In part, this may be due to random variation. The number to the left of the chart is the ratio of the actual variance in service delivery between small areas divided by the expected variance calculated from each small area's population, age/sex composition and the State average use of the service for each age/sex cohort. If the actual variance equaled the expected variance this ratio would equal 1. The figures indicate a typical variance which is 400 to 600 per cent of the expected variance, rising to 4,530 per cent of expected variance in the case of colonoscopy.

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



Median, mean, 25th & 75th centile for Statistical Local Areas, standardized to Victorian State Ratio = 100. Extreme values greater than 2 times 50th, 75th and 25th, 50th centile intervals are recorded as separate points.

Source: Richardson, I (1999) 'The healthcare financing debate' in *Economics and Australian Health Policy*, eds G Mason & DP Coster, Allen & Unwin, Sydney.

This picture of an erratic allocation of health services and of a pervasive lack of information about their benefits stands in stark contrast to the common perception of the health sector. It is widely believed that there is a fairly well defined need for medical services arising from fairly well defined medical problems and that this results in a fairly well defined demand for health care which can then be met through the required allocation of resources to the sector. This perspective is most clearly illustrated by the almost universal belief that the ageing of the population will generate an explosive and irresistible demand for future health services. However the evidence clearly indicates that the growth of the health sector in the past has probably had little to do with the ageing of the population. More significantly, the use of health services across Australia, between OECD countries, and the growth of health expenditures in OECD countries through time have all been unrelated to demographic factors (see Richardson and Robertson, 1999).

1 The Adequacy of Current Funding Levels to Meet Future Demand for Public Hospital Services (Terms of Reference 1)

Background: Hospital Costs

The relationship between the demand for hospital services and the level of funding is complex and reflects, in large part, historical events. Twenty years ago it was almost universally accepted that Australian hospitals (and hospitals in most developed countries) were highly inefficient: significantly more resources were used than was necessary to obtain the same quality and quantity of care. In the absence of any other policy levers, governments limited hospital budgets and it was these budget caps – in Australia and in other Western countries – which were primarily responsible for the stabilization of health spending as a percentage of the GDP in the mid to late 1970's. (The USA was the only significant country which did not use some sort of budget cap and relied upon market competition and its subsequent and unique failure to control health expenditures is commonly attributed to this difference.) The widespread response of hospitals to this policy was to 'play the press': it was—often correctly—believed that internal reform was more difficult than obtaining compromise from health departments. One of the legacies of this response was the 'desensitization' of departments to public complaints by hospitals. Over time, however, constant budgetary pressure plus the introduction of DRG based payments in some states has brought about significant improvements in the efficiency of public hospitals and between 1982/83 and 1996/97 their share of the national health budget fell from 34.7 to 28.8 percent. At the same time the more rapid growth of private hospital expenditures increased their share of hospital expenditures from 12.6 to 21.5 percent of total hospital expenditures; ie the market share of private hospitals rose by 70.6 percent (AIHW 1992; 1999a).

The significance of this history is that it illustrates that, as elsewhere in the health sector, the capacity of the hospital system to absorb resources is highly flexible and there is no simple relationship between spending and demand. There is currently such widespread anecdotal evidence of hardship within hospitals that it is hard not to conclude that a further, short run increase in 'efficiency' by cost cutting is not possible. Importantly, however, this conclusion must still be drawn from a consensus of anecdotes rather than from systematic, valid and reliable indicators of hospital performance. Further improvements in efficiency may be achieved in the long run but the implementation and adaptation to change will probably have to proceed more slowly than in the last decade.

Demand

It is also difficult to obtain a fully satisfactory explanation for growth in the demand for hospital and health services. Cross national comparisons indicate that GDP per capita is closely correlated with health expenditures as a percentage of the GDP. However, this does not indicate the existence of the simple 'income effect' described in economics textbooks to explain individual household demand. Rather the correlation through time at the national level is attributable to other factors. One of these is clear. The productivity growth that raises GDP per capita also raises the wages and incomes which are a major cost in the health sector. Other factors driving

health expenditures are less obvious. Health service budgets commonly have a betterment factor which depends upon GDP growth. On the demand side, the conventional economic variables—personal income, prices (co-payments) and ageing have comparatively little explanatory power. Partly for this reason, the majority of health economists believe that a major influence upon the demand for health services is the availability of those services—the theory of ‘Supplier Induced Demand’, and policy makers have increasingly turned to the supply side of the market to influence demand and outcomes.

Supplier induced demand does not, however, represent a complete explanation for the growth of demand. Rather, and by the elimination of other causal factors, it is clear that product innovation based upon technological progress has been an important, and possibly the most important cost driver. The impact of new procedures and products upon future demand is hard to quantify and, almost by definition, difficult to predict.

Future Demand

As discussed under Terms of Reference 6, the size of the public hospital service, and the demand for public hospital care is very largely a matter of social and political choice. The perception that there is a ‘correct’ level of these services and a corresponding ‘correct level of funding’ is unambiguously wrong. In the short run, and in the absence of a significant change in government policy, medical practices relating to hospital care cannot be changed: doctors will continue to admit patients and carry out procedures for the same reasons—with the same clinical indicators—as they have done in the recent past. While this simplifies the prediction of future demand there has been no study, to our knowledge, which has carried out this exercise. Indeed, current cost drivers have not been well documented. In principle, such an exercise is feasible. The desegregation of separations by DRG permits the identification of immediate growth areas. The further desegregation using hospital management information systems can isolate cost drivers. In principle, the likelihood of further growth in these areas can be determined through consultation with the appropriate professional groups, by comparison with private sector practices and with the capacity of the medical workforce to expand service provision. The task, however, is not trivial.

In the longer run, the concept of independent demand is unhelpful. Proximate spending in public hospitals will be determined by budgets. In principle, these should reflect (and help to bring about) best practice where this is determined both by medical outcome and the cost of procedures. However, this long run goal will be extraordinarily difficult to achieve. While numerous practice guidelines have been drawn up (primarily in the USA) there is, at present, no consensus about ‘best practice’. For the immediate future it is likely that private practitioners in Australia will ignore clinical guidelines for both legitimate and illegitimate reasons. First, there is a widespread belief that guidelines often do not reflect a realistic assessment of true clinical conditions. In some cases these are based upon trials which, for scientific validity, have abstracted from the conditions that often face practitioners. Secondly, in some instances guidelines will suggest a lower level of service provision than currently occurs and lower service

expenditures. However, in the private sector, service expenditures are identically equal to provider incomes and a reduction in these will be fiercely resisted.

There is a serious conflict between the achievement of short run and long run goals. The full funding of short run demands will remove pressure for further reform. If the long run becomes nothing more than a succession of superficially satisfactory short runs, then the likelihood of achieving long run value for money will be significantly reduced. The major challenge facing government is to reconcile short and long run objectives. Financial coercion in the form of budget caps was necessary in the past. Whether or not further financial coercion will be necessary in the future depends upon the cooperation of the medical profession. While different colleges have been both receptive and proactive with respect to the need for best practice, it is less clear that their membership will be responsive, in particular, when medical incomes are threatened.

Conclusions

- There is no simple answer to the question 'How much should the government allocate to hospital and medical services?' In part, this is because the answer is a matter of social choice (see Terms of Reference 6). In part, it is because of a lack of understanding of what constitutes best (value for money) practice; and
- Hospital and health policy must take account of both the short run problems arising from tightly controlled budgets and the long run need for cost effectiveness. Without considerable skill these two objectives are likely to conflict.

2 Current Practices in Cost Shifting Between Levels of Government (Terms of Reference 2)

The major adverse effects of cost shifting are not a result of the immediate financial burden to patients. Two other effects are likely to be of much greater significance. The first of these is the adverse effects of the time and energy that Health Departments devote to cost shifting. The 'opportunity cost' of this is the neglect of genuine health system reform. In the OECD, increasing health costs are associated with a decreasing share of the budget paid for by government. One common interpretation of this is that when government cannot shift costs easily, it undertakes cost control. Conversely, it is commonly believed that one contributory factor to the American health system inflation has been the almost exclusive focus upon cost shifting and the absence of a powerful body concerned with global cost control.

Secondly, cost shifting encourages the distortion of service patterns. Patients are attracted to services that are fully funded by government in preference to those where there is a large co-payment or no government subsidy. Government authorities distort the optimal (most cost effective) mix of services by cost shifting to other authorities or the public in order to achieve the short run and cosmetic objective of reduced expenditures. One possible explanation of Australia's high use of hospitals (for a relatively young country) is that this is a legacy of the pre-Medibank era in which patient out-of-pocket payments were less after hospitalization than when a substitute out of hospital medical service was received.

More generally, the effects of cost shifting is one of the very many important issues that has not been properly researched in Australia. For example, while there is a potential for cost shifting between emergency department and GP services, the actual extent of substitutability between these services is unknown. The general perception is that emergency services for triage categories 4 and 5 can be replaced with GP services, and yet measurement of the extent of this, including differential outcomes have not been investigated. The National Health Strategy (1992) found that 15 percent of encounters were defined as primary care, yet the case load between emergency department primary care and GP attendances was different, with more injuries amongst primary care encounters in emergency departments. Service substitution has been driven by perception rather than genuine research into cost effectiveness. In this context, incentives for cost shifting between funders will continue to be the driver, rather than a broad social objective of allocative efficiency.

Conclusions

- The most detrimental effects of cost shifting are likely to be (a) the impact upon allocative efficiency, ie a distortion of the pattern of spending from the pattern which would maximise health and other outcomes for a given cost; and (b) the adverse effect upon the quality of management and leadership as funders and particularly government authorities focus upon cost shifting rather than upon activities and practices that would increase efficiency, equity and population health; and
- The effects of cost shifting between government authorities and from authorities to the public have not been properly investigated.

3 The Impact on Consumers of Cost Shifting Practices (Terms of Reference 3)

Cost shifting to the public can take the form of co-payments for particular services or the total removal of particular benefits. The former has occurred with the privatization of some outpatient department functions and with the transfer of hospital pharmaceutical costs to the PBS. The latter has occurred with the deinstitutionalization of mental health and the failure to provide an ambulatory service which fully absorbs the resulting demand. If permitted, there is the potential to cost shift through the imposition of co-payments on public hospital patients.

Our comments on cost shifting are limited. We have not conducted research into the deinstitutionalisation of mental hospitals.

The conventional wisdom and best available evidence on the impact of co-payments is outlined in the National Health Strategy Background Paper 5 (Richardson, 1991). In summary, co-payments have a limited and one off effect upon demand. The impact is greater upon the poor and the decrease in service use is unrelated to the importance of the services, reflecting the inability of patients to objectively evaluate many services. In one revealing study, co-payments upon pharmaceuticals were observed to have a greater impact upon life preserving anti hypertension drugs than upon drugs for the reduction of immediate pain, which had no impact upon the likelihood of death.

Reflecting these results, health system reform in recent years has increasingly focused upon the supply side and the incentives facing service providers.

Conclusions

- Cost shifting to consumers in the form of increased co-payments will have a disproportionate effect upon the poor, but only a limited affect on total expenditures;
- Cost shifting by the elimination of benefits has the potential to reduce government outlays but is likely to reduce allocative efficiency.

4 Options for Re-Organisation of State and Commonwealth Funding and Service Delivery Responsibilities to Remove Duplication and the Incentives for Cost Shifting to Promote Greater Efficiency and Deliver Better Health Care (Terms of Reference 4)

There is widespread agreement that the present division of responsibilities is a serious obstacle to health sector reform and various models of State-Commonwealth funding and responsibility have been canvassed in the past. See, for example National Health Strategy Issues Paper No 1 (1991). We do not intend to comment on these here and we limit our comments and observations.

Duplication and Cost Shifting

Despite repeated assertions about the duplication of administrative functions, we are unaware of any study which has documented the extent to which this occurs. The impact of duplications, however, must be very small. The cost of operating the Commonwealth Department of Health is a very small fraction of the cost of Medicare and, even if its functions were completely duplicated by the States (which they are not) the total elimination of the Commonwealth Department would have little impact upon cost.

The effects of cost shifting are probably much more important, although the magnitude of the effects also remain unquantified. In our view, the most important adverse effect of the current division of responsibilities is likely to be upon the coordination of services (Terms of Reference 5). It is important to note, however, that rationalization of responsibilities is a necessary but not sufficient condition for effective coordination.

The complex funding and delivery arrangements for health services that operate at State and Federal levels of government promote inefficiencies in the Australia health system by restricting the capacity of resources to shift between different program areas in response to need or evidence on cost-effectiveness (Paterson, 1996). They encourage a narrow, short term, financial focus by agencies and health service providers, which encourages cost-shifting. The current arrangements are unable to adequately address equity objectives—whether described in terms of equal access for equal need or a reduction in gross health inequalities.

Many of these problems could be overcome if a single tier of government assumed full financial responsibility for the health sector and developed a weighted capitation formula to determine a global budget for defined populations. Such a formula may significantly increase the ability to achieve equity as well as efficiency objectives. In principle, this approach does not preclude the possibility, at least as a transitional arrangement, of a weighted capitation formula that included a separable State and Commonwealth component. In one such model the global funder-purchaser could be a regional health authority with full responsibility for purchasing health services for all residents within regional boundaries.

While the National Coordinated Care Trials have been established to address these issues through the pooling of funds, their capacity to make genuine gains without a more active Commonwealth and State leadership role is extremely limited. The current expectation is that the Trials will negotiate with providers in order to obtain a contribution for each patient that is equivalent to the amount that would 'normally be spent', ie in the past. There are a number of problems with this. Firstly, it presumes that historic funding levels are appropriate. Secondly, it presumes that expected levels of expenditure can be determined with sufficient accuracy. Thirdly, it requires that Trials negotiate contributions to the pool that reflect the agreed pool calculations. Each of these presumptions is problematic.

The next round of Trials will provide an opportunity to test the development and introduction of a risk-adjusted population based funding formula, with contributions made directly from the Commonwealth and the States. Not only should this contribute to equity objectives, but it is likely to increase efficiency by overcoming the difficult and costly negotiations associated with the historic funds pool model. Such negotiations inevitably result in a compromise in terms of the scope of services included in the pool and the basis of payment.

An important research priority for the Commonwealth should be a research program to explore the principles of, and the means to support, the development and adoption of this approach to the funding of health services.

Many of these issues are discussed in Peacock and Segal (1999).

Conclusions

- The significance of duplication and cost shifting between the two levels of government should be quantified. Policy should not be driven by a perceived need to eliminate problems of an unknown magnitude;
- The COAG Trials should be broadened in scope and funded using a risk and equity adjusted formula (see also below); and
- Priority should be given to the development of risk adjusted/weighted capitation models for the equitable and efficient funding of health services.

5 How to Better Coordinate Funding and Services Provided by Different Levels of Government to Ensure the Appropriate Care is Provided Through the Whole Episode of care (Terms of Reference 5)

As noted above, the coordination of funding and service delivery is seriously impeded by the division of responsibilities between the Commonwealth and States. One approach to coordination—and probably the one which will receive greatest attention—is the extension of the COAG Trials. This approach is the political line of least resistance as it avoids the difficult task of undoing the financial straight jacket imposed by the division of authority. Failing more fundamental reform, this approach is highly desirable, provided the Trials achieve a genuine commitment from the Commonwealth and State Governments, and their engagement in negotiations around funding, especially of acute services. A variety of models for priority setting for the achievement of allocative efficiency within the existing regulatory framework can be developed and trialled. One example is outlined in Segal and Richardson (1998).

The coordination of funding and services referred to in Terms of Reference 4 is a prerequisite to what economists refer to as ‘allocative efficiency’ which, in the present context, refers to the allocation of resources in such a way that health and other objectives are maximized. Allocative efficiency, however, requires attention to a broader range of issues than the coordination of State and Commonwealth government funding. In broad terms it includes the following:

- i An appropriate allocation of resources between the recognized health system and services outside the formal system;
- ii An appropriate allocation between the publicly funded and unfunded health sub-systems;
- iii Appropriate criteria for entry into the health system; and
- iv Appropriate allocation within the government sub-system including government hospitals.

The Terms of Reference are, at present, inappropriately limited to the last of these.

The scope and flexibility of an ideal system is illustrated nicely by an anecdote given by Ford during an HEU forum on health system reform in 1995 (see Ford and Kissick, 1995).

Ethix, a Seattle based Managed Care organisation was asked to establish a health plan for a nearby country town. The scheme included, inter alia, detailed utilization review. Shortly after commencement this detected an unexpectedly high level of spinal injury in youths. Investigation established that the reason for this was a tree stump which had been left in the middle of a popular toboggan run. Young people were crashing into this and injuring their backs. The health plan paid for a bulldozer to remove the tree stump.

(Summary from a public address)

Health schemes do not normally cover bulldozer services. Yet on this occasion the service reduced health costs and significantly improved health outcomes. In principle, this degree of flexibility should characterize the entire health system and the challenge is to establish incentives for achieving this.

There is little doubt that, in the long run, the need to improve allocative efficiency is the greatest challenge facing Medicare. The fact that it also faces health schemes in other countries does not reduce the enormous benefit that could be achieved if our health system allocated resources to where the health benefit was greatest. The magnitude of the problem to be overcome is indicated by the extent of the small area variation noted earlier. It is simply not possible that these variations are consistent with allocative efficiency. They suggest that some populations are receiving too many and/or other populations too few, services. These observed variations only represent the tip of the iceberg of allocative inefficiency. At present, there is insufficient information to even document what the ideal allocation of resources would look like.

The solution to this problem of allocative inefficiency is the heart of health sector reform and the type of regulatory mechanism and incentives that should determine resource use. The economist's solution to this problem focuses upon incentives. More specifically, economists have suggested that the existence of a single funder is a prerequisite to the removal of artificial barriers to appropriate service use. Importantly, the removal of these boundaries is necessary but not sufficient for allocative efficiency; that is, incentives may be appropriate but there may be little response to these incentives.

The need for a single funder with appropriate incentives has been the reason for the world wide movement towards the separation of the purchaser and the provider (the 'purchaser-provider split') and the examination of Managed Care and Managed Competition as models of service delivery. In Australia the feasibility of Managed Competition has been explored in a succession of articles by Scotton at the HEU (most recently Scotton, 1999). Scotton has argued that piecemeal reform cannot truly address the endemic problems of allocative inefficiency while simultaneously preserving equity within the system. The case developed is sufficiently compelling to suggest the need for a broad based inquiry into the health sector.

A number of countries including the UK, Netherlands, Israel, New Zealand and the USA have experimented with different forms of Managed Care/Managed Competition and elements of the purchaser-provider split have been incorporated in State hospital funding arrangements. Few conclusions can be drawn from the overseas evidence. Dutch and British experience suggests that where a health system is relatively satisfactory, change will not be dramatic following relatively modest changes to funding arrangements. That is, in the absence of accompanying measures, the separation of the purchaser and provider may have little effect upon efficiency; ie while necessary, the separation may be insufficient to effect major changes to the allocation of resources. US evidence indicates that Managed Care (at least temporarily) halted the growth of expenditures. Sensible debate over Managed Care has, unfortunately, been inhibited in Australia by its demonisation by the medical profession which has characterized 'US style Managed Care' as a formula for sub-standard service quality. Systematic evidence does not support this general

conclusion and the response of the Australian medical profession must be explained in terms of the very real threat that Managed Care represents to their financial and professional interests.

The achievement of allocative efficiency will require either an extraordinarily high level of cooperation from the medical profession—and a willingness to direct patients away from treatments which are in their financial interests—or the establishment of some form of agency-purchaser arrangement whereby the agent-purchaser can either assist the patient in purchasing the best combination of services or purchase these directly on the patient's behalf. Depending upon the model, the agent-purchaser may be a government agency (such as a regional authority), a general practitioner or a professional agent. The common characteristic is that the agent-purchaser must be able to access the full range of relevant services with the final choice of service being based upon (true) costs and (known) outcomes rather than artificial budgetary or statutory boundaries or patterns dictated by historical factors.

A supplementary strategy which may be explored is the explicit education and empowerment of consumers in an attempt to mitigate the effects of the information and power imbalance between consumers and providers (Segal, 1998). The extent to which this can be achieved is not known as there has not (to our knowledge) been serious investigation or experimentation with this option.

Conclusions

- In the absence of more fundamental reform, the National Coordinated Care Trials should be broadened in scope and extended in time and coverage;
- Options for patient empowerment should be explored;
- Additional models for priority setting at the regional level should be explored;
- The greatest potential benefit in terms of both health outcome and cost effectiveness, is likely to be through the better coordination of services and the achievement of allocative efficiency across the entire spectrum of health related sub-sectors of the economy;
- Allocative efficiency should take account of more than the sub-sector of the health industry that is funded by the government;
- Long run health sector reform should focus upon the achievement of allocative efficiency between and within health sub-sectors;
- Options for the creation of a single funder for different population groups should be vigorously explored; and
- There is a compelling case for a broad based inquiry into the health sector which includes, *inter alia*, an examination of the option of Managed Competition.

6 The Impact of the Private Health Insurance (PHI) Rebate on Demand for Public Hospital Services (Terms of Reference 6)

The impact of the private health insurance rebate upon public hospitals depends upon two independent factors; (i) the impact of the subsidy upon PHI; and (ii) the effect of PHI upon the demand for public hospital services. We briefly comment on these below.

The net effect of the PHI subsidy upon the hospital sector, at least in the short run, will almost certainly be less than the effect upon the hospital sector of a direct subsidy of equal magnitude to public hospitals. This is because the greater part of an insurance rebate will be received by existing PHI members and will result in an increased expenditure on general goods and services by the already insured and only a fraction of the rebate will be received by the hospital sector. The exact impact depends upon which of two 'leverage' effects is quantitatively more important (see Richardson, 1998); viz (i) the ratio of the total PHI premium to subsidy per member (ie revenue generated to subsidy per member) and (ii) the ratio of old to new membership (ie the proportion of the subsidy 'lost' to pre-existing members'

The impact of the subsidy is most easily shown with a numerical example. Suppose that a 30 percent rebate increased membership from 1,000 to 1,100 and that the annual premium was \$1,200. The cost of the subsidy to government would be $30\% \times \text{premium} \times \text{total membership} = (0.3) (\$1,200) (1,100) = \$396,000$. If the entire proceeds of PHI was spent upon hospital services (ie administrative and other costs were zero) then hospital revenue from PHI would increase from \$1.2 million to \$1.32 million—by \$120,000 or by 10 percent. If the rebate was directly provided to hospitals as a subsidy then funding would increase by \$396,000; that is by 3.3 times the increase achieved indirectly through the subsidy to PHI.¹

The net effect of the rebate upon funding depends upon its impact upon PHI. The 10 percent effect in the example here is significantly greater than the 3.7 percent estimated by the Industry Commission (1997) and, as a consequence, the effect upon public hospitals would be significantly less than suggested in the example. However our understanding of the demand for PHI is very imperfect and estimates of the effect of the rebate are highly speculative. If, for example, the \$1,500 million rebate prevented the total collapse and extinction of PHI then it would have encouraged voluntary contributions to the hospital sector via PHI of almost twice this magnitude. Of course, the scenario of complete extinction is highly unrealistic. However the estimated impact of the subsidy depends heavily upon the assumed count-factual, viz, what would have occurred to PHI without the subsidy and how much further it would have declined. We will not speculate further here upon this issue.

¹ These paragraphs are an edited version of those submitted.

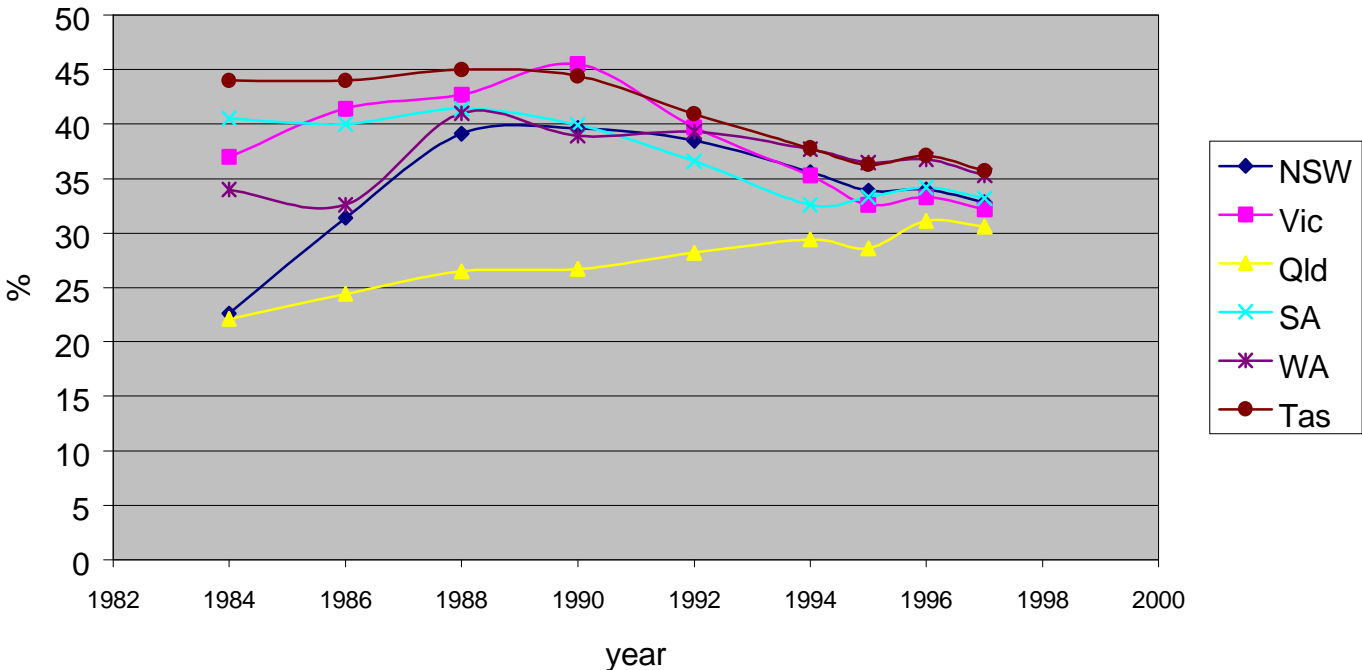
Impact of PHI Upon Public Hospitals

The relationship between PHI and the demand for public hospital services has been well analyzed in the Industry Commission Report No 57.

It is worth reiterating that the relationship is not straightforward. For many years the (basic) PHI coverage of the population was declining while the use of private hospitals was increasing. In part, this was due to the fact that it was PHI members with basic insurance who gave up PHI and the decline in those with supplementary insurance—upon which private hospitals depended—was significantly less. Indeed, in 1984 only 29.6 percent of the population had supplementary insurance which is almost exactly the proportion which holds insurance in 1999. Supplementary insurance rose after 1984 before gradually declining (see Figure 2).

Figure 2: Supplementary Health Insurance: % Population by State

Supplementary health insurance: % population by State



Source: Private Health Insurance Administration Council, (October 1999), website: www.phiac.org.au

In sum, and contrary to numerous assertions, the total demand (public plus private) for public hospitals did not increase sharply as PHI membership declined. In 1982/83 it was 75.1 percent of total hospital admissions; in 1996/97 it was 75.6 percent of total; (AIHW 1992; 1999b). The chief problem for public hospitals was not an excessive *demand* for their services but the loss of revenue from private patients. Between 1982/83 and 1996/97 the share of public hospital revenue derived from PHI declined from 17.0 to 3.0 percent. In combination with government

imposed budget caps this contributed to a reduction in their capacity to *supply* hospital services without first effecting significant internal reform.

If PHI had continued to lose members at the rate that was occurring before the introduction of the 30 percent subsidy, then the demand for private hospitals would eventually have fallen very significantly and the decline would have led to a (probably less than equal) increase in the demand for public hospitals. The commonly made claim that public hospitals could not cope with such an increase in demand is unequivocally untrue. Public hospitals have closed wards in the last decade. Significant expansion is possible by reopening or building of new wards, or by the purchase of private hospitals. The relevant issue is whether or not the government wishes this to occur and whether or not it is prepared to sacrifice other policy objectives to achieve this. For example, if the \$1,500 million subsidy to private health insurance in 1996-97 had been allocated to public hospitals, their capacity would have increased at least 14 percent² (which significantly exceeds the likely affect of the subsidy—at least in the short run—upon PHI and the indirect effect upon public hospitalization (See above)). If the preservation of PHI per sé was an important political or social objective (for example, ‘to encourage personal responsibility for health and health care’) then taxation could be increased as needed to expand public hospital capacity.

The final choice between public and private hospital care for public patients may or may not be based primarily upon their relative efficiency or cost (see below) but there is no principle of economics which asserts that hospital care should be financed by private or by public funds or that there is an upper or lower limit to the public contribution. This is also a political decision. The almost self evident choice that we face with respect to the funding of hospitals and more generally health services has been almost totally buried by ideological and self interested assertions that economic imperatives drive health funding towards one system or another. These assertions are false. There is choice concerning both the nature of our health system, and its funding.

PHI Membership and Benefit Structure

While outside the Terms of Reference of the Inquiry it is worth noting that the declining popularity of PHI before the introduction of the 30 percent rebate has been, in part, a result of inappropriate regulation. The (probably correct) conventional wisdom is that the failure of PHI benefits to match the charge for private medical and hospital services has had a negative effect upon the demand for PHI.

The regulation of PHI in Australia limits the ability of the Health Funds to provide gap insurance. An open-ended commitment to reimburse any expenditure would cause the inflation of medical and private hospital costs. This, in turn, would increase PHI premiums and consequently reduce the demand for PHI. As long as there is no constraint upon medical fees it is not sensible or desirable for Health Funds to close the medical gap. In the absence of inappropriate regulation, PHI could use its market power to limit hospital and medical fees and to exclude hospitals and

² This figure represents the percentage increase in the public hospital budget that would have occurred. As the marginal cost of hospital care is significantly less than the average cost, the increase in capacity would have significantly exceeded 14 percent.

doctors that would not accept a negotiated rebate as full payment. However limits on fees would control PHI expenditure per service but not total expenditure, which may still increase due to a compensating increase in the demand for service.

In the competitive market described in economics text books these fees would be driven to the lowest level consistent with the economic viability of the private hospitals and the provision of services by medical practitioners. However, and contrary to a recommendation by the Industry Commission (1997), PHI Funds are forced to make a default payment to non-participating hospitals which is sufficiently high that effective competition is eliminated and financial pressure on medical practitioners is similarly impossible. In sum, the usual benefits of competition envisaged by economists have been prohibited by the existing and inappropriate regulation.

There is probably no other country in the World where private practitioners face such congenial regulation. In exchange for the underwriting of medical incomes by public and by private insurance there is no requirement that doctors either individually or collectively limit their fees or undertake to adopt best practice guidelines (however broadly defined). The over-billing by some private practitioners (in the order of 100 percent of the rebate) is consistent with the hypothesis that the entire benefit of public and private insurance has been captured by the practitioner who has then charged a market fee in addition to these base payments. The provision of adequate private insurance in these circumstances is very difficult and the unsatisfactory contracts offered to the public are a contributory factor to the decline in PHI which occurred before the recent 30% subsidy.

Conclusions

- The relationship between PHI and the demand for public hospital care is complex. The decline in the percentage of the population with PHI has not been associated with an increase in the proportion of services offered in public hospitals;
- Pressure on public hospitals has been a result, not of an increase in demand for their services as a proportion of total demand, but of a significant decline in the proportion of their revenue obtained from private patients and the simultaneous imposition of budget caps by State governments.
- There is no firm basis for the calculation of the effect of the PHI rebate and any estimate must be highly speculative;
- The effect of the rebate upon hospital resources in the short run will most probably be less than the effect of a direct hospital subsidy;
- It is unequivocally untrue that private health insurance or private hospitalisation at their present levels are necessary for the viability of public hospitals;
- The continued erosion of PHI would eventually force the public sector to accelerate the growth of public hospital capacity and, if necessary, increase taxation to pay for this. The desirability of this strategy and the use of a PHI subsidy is, in part, a political/social decision and not simply an economic issue; and
- Demand for PHI and the resources available for hospital services would increase if Private Health Funds could more easily offer full gap insurance. This would occur if default payments to non-participating doctors and hospitals were deregulated and permitted to fall to zero.

7 The Interface Between Public and Private Hospitals, Including The Impact of the Privatisation of Public Hospitals and the Scope for Private Hospitals to Provide Services for Public Patients (Terms of Reference 7)

In principle, private hospitals should be capable of providing services to public patients at a rate that is determined competitively. Prima facie, this option is attractive as it is both consistent with the principles of the Hilmer Report and with the separation of the Purchaser and the Provider discussed above. Until very recently there have been no examples of the privatization of public hospitals. Past attempts to achieve this have met resistance from private doctors who were reluctant to have private patients co-habiting wards with public patients as this could adversely impact upon the demand for private health insurance.

The impact of privatization depends upon:

- a the relative administrative efficiency of private and public hospitals when the quality of care is similar; and
- b the effect of private hospital status upon the type of service.

Efficiency

While it is true that privatization very commonly leads to increased efficiency, this is not an invariable rule and there are numerous examples of privatization resulting in increased inefficiency (King and Pitchford, 1998; Martin and Parker, 1998). A similar conclusion was reached by both the Industry Commission and by Hodge (1996), in his review of cross national evidence on the effects of out-sourcing and private contracting of government services.

A comprehensive review of the existing literature in 1987 by Richardson did not find studies that demonstrated differences in the administrative efficiency of government, not-for-profit and for-profit hospitals in the USA. There were no reliable Australian studies. A subsequent search of the literature (unpublished) in 1998 similarly failed to detect studies which demonstrated significant differences in administrative efficiencies.

In the absence of empirical evidence the case for the privatization of public hospitals is weak and the likelihood of significant health sector benefits from this activity are correspondingly small.

Type of Service

Despite some limited experimentation (the most long running of which is at Port Macquarie) the Australian experience with the privatization of public hospitals is too limited and too recent to draw general conclusions. There is, however, relevant evidence concerning the performance of existing private and public hospitals.

Two recent studies are of particular relevance:

- i As part of an international collaborative study, Richardson and Robertson (1999) compared the likelihood of patients receiving a costly high technology procedure after hospitalization due to an acute myocardial infarction (AMI). These patients were selected for study as their medical condition was similar when they were admitted, ie they had all suffered a recent heart attack. As summarized in Table 1, at the end of eight weeks the likelihood of angiography, or a revascularisation procedure (coronary artery by-pass graft; angioplasty; stenting) was between 100 and 400 per cent higher for patients admitted to the private hospitals. After 12 months a 100 percent differential was preserved.
- ii A recent study by Harper (1999) at the Monash Medical Centre examined the unit cost of coronary procedures in the public and in the private wards. Private expenditures significantly exceeded public costs and perversely, because of the public reimbursement of medical and pharmaceuticals costs, generated higher costs for public Medicare than if the patient had been admitted to the public hospital.

Table 1: Ratio of the Likelihood of Public Patients to Private Patients in Private and Public Hospitals, Age Sex Adjusted 1996/97

		Private Hospital Patients to Public Patients		Private Patients in Public Hospitals to Public Patients	
		Angiography	Re-vascularisation	Angiography	Re-vascularisation
Initial admissions	Men	2.5	4.0	1.6	1.5
	Women	3.0	5.5	1.6	2.2
Admissions within first 8 weeks	Men	3.1	4.9	1.5	1.3
	Women	3.4	6.7	1.3	1.9
Admissions within first 12 months	Men	2.2	2.8	1.3	1.0
	Women	2.3	3.2	1.3	1.2

Source: Victorian In-patient Minimum Dataset, Richardson, J, et al (in press).

If these results are generally true for other procedures then they imply that:

- The expansion of private health insurance will increase total hospital costs very significantly. This will occur both by increasing the use of expensive procedures and through the increased charges that occur for procedures in the private sector.

-
- As the reason for this difference is associated with the more permissive environment in the private sector (facilities being more readily available in order to attract private doctors), it is highly probable that the same differential pattern of service provision will occur in privatised public hospitals. Mechanisms have not yet been developed and implemented to regulate the type of procedures doctors choose to undertake in private hospitals.
 - Perversely the privatisation of public hospitals could result in a significant increase in public expenditures.
 - The importance of the utilisation effect and payment differential between the private and public sector will dwarf any marginal differences in administrative efficiencies were they to be detected.

In sum, the case for privatizing public hospitals must be made in terms of an improvement in the quality of care, the quality of the patient experience or the desirability of choice in the level of hospital care offered to the public. Current evidence does not indicate the likelihood of increased efficiency through a reduction in costs.

This conclusion is consistent with the recent findings by Silverman, et al in the *New England Journal of Medicine* (1999). In this, study expenditures on US Medicare patients were found to be significantly higher in areas with for-profit hospitals.

Conclusions

- There is no well documented and reliable evidence indicating a difference in the administrative efficiency of public and private hospitals;
- Australian data suggest that private hospitals may be more likely to employ costly procedures and that the unit cost of such procedures may be significantly greater in the private sector;
- Private hospital care may cost the public sector more than public care; and
- These results imply that the expansion of private hospitalisation and the privatisation of public hospitals may significantly increase the cost of health care.

8 The Adequacy of Current Procedures for the Collection and Analysis of Data (Terms of Reference 8)

To assess the adequacy of data and data analyses we must first ask the question 'adequacy for what?'. There are a large number of possible answers. Below we focus upon a subset of objectives where data and data analyses are potentially of great importance. Possible objectives include:

- tracking cost by various categorisations (total; states/territories; funders; service-providers; disease category etc.);
- tracking benefits (service volumes; mortality, morbidity);
- evaluating service effectiveness; cost effectiveness;
- monitoring quality of hospitals and medical services;
- auditing medical practices (screening for fraud, deviant practices etc.);
- screening for disease prevalence; immunisation uptake; routine reminders to the population; and
- creation of individual health and demographic profiles to assist with diagnosis and treatment.

These objectives range from the uncontroversial collection of 'national health accounting data' to the controversial collection of individual health profiles. For each of these areas we may ask the questions:

- 'What data are presently collected?'
- 'What is the integrity of the data?'
- 'How satisfactory is the routine analyses of these data?' and
- 'How could current collections and analyses be improved in a cost effective way?'

Comments on this large agenda are incomplete and highly selective.

Our overall belief is that there is an enormous unrealized potential for improving our understanding of individual and population health and for making inroads into the ocean of ignorance about the effectiveness and cost effectiveness of various interventions. For example in Figure 1 and Table 1 we highlight the enormous discrepancies in the receipt of treatments by different population groups. These data have enormous implications for the fairness of our system and for the cost effectiveness of our service delivery. However, these data are not routinely analyzed and required an ad hoc research effort to produce an incomplete picture of these problems.

Table 1 highlights an even more serious deficiency. Following an acute myocardial infarction different patient groups are currently receiving quite dissimilar treatments. We cannot draw strong conclusions from this because we do not know the subsequent health history and outcomes of these patients. However, separate and unlinked data already exists which would allow us to determine subsequent mortality, re-hospitalization, and the use of medical and

pharmaceutical services. These data are likely to give a clear answer to the question 'which treatment pattern should we adopt?'. Our failure to use these data to answer this question perpetuates one of two outcomes viz. (i) the overuse of extremely costly procedures; or (ii) unnecessary morbidity and premature death for those who are not receiving life saving services.

Such use of data may, of course, infringe some perceptions of civil liberty and this is a question which must be answered by the community and its' representatives and not by economists. We can, however, note that the 'opportunity cost' of confidentiality is almost certainly the premature death of large numbers of Australians whose illnesses could have been better managed with the better use of even existing data.

Australia has one of the world's best collections of administrative data. In addition to the benefits to Australians from its better use the analysis of existing and marginally extended data sets could have world-wide implications. At present these possibilities are largely ignored.

Inpatient Data

The data collected by the Australian Institute of Health and Welfare (AIHW) from State and Territory health authorities in the form of the National Hospital Morbidity Database is adequate with regards to timely reporting of public hospital utilization data. The AIHW (1999b) dataset consists of aggregate or summary data by state/territory and diagnosis related groups (DRG's) based on case level data. Case level data provides a vast potential for research relating to specific areas, for example procedures, diagnostic groups, and small area variation studies. To date the research effort to analyze this data has been somewhat ad hoc, with a need for more routine data analysis.

The current provision of national hospitalization data at the case level, however has the following limitations:

- inconsistency in the definition of data elements by institutions and between years as the data set is updated and redefined;
- demographic differences, particularly in reporting of aggregate data or average statistics at the state level;
- few variables relating to socioeconomic status;
- reporting of average data at the State or Territory level does not take into consideration differences in the level of service provision within local areas;
- under-representation of private hospital separations, because of under-reporting affecting comparisons across public and private institutions;
- poor protocols for data linkage with other data sources, for example MBS, PBS and DVA data; and
- no linkage to National Death Registry.

To inform health policy and the provision of cost effective care, case level utilization data needs to be supplemented with outcome data and indicators of quality. Mortality and morbidity data are

available, but are linked only to the hospital separations and any subsequent mortality and morbidity is not reported at the case level.

From the hospital's perspective output is defined as the 'discharged separation', reported by diagnosis or procedure. Thus an admission output, for example appendicectomy, becomes a proxy for the outcome of hospitalization. This is reinforced by output-based funding systems, where funding is based on Diagnosis Related Groups and is unrelated to patient-level outcomes or quality of care. There is no indicator of quality of hospital care included in the national dataset and reported at the case level. Thus data comparisons rely on the assumption of constant quality. That is, output defined by diagnosis or procedure is assumed the same, regardless of quality of care or patient outcomes.

Statistical data specifically relating to quality are reported annually by the Australian Council of Healthcare Standards (ACHS). The Report consists of aggregate data relating to clinical indicators, which include analysis by hospital type, location and size. The data are not reported at the case or individual hospital level, thus data to undertake comparison at this level is not readily available.

Minimal information relating to socioeconomic variables are reported at the patient level and included in the national hospital dataset.

Hospital Clinical Costing Data

The inpatient dataset can be supplemented with costing data from the National Hospital Cost Data Collection (NHCDC). Aggregate costing data can be used to compare productive efficiency across institutions, both public and private, at the hospital, DRG or specialty level. Currently, costs from the NHCDC are used in economic evaluations of new drugs undertaken for the Pharmaceutical Benefits Scheme (PBS), where hospital costs are required. Annual costing studies are also separately commissioned by the Victorian Department of Human Services to determine DRG cost weights, as the basis to a DRG-based funding system.

The above uses of costing data require that the data is of high quality in terms of both accuracy and completeness. Inaccurate hospital costing data may distort conclusions from economic analyses and may provide perverse incentives where cost weights derived from average costs form the basis of hospital payment. Conclusions from data analysis with respect to hospital efficiency may also be distorted.

Average costs per DRG derived from both the National and Victorian cost weights generally differ. However there has been no study undertaken to determine the extent and possible reasons for these differences. The methodology for deriving costs at the DRG level differs between the two collections. The national cost dataset relies on data collected from both cost modeling and patient-level clinical costing sites. Cost modeling sites use a 'top down' approach whereby total costs are distributed across patients based on a set of allocation statistics. Clinical cost sites, however, take a 'bottom up' approach where patients are identified and costs

distributed on the basis of activity data. The two approaches are described in Jackson, Watts et al (1999).

As more hospitals are implementing computerized costing systems, a study looking at data comparability issues and differences between cost modeled data and patient level clinical costing data is warranted at the national level. This task is particularly urgent as there will be an increased reliance on these data for health policy formulation relating to economic evaluations of specific technologies and pharmaceuticals.

Allied Health Services

There is no systematic national reporting of public hospital allied health services for admitted or non-admitted patients. Allied health services are included as a cost group/department reported in hospital cost weight studies, for both the National and Victorian studies at the case level, however activity data is not reported or defined by service type.

A broader issue than allied health services is the reporting of non-admitted patient services more generally. There is no national dataset of case level outpatient data, despite an increasing emphasis on these services. A reduction in hospital length of stay and changes in technology have enabled more people to access acute hospital services on an outpatient basis. This occurs in both the post-discharge setting to assist early discharge and in the management of chronic diseases to prevent hospitalization.

Provision of non-admitted patient services by hospitals are also a substitute for private specialist and GP primary care services, providing access to specialist and primary care services for disadvantaged population groups. However, the lack of a national dataset means that the extent of hospital outpatient service provision and utilization is not known. Potential costs and benefits relating to access and substitution are thus currently not able to be measured.

Waiting Times for Elective Surgery

Waiting list data by hospital and state/territory provides an insight into unmet elective surgery need (however defined) within the community. While data on waiting lists are available from the AIHW, it is widely believed that the information is unreliable as a result of gaming. Incentives exist for gaming when funding and penalties depend on the size of waiting lists and the numbers in particular patient categories. In addition, waiting lists are subject to manipulation by providers where they desire to discourage certain procedures or individuals (for example in the expectation of high cost), where they wish to encourage people into the private system, or where future income relates to the size of an individual surgeon's waiting list.

These problems may be mitigated by the overseeing of the reporting process by an independent agent. The formal monitoring and reporting process would be controversial, as it would require an assessment of need at the individual level according to clinical best practice (and evidence based) guidelines.

Conclusions

- Data needs and analyses should be determined and prioritised according to the importance of the problems they document;
- In summary, national reporting of hospital statistics and case level data are adequate for utilisation statistics and rate variation by states and territories. However some of the data are subject to remediable problems of reliability;
- There is a need for the establishment of national performance indicators for public hospitals and associated services, including inpatient, outpatient and emergency department services. These performance indicators could be used for comparative purposes across institutions relating to efficiency, clinical outcomes and quality;
- Data are generally inadequate for the analysis of patient level outcomes and indications of service quality;
- There is a need for research comparing difference between costing data from case level clinical costing and cost modelled sites; and
- There is an urgent need for an increased level of routine analysis of existing administrative data. Data linkage and the modest extension of data sets may, potentially, lead to very significant benefits in terms of lives saved, improvements in the quality of life and the elimination of unhelpful procedures. These benefits may need to be compared with the possible costs that some assert will arise from the potential leakage of confidential information.

9 The Effectiveness of Quality Improvement Programs to Reduce the Frequency of Adverse Events (Terms of Reference 9)

The key issue is the lack of any reward under current payment arrangements for the achievement of high quality care. Perversely, with the reliance on throughput based payment arrangements, in the hospital sector, and for – profit fee-for-service medical services, it could be argued that the pursuit of quality is discouraged. In many instances throughput and revenue maximization is most easily pursued through degradation in quality and this may be difficult to detect as quality of care is not the subject of regular monitoring and reporting and poor quality does not result in financial penalties. Where successful, quality initiatives are introduced, there is no formal mechanism for transmitting results elsewhere or for ensuring on-going funding.

A Systemic Approach

There are two possible interpretations of a systemic approach to quality improvement:

- a) the existence of financial incentives throughout the system that will promote the quality of care; and
- b) a regulatory framework which applies to the entire system and transcends particular boundaries.

Both are potentially important.

In one sense there already exists a regulatory framework, viz, the existing powers of the different levels of government. However, within this framework quality initiatives appear to be ad hoc. This is not necessarily undesirable. New and good ideas have a large random element in them and imposing an intellectually satisfying structure may be counter productive if—as sometimes happens—the elegance of the structure substitutes for more concrete measures.

There is, however, a minimum requirement for a satisfactory regulatory framework. A well funded body or group should be established with the dedicated task of supporting quality improvement within the health sector. The roles and responsibilities of such a body would need to be determined but they may include; searching for quality related ideas and initiatives both within, and from outside of, the health care sector narrowly defined; and support for an ongoing process of problem identification and problem solving with respect to the achievement of quality. Problem identification implies a systematic analysis of problems such as the occurrence of preventable adverse effects and excessive variations.

If this regulatory framework is to represent a truly ‘systemic approach’ and if the issue of quality is to be taken seriously then there is a case for the establishment of something more permanent than a working party. In the US, the President’s Advisory Commission on Quality has recommended the creation of an ‘Advisory Council for Health Care Quality’ which is responsible for problem identification and solving as discussed above. The most effective way of embodying

quality within the system would be to make such a group statutorily independent, answerable to the Minister and with a Secretariat from within the Commonwealth Department of Health and Aged Care.

As an alternative, such a group could be attached to the NH&MRC. Either way, a very clear signal would have been sent to both the public, and to service providers about the importance of quality improvement.

An important role of a permanent quality assurance group would be the determination of core measurement and performance indicators for each sector and specialization, and the determination of the validity and reliability of these instruments. This suggests the desirability of a capacity to monitor work in other countries and to run pilot studies in Australia.

Criteria for Prioritising Quality Initiatives

The importance of policy initiatives arises from the magnitude of the problem they are intended to overcome and from their effectiveness in resolving the problem—the burden of disease potentially avoidable through improved quality. This burden arises from an under or over use of services; from poor execution of services or from the poor management of an episode of illness. There are a variety of indicators of these problems and a full list of these should be identified and used as a trigger for policy development. Appropriate indicators might include:

- a) Unexplained variability in morbidity/mortality by population sub-group or geographic area;
- b) Unexplained variability in service delivery by population sub-group or geographic location;
- c) The number and importance of adverse events;
- d) Excess re-admission rates/unplanned admissions;
- e) Costliness of procedures;
- f) An unrealized potential for patient involvement; and
- g) Ad hoc findings which potentially indicate a wider problem.

The last point is nicely illustrated by the article by Stewart et al (1998) which found that counseling medical and surgical patients before discharge and during a single home visit more than halved mortality in a study population. This indicates a failure of communication and discharge procedures.

It is worth noting that Australia has an extremely rich database arising from routine administrative data. These have been dramatically under-utilized as a means of understanding the performance of the system.

While such criteria are needed to assess the importance of policy innovations, criteria are also needed to determine the success or otherwise of innovations. Evaluation and sunset clauses should be the norm for any initiative which requires an ongoing commitment of resources. Note that the literature does not, to date, suggest that many (potentially costly) QA procedures have had a demonstrably significant effect.

Use of Financial Levers

The full potential of financial levers is not explicitly recognized. In principle, a system committed to quality improvement would embody incentives to achieve this objective at all levels. This would, *inter alia*, suggest the following options.

Private Health Insurance: Health funds should have the ability and an incentive to reward quality. This might occur through differential payments as in the public sector (see below). A far more powerful option would be to reduce default payments (preferably to zero) for non-participating hospitals. The Funds should be permitted to base their selection of preferred providers upon explicit performance indicators of quality and be permitted to publicize why they have selected particular providers.

Public Hospitals: The use of 'normative DRG's' and other penalties/rewards should be explored. With these, the cost weight per DRG would have a deterrent or reward loading which could reflect (i) under/over used procedures; (ii) origin of the patient in an over/under serviced geographic location; (iii) the receipt of services from an accredited hospital; and (iv) some other quality related activity such as discharge planning and follow up servicing.

Doctors: Accreditation may be linked to a differential fee. This could be extended so that a loading was added to fees when doctors indicated their compliance with (broad) evidence based guidelines. The truth of their commitment could, potentially, be monitored using routine administrative data.

Financial Incentives are potentially the most powerful lever for achieving quality improvement. They are also the most controversial as they affect doctors' incomes and, arguably, their professional 'autonomy'. As a principle, however, it is not unreasonable that purchasers identify what they want and pay differentially when they do or do not get what they want. This is the basic principle which makes markets work. In some contexts it may be the only effective lever. For example, doctors who over-service are unlikely to change their practice and thereby cut their income because of an exhortation to adopt best practice.

Linking Solutions, Problems, Feasibility and Priority

The prioritization of solutions on the basis of the problem they solve and their feasibility is probably the key to further progressing a reform agenda. The approach to this task could either focus upon problems or upon potential solutions. The former approach is, probably superior. It is generally more rewarding to commence with problems and to seek solutions than to start with solutions and to seek the problems which justify them.

Conclusions

- Quality of care is not currently given serious attention. There are no explicit or comprehensive mechanisms for regularly reviewing and improving quality of care. Current incentives may encourage quality deterioration;
- Consideration should be given to the establishment of a statutorily independent body with similar responsibilities as the US 'Advisory Council for Health care Quality';
- The use of administrative data to monitor particular dimensions of quality should be explored; and
- Options for the incorporation of financial incentives for the improvement of quality should be canvassed. These include an elimination of default payments for private health insurance; the adoption of 'normative DRG's' and differential medical payments for compliance with defined guidelines.

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