

Health care funding in the Australian Capital Territory: From hospital to community

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Abstract

This paper presents an outline of the socio-demographic features of the Australian Capital Territory (the ACT) and of its health care system. I describe how health care resources are allocated in the government sector, present a more detailed description of the way that hospital services are purchased, and summarise the government's policy directions for health.

I argue that the main directions are sensible, and particularly those that support more integrated care that is largely based in the community. There appear to be no major weaknesses in the budget-share output-based funding model used in the purchase of hospital services, although the rationale for some of the components might be clarified.

In total, the ACT government appears to be on the right track. However, I argue that more rapid progress might be possible if there were greater collaboration between the Territory health authority and the relatively powerful private medical profession.

The context

Demography

The Australian Capital Territory (ACT) is 2400 square kilometers in size, which is about 0.03 per cent of the total area of Australia. It had a population of 308,700 in 1997 (about 1.7 per cent of the Australian population).

The population density is the highest of any state or territory (129 per sq km compared with the national average of 2.4 per sq km). Moreover, most people live in the northeast part of the Territory, and the south and west parts mainly comprise the Namadgi National Park. In short, there are no problems of rurality or remoteness. It should be noted, however, that the ACT's health system caters for a significant number of rural residents in adjacent parts of New South Wales. Indeed, patients from NSW have accounted for about one quarter of acute hospital admissions in recent years.

The population grew by 15 per cent in the ten years to 1997, but the growth rate has declined since then. Between 1998 and 2000, the average annual growth rate was 0.2 per cent, which is the second lowest of any State or Territory in Australia.

Figure 1: Age distribution in the ACT, 1996 population census

Age group	Male	Population Female	Total	Cumulative ACT	per cent Australia
0-4	10959	10553	21512	7.2	7.1
5-9	11465	10921	22386	14.7	14.2
10-14	12083	11478	23561	22.5	21.5
15-19	12671	12067	24738	30.8	28.4
20-24	13554	13495	27049	39.8	35.8
25-29	12265	12513	24778	48.1	43.4
30-34	11923	12592	24515	56.3	51.2
35-39	11847	12699	24546	64.5	59.0
40-44	11342	12275	23617	72.4	66.4
45-49	11461	11935	23396	80.2	73.4
50-54	8390	8102	16492	85.7	78.9
55-59	5711	5607	11318	89.5	83.4
60-64	4139	4075	8214	92.3	87.2
65-69	3378	3630	7008	94.6	90.9
70-74	2686	3338	6024	96.6	94.2
75 and over	2959	5061	8020	99.3	99.2
Overseas	996	1072	2068	100.0	100.0
All	147829	151413	299242		

As shown in Figure 1, the ACT has a younger population than Australia as a whole. Indeed, the average age in 1997 (31.6 years) was the lowest of any State or Territory.

It is similar to the rest of Australia with regard to many demographic attributes. For example, 22.5 per cent of the Territory's population was under age 15 (21.6 per cent for Australia as a whole), 50.6 per cent were female (50.5 per cent), and 74.3 per cent were Australia-born (73.9 per cent).

However, it is significantly different on some social and economic dimensions. For example, 10.3 per cent were attending a tertiary education institution (6.0 per cent), and the median weekly personal income was \$430 (\$292). Only 1 per cent of residents (about 3000) identified themselves as Indigenous in the 1996 Census, compared with 2 per cent for Australia as a whole.

Health status

The ACT's population is not only relatively young, but also healthy. As illustrated in Figure 2, the ACT's health status is the highest of any State or Territory in most respects. After adjustment for age, mortality rates are 16 per cent lower than the national average. The hospital admission and GP consultation rates are similarly low.

Figure 2: Selected health indicators, ACT compared to Australia, 1996

Indicator	ACT	Australia	ACT rank among States and Territories (Best = 1)
Health status			
Male life expectancy at birth (years)	76.6	75.2	1
Female life expectancy at birth (years)	81.6	80.1	1
Crude death rate (per 1000)	4.2	7.0	1
Standardised death rate (per 1000)	6.1	6.4	1
Infant mortality rate (per 1000 live births)	5.7	5.8	4
Perinatal mortality rate (per 1000 live births and fetal deaths)	7.9	8.5	4
Cause of death			
Ischaemic heart disease (standardised rate per 100,000)	116	151	1
Cancer (standardised rate per 100,000)	168	178	2
Road accidents (standardised rate per 100,000)	7	11	1
Suicide (standardised rate per 100,000)	12	13	1
Risk factors			
Medium and high risk drinkers (18 years and over)	4.2%	3.1%	7
Current smokers (18 years and over)	22.8%	23.7%	2
Acceptable weight (18 years and over)	55.6%	50.0%	1

Source: ABS, *Australian Social Trends 1998*. Catalogue No. 4102.0

There are, however, reasons for concern. Most obvious, its population has the highest rate of ageing of all States and Territories – more than twice the national average. The proportion of persons aged 65 years or more will increase from 7.3 percent of the population in 1997 to 10.2 percent in 2011.

The implications may be illustrated by the use of hospital separation statistics. In Australia as a whole, total hospital separations increased by 4 per cent per year (21 per cent overall) between 1992-93 and 1997-98. Public patient separations (that is, excluding private and compensable patients) grew by 6.7 per cent per year.

In contrast, total separations from hospitals in the ACT increased by only 2.9 per cent per year, and public patient separations grew by 9.2 per cent over the entire period. The situation is expected to change significantly over the next ten years, and by 2011 the ACT's rate of growth of separations is likely to approximate the national average.

The structure of the health care sector

Although it has a small and relatively homogeneous population, the ACT's health care sector has many of the structural complexities of the other States and Territories. Indeed, its small population means that the consequential overheads represent a proportionally larger burden. As stated in a recent policy document issued by the ACT Department of Health and Community Care (the Department), the health care system "... may be described as pluralistic, complex, and loosely organised" (ACT Health and Community Care, 1998). Reduction of the unnecessary complexity is an important goal.

The non-government sector includes three private hospitals and six privately-owned day surgery units. There are many individual health care providers including General Practitioners (GPs), private medical

specialists, pharmacists, community nurses and allied health professionals. There is a relatively large number of self-help groups, and there is an active network of volunteers.

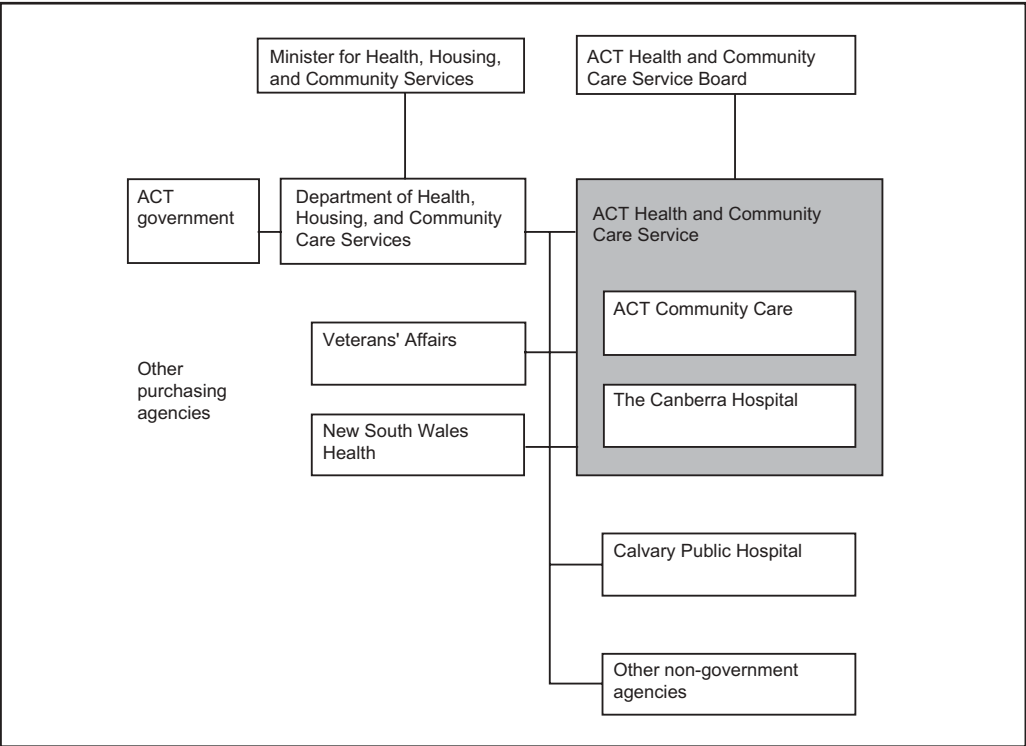
Rather surprisingly, the ACT is poorly served by general practitioners. In 1999-00, the ACT had fewer fulltime equivalent GPs per capita than any other state or territory excepting the Northern Territory. One consequence is that the level of bulk-billing is the lowest of all states and territories, and the rate of decline in bulk-billing has been the most rapid in the last two or three years. This situation may well be one reason for the high per capita health expenditures by the ACT government.

The ACT has long had private health insurance (PHI) membership above the national average, and this has continued to be the case over the last two years when Federal government incentives have caused a general increase in membership. For example, membership in the ACT grew from 33.8 per cent to 35.3 per cent between December 1998 and December 1999, compared with the national average of 30.2 per cent and 31.7 per cent.

The number of PHI members is not necessarily a good indicator of use of private insurance. A recent study showed that the proportion of privately insured patients treated at The Canberra Hospital declined from 16.7 per cent of all separations in 1993/94 to 8 per cent in 1996/97 although membership levels fell only marginally. A similar trend was observed at Calvary Public Hospital – from 26.1 per cent of all separations in 1994/95 to 9.9 per cent in 1996/97. ACT Health believes it is important to encourage more use of PHI in order to ‘take the pressure off the public hospitals’ but (like many other bodies that make this claim) gives no explanation of how this could possibly happen.

The structure of the ACT government health care sector is summarised in Figure 3. A single agency was responsible for both financing and care provision until 1996. In that year, the government implemented a purchaser-provider model across most sectors including health. At the time of writing, there are two distinct components: the purchasing agency (the Department), and the provider agency (the ACT Health and Community Care Service, or simply the Service in the remainder of this paper).

Figure 3: The main features of the public health care system in the ACT



The Department purchases services from The Canberra Hospital, ACT Community Care, Calvary Public Hospital, a range of non-government agencies and some private service providers. In addition to its purchasing functions, the Department is responsible for policy development and planning. It also provides a health protection service.

The Service is operated by a board of governance, termed the ACT Health and Community Care Service Board. It supervises the two main service provider agencies, The Canberra Hospital and ACT Community Care.

The two main hospitals, The Canberra Hospital and Calvary Public Hospital, provide a nearly complete range of secondary and tertiary emergency, outpatient, and inpatient services and only a small proportion of highly specialised services are not present. ACT Community Care provides a wide range of services in a relatively integrated way. The services are structured as six main programs: child, youth, and women's health; alcohol and drug; dental health; community rehabilitation; correctional health; and disability.

An interesting feature is that most allied health services have recently ceased to be hospital-based and are now managed through ACT Community Care (although many allied health staff continue to work in the hospitals). The policy intention was not only to increase the cohesion of the services themselves but also to take a step towards strengthening the degree to which care is integrated and predominantly community-based.

There has been an ongoing debate about the value of the purchaser-provider split – as has been the case in many other parts of the world. The Department argues that, although some degree of tension is necessary if the purchaser-provider split is to deliver gains relative to previous arrangements, there are also opportunities for improved communication and collaboration. There appears to be little evidence of significant changes in effectiveness that could not have been achieved in other ways. However, it may be reasonable to claim that the reorganisation of responsibilities stimulated all parties to be more aware of the need for improvement on both sides.

The goal is purchasing on the basis of value for money. The Department believes it should in future "... be purchasing services only where there is evidence of good clinical outcomes and should be looking to cease purchasing services where there is little or no evidence of better health outcomes." It has been enhancing its ability to measure outcomes in various ways, including establishment of the Clinical Health Outcomes Centre at The Canberra Hospital and funding of various care teams to develop and implement clinical practice guidelines. The intention is to ensure the guidelines cover all settings of care, and to design them in such a way that they promote care coordination.

It has long been argued that the ACT should have a medical school, partly because The Canberra Hospital has a regional referral function that services both the ACT and surrounding parts of NSW. In 1993, a step was taken towards this goal by the establishment of the Canberra Clinical School at the Canberra Hospital. It is effectively another campus of the University of Sydney Medical School. Shortly before going to press, it was announced that the Canberra Medical School would be established as a joint venture for the Australian National University and Canberra University.

Cross-boundary flows

There is a net inflow of patients to the ACT, and it mostly originates within the Southern Area Health Service (Southern AHS) of New South Wales. Southern AHS residents accounted for 27 per cent of separations and 15 per cent of beddays in ACT public and private hospitals in 1997/98. In total, there are fewer cross-boundary flows for community services, but some of the more specialised are heavily used by patients from outside the Territory.

Figure 4 shows the sources of inpatients for ACT public hospitals in 1999-00. Nearly one in four patients came from outside the Territory, predominantly from the service area of Southern AHS.

Figure 4: Source of ACT public hospital inpatients, 1999-00

Source	Separations		Inpatient days	
	Number	%	Number	%
ACT residents	45965	76	151568	74
Southern AHS	12702	21	43009	21
Other	1816	3	10239	5
Total	60483	100	204816	100

The cross-border flows were even more significant with respect to the more complicated types of inpatient care. The ACT uses the same definition of complexity as in New South Wales (comprising the 'high cost complex' or HCC DRGs). With respect to these cases, 45 per cent were residents outside the ACT in 1999-00. The cross-boundary flows of complicated cases were particularly significant in cardiothoracic surgery, general medicine, haematology, neurosurgery, ophthalmology, orthopaedics, and vascular surgery.

As noted earlier, the ACT provides most kinds of care, and flows from the ACT are quite low. In 1996-97, the ACT was estimated to be able to handle 94 per cent of its hospital service needs in its own facilities. A small number of complicated cases are treated outside the Territory, predominantly in teaching hospitals in Sydney. ACT Health considers this is adequate, given the high costs (and the difficulties in maintaining quality for low volumes) that could be anticipated if all kinds of quaternary services were available locally.

Strategic directions

Two recently issued policy documents define important strategic directions for the ACT over the next few years. The first was titled "Setting the agenda" (ACT Health and Community Care, 1998), and the second was a strategic plan for health and community care services to cover the period from 2000 to 2002 (ACT Health, 2000a).

In total, there are five main strategic directions. They are the provision of integrated health services, encouragement of increased use of primary care and a corresponding reduction in the use of acute care hospitals, cost-effective acute care services, decision-making based on evidence regarding outcomes, and the reporting of system performance for the information of the community at large.

Much use has been made of ideas originating in the "Health for all" program of the World Health Organisation. In particular, the emphasis is on "... keeping people healthy and out of hospital through support in the home and in the community with primary health care providers, while ensuring a high quality hospital system is available for those who need it."

With respect to service integration, ACT Health emphasises improved coordination between hospitals, hospital and non-hospital services, and sectors. For example, it notes that "... it is neither logical for consumers nor for service providers for the management of The Canberra Hospital to act in isolation from Calvary Public Hospital. Nor is it logical (or in the interests of consumers) for community-based services to be provided without taking into account the interface with, and continuity of care involving, the hospital sector". Similar comments are made with regard to the linking of the government and non-government sectors, and Federal Government and State services – and particularly those of New South Wales.

The main focus of attention has been the integration of services for people who need care across several settings over prolonged periods of time. Indeed, ACT Health has already made considerable progress in this regard. An example is the Link Program, which is designed to provide better continuity of care across hospital and non-hospital services. It includes the provision of after-hours home nursing services, and the involvement of GPs in the Canberra After Hours Locum Medical Service (CALMS). These and related developments have been effective in reducing the number of admissions to hospital of persons whose needs largely comprise social support rather than specialised acute care.

Several programs that relate to specific chronic conditions have been implemented or are under trial. For example, ACT Health is working with GPs and other care providers to improve the cost-effectiveness of care for asthma and diabetes. On a broader front, ACT Health has been attempting to reach agreement with the Commonwealth and various care providers (and particularly the general practitioners) on the trialing of an 'Integrated Care' model. In essence, this would involve establishing the Department as the only purchaser of care.

The Department is concerned that there should be easier and faster access to information and services at home, so that people are better able to care for themselves and to know where and how to access services when they are needed. Much has been done in the last decade to promote the active involvement of consumers in all aspects of health care planning and evaluation. A major extension has been developed called Healthfirst. The core is a consumer call centre that can provide a wide range of information including advice on the accessing of appropriate services. The service became operational in early 2001.

However, a recent planning document (ACT Health 2001) noted that the ACT has no overall mechanism for high-level community input to health care planning or policy development. Although consumers have been added to planning groups for particular specialties, there is no formal structure whereby the community as a whole can provide the Department with broad policy and planning advice.

Another important goal is reduction of the range of services provided by hospitals through the progressive expansion of community-based services. 'Setting the agenda' (ACT Health and Community Care, 1998) made specific mention of the need to "... limit functions performed within the hospital system to only those functions which are best performed (there)." In addition to the refinements in community-based services noted above, developments have taken place with respect to rehabilitation, palliative care, chronic pain management, convalescence, aged care, and various forms of step-down services. An important design principle is that the focus of management of patients across settings should normally be within the community rather than the hospital.

A 1998 survey of utilisation rates for services within the Home and Community Care (HACC) Program showed that ACT residents made much higher use of respite care and a slightly more use of personal care services than the Australian average. They made much less use of day centre care and home help. In total, the ACT had lower levels of use of HACC services than the national average. ACT Health (ACT Health 2001) notes that "... the accessibility and appropriateness of these services have been identified as requiring attention".

Finally, the ACT is taking a particular interest in the development of integrated information systems. It is establishing a Territory-wide patient master index that facilitates the linkage of care provided in most care settings. This will be extended through the Health Information Networking (HIN) Project, which includes networking between public and private sector providers.

Health care financing and resource allocation

The process of financing is relatively simple to describe. The annual budget allocation for health is determined by the ACT Government, and is then distributed by the Department through a set of contracts with care providers.

The care provider agencies are few in number, compared with other States and Territories, and they are dominated by three: ACT Community Care, The Canberra Hospital, and Calvary Public Hospital. It has been the practice in recent years to make adjustments to the split of resources in accordance with the government's health care strategies. However, the adjustments have mostly been marginal thus far.

An illustration of this process comes from 2000-01 (ACT Health 2000c). The total budget for Health and Community Care was \$405 million, an increase of about \$15.9 million over expenditure in 1999-00.

Most of the increase was directed at growth in input prices and patient volumes. In the latter category were increased needs for oncology services, palliative care, and renal dialysis.

Only a fraction of the increase was directed at the facilitation of changes of strategy. They included improved discharge planning, adult asthma education aimed at decreasing hospital admissions and emergency department attendances, research into the establishment of primary health care centres in hospital emergency departments, improved chronic pain management at The Canberra Hospital, and increased funding for public outpatient fracture clinics to improve long term outcomes for orthopaedic patients. It can, however, be argued that some of the 'incentive funds' were directed at promotion of strategic directions. These are described in more detail below.

Mention of the slow rate of change is not intended to be a criticism of ACT Health. There are high levels of fixed investments in any health care system, in both facilities and equipment and in labour costs. However, there is an argument that more could be done. In particular, there could be budget share targets as well as general statements about goals.

A counter-argument is that, if policies are taken into account in every decision about the details, the overall effect will be significant and consistent with those policies. In reality, there will always be a gap between expectation and reality because decisions taken at the level of specific services are more likely to lead to compromise. There are too many vested interests in existing arrangements, and they may be particularly strong in the ACT.

Health care costs and budget overruns

Budget overruns have been common for more than a decade. As an example, The Canberra Hospital began 1999-00 with a projected budget overrun of \$11.7 million. In spite of considerable effort, it had an operating deficit of \$7.4 million at the end of the year. The process of budget management has almost become routine. There are promises of elimination of budget overruns on the side of the purchaser and the provider, there is optimism during the early part of the financial year followed by despair and recrimination towards the end – and the departure of one or more senior staff before the start of the next cycle.

There are conflicting views about this state of affairs. The Department has sometimes argued that the providers are failing to act responsibly with respect to expenditure control. The care providers have tended to argue that the budgets are too low, and that they would be irresponsible if they denied necessary care to their patients simply in response to what they claim to be bureaucratic incompetence or political dogma about small government.

There is no doubt that the unit costs of most hospital and community health services are higher than the national average. This is partly a consequence of the higher expectations and willingness to pay of the serviced population, and the limited opportunities to realise economies of scale. However, there appear to be other contributing factors that should be controllable, including problems of both input prices and productive efficiency.

Whatever the causes, the problem will continue to be poorly handled and the source of unnecessary friction until there is a greater degree of agreement about the causes of the higher costs – or even about the validity of comparisons with the costs elsewhere in Australia. The Department recently observed (ACT Health 2001) that it is a matter of some urgency “... to better understand (the causes of) the cost differential, as the opportunity cost of this differential may be unsustainable in the future.”

The Government has repeatedly committed itself to reducing the ACT's health costs so they are closer to the national average, in order better to manage its overall budget. It has adopted a strategy in the last two or three years which is dominated by attempts to improve productive efficiency rather than by reductions in access to services.

Much effort has been made to establish a reasonable basis for comparison, and hence to resolve the issue of appropriate funding levels for hospital services. At present, the Department is employing a model that defines additional funding of two main types.

The first component of additional funding is temporary, and should be unnecessary in due course. The most recent documentation (ACT Health 2000c) claims that “... ACT public hospital funding will move, over the next ten years, to be in line with national average prices for benchmark hospitals.” In fact, a ten-year schedule for cost reductions was developed in 2000 and activated at that time. However, the Department's current view is that more will be achieved by a collaborative effort of the purchaser and provider in understanding the nature of the cost differences – and avoiding the assumption that all causes of higher costs are unjustifiable. The latter approach is dominant at the time of writing.

A group of Australian hospitals has been identified as the peer group for the purpose of determining the spending goal. The expected levels have then been openly stated. The Department argues that openness is essential if only because it will “... provide pricing signals to both public hospitals, which will enable hospital managers to force change in the areas where efficiencies are achievable and desirable.”

The second component concerns services provided by ACT public hospitals that are not present in the benchmark hospitals. The Department argues that the ACT is unique in some respects. For example, The Canberra Hospital provides some public health services that are delivered by "... dedicated centres in larger health systems."

Statistics from the Australian Institute of Health & Welfare (AIHW) show that the benchmark cost per casemix-adjusted separation in the ACT has declined from \$3623 in 1997/1998 to \$3167 in 1999/2000. These figures confirm that based on this benchmark, the ACT hospital system's costs are now no longer the most expensive in Australia. Its costs are now 16% higher than the average, compared with 40% higher in 1997/98 (AIHW, 2001).

The most recent analysis of ACT's historical variation from national benchmark costs have questioned the validity of methods used to assert the claim that it has the most expensive hospital system in Australia. Work undertaken by the National Centre for Social and Economic Modelling (NATSEM) for The Canberra Hospital concludes that much of the reported differences by AIHW in the past should not form the basis for a judgement that ACT hospitals are less efficient. Subsequent work identifies a range of structural and systemic differences between hospitals in the ACT and other States that have not previously been taken into account in assessments of relative efficiency (The Canberra Hospital, 2001).

The funding of acute hospital services

As in other States and Territories, payments to non-government care providers include an element related to capital costs. However, there are separate budgeting processes for capital and recurrent expenditures with respect to government-owned care providers. Whereas the Department is responsible for the funding of recurrent expenditures, major capital items are the responsibility of the ACT Department of Treasury and Infrastructure. Thus far, no serious consideration had been given to the possibility of combining them.

However, the recurrent budgets include an amount (\$3 million in 2000-01) for the replacement of equipment valued at over \$5,000. The Department recognises that this is an accident of history. The amount has not been indexed for several years, and it is not sufficient to cover the costs of replacing essential equipment. At the time of writing, the Department is reviewing capital funding with the aim of establishing entirely separate processes for capital and recurrent funding (in contrast to some States where there is growing interest in merging the funding streams).

Most of the acute care for Medicare-insured patients in the ACT is provided at two hospitals. The Canberra Hospital is a government-owned facility with about 500 beds that was established in its current form in 1990 when the Royal Canberra Hospital was closed and most of its services were moved to the current site – until then known as the Woden Valley Hospital. The Canberra Hospital provides most of the tertiary services including major trauma and intensive care.

The second facility is the Calvary Public Hospital, which had 182 beds in 2000. It is owned by the Sisters of the Little Company of Mary, which also operates the Calvary Private Hospital on the same site. Indeed, the site was originally established under the name 'Calvary Hospital' to function only as a public hospital. However, it made sense for all concerned to establish a part of the hospital simply to provide services for privately insured patients, in view of the fact that there was more space than was required for publicly insured patients alone. The role of Calvary Public Hospital is now best seen as that of the community hospital for the northern part of the ACT. It has also become an important provider of elective surgery under contract to the Department.

The Department uses a budget-share form of output-based funding to allocate resources among its hospitals. By this, I mean that information is used about what the hospital produced. Since the main products of hospitals are episodes of patient care, this approach is often termed casemix-based funding.

By budget share, I mean that a total budget is determined in advance and is distributed among the hospitals in proportion to their casemix-adjusted workload. Thus a hospital that has more episodes of care would receive a larger share, but account is also taken of its casemix: episode types with higher than average costs would count more when its share is being determined. Because the total budget is fixed in advance, only the shares for each hospital would be affected by changes in volume or casemix. If more patients were processed, or if casemix became more complicated, hospitals would normally have to do the extra work without additional compensation.

In practice, there have usually been provisions in the hospitals' contracts for upward variations in budgets to reflect justifiable volume increases over the targets. Given that the ACT government has nearly always been able to provide additional funding, it might reasonably be argued that the capped budget has effectively been divided into the major part that is initially contracted, and a small reserve to be used as necessary (such as when there are unanticipated increases in workloads).

Given that the Department has defined reasonable payment amounts based on comparisons with peer group hospitals (called benchmark prices as described below), it might be argued that it is moving towards a payment and away from a budget-share model. However, the reality is that prices will continue to be adjusted for various reasons for the foreseeable future. For this and other reasons, the dominant idea will continue to be that of negotiation of a capped budget each year that reflects judgements as to the reasonableness of care levels and efficiency.

Contracts are written each year between the purchasing agency (the Department) and each care provider. This approach has been used for several years, and the contracts have become progressively more specific and binding.

The contract for Calvary Hospital

An example of a recent contract is that between the Department and Calvary Hospital for financial year 2000-01. I will only describe the general structure below, because the Calvary Hospital argues that the details are commercially sensitive. It seems to me that its arguments are unreasonable, given that the contract relates to services being provided through government funding. However, the details are not essential to this paper, given that no restrictions were placed on my reporting the details for The Canberra Hospital's budget (see the following section).

In overview, Calvary Hospital was provided with a target budget for which it was required to deliver an agreed range and level of services. There were three main components in the budget, as follows.

- First, the hospital had to deliver 9875 acute inpatient episodes. The budget amount was based on a predetermined price per cost-weighted separation.
- Second, it was required to provide 47661 emergency department episodes of care. Again, the budget amount was based on a predetermined price per episode. In this case, the episode was the occasion of service.
- The remaining products were largely funded on a cost basis. Separate budget amounts were specified for outpatient services, prostheses, research and training, mental health, equipment with a unit price of \$5000 or more, hospice care, and a residual category (other).

Various other conditions applied, including those relating to the reporting of performance. The hospital was also required to inform the Department if, at any stage during the year, it believed it was likely to vary from the specified activity levels by 2 per cent or more (either above or below). Negotiations must then take place with respect to possible variations to the contract within a short and specified period.

For 2000-01, the Department indicated that targets would be judged to have been met if at least 97 per cent of the total contracted throughput had been delivered. This seems to be mainly a reflection of the uncertainty regarding volume forecasts and associated prices.

Figure 5: Structure of the budget for Calvary Hospital, 2000-01

Services	Throughput	Benchmark price in \$	ACT cost factors and transitional funding in \$	Total funding in \$
Inpatient cost-weighted separations	9,875	B_1	A_1	T_1
Emergency department (CWOOS)*	47,661	B_2	A_2	T_2
Outpatients	33,540	B_3		T_3
Prostheses		B_4	A_4	T_4
Research and training		B_5		T_5
Mental health		B_6	A_6	T_6
Equipment over \$5000		B_7		T_7
Hospice B8 T8 Other services		B_9		T_9
Total Expenditure		(B_i)		(T_i)
Less revenue				T_{10}
Incentive funding		B_{11}		T_{11}
Total		$(BI) + B_{11}$	(AI)	$(TI) - T_{10} + T_{11}$

* Cost-weighted occasions of service

The budget is summarised in Figure 5, with the actual financial data removed for reasons noted above. The term 'benchmark price' refers to the level of funding that would be appropriate in some circumstances. The fourth column includes the two types of reasons for exceeding the benchmark prices: unavoidable and appropriately higher spending (called ACT cost factors), and subsidies relating to avoidable inefficiencies (called transitional funding) which might therefore only apply for two or three years more.

Acute inpatient services were priced by use of AR-DRG version 4 national teaching hospital costs (CDHAC 2000). However, the costs were reduced by deduction of the emergency department and prosthesis components (which were specified as separate products). This resulted in an agreed price per cost-weighted separation.

In contrast with the budgeting models in other States, there was no discounting of privately insured patients. The payment was set to zero for the so-called error DRGs (960Z, 961Z, and 962Z).

The target volume was based on actual numbers in 1999-2000, but with adjustments for additional growth. Of particular importance, additional funding was provided to reflect new oncology services for an estimated 500 patients.

No restriction was placed on the mix of cases, in contrast with previous years where specific targets were set for each of around 20 major categories. However, the contract specified the range of specialty services that must be available.

Emergency department services were purchased at an agreed price per cost-weighted occasion of service, categorised by use of the Urgency Disposition Grouping System (Jelinek 1992). The cost weights for each category are shown in Figure 6. The target volume of 47661 occasions of service was based on actual numbers in 1999-2000, but with adjustments for additional growth.

Figure 6: Emergency department classification and payment rates, 2000-01

	Category	Funding rate	Cost weight
Directly admitted	Triage 1	\$ P ₁	4.8493
	Triage 2	\$ P ₂	2.6412
	Triage 3	\$ P ₃	2.2693
	Triage 4	\$ P ₄	1.8345
	Triage 5	\$ P ₅	1.1358
Discharged from ED	Triage 1	\$ P ₆	1.8327
	Triage 2	\$ P ₇	1.7138
	Triage 3	\$ P ₈	1.4993
	Triage 4	\$ P ₉	1.1903
	Triage 5	\$ P ₁₀	0.7859
Did not wait		\$ P ₁₁	0.0633

ACT Health describes the funding method for outpatient services as 'block funding'. In other words, a single amount of funding was provided that reflected the estimated total expenditure in the previous year, but with minor adjustments to take account of cost and volume changes at the margins.

It was envisaged that a casemix classification would be applied in subsequent years, in which case block funding would be replaced by casemix-weighted volume. The Developmental Ambulatory Classification System was being considered as a possible basis for categorisation of services.

No restriction was placed on the mix of cases. However, the contract specified 23 types of outpatient clinics that must be available such as antenatal, psychiatry, radiology, occupational therapy, nutrition, and cardiac rehabilitation. The hospital was not permitted to operate any other than the listed types of clinics without the prior agreement of the Department.

Prostheses were purchased separately because the Department recognised that "... funding through a DRG payment does not adequately reflect" the true costs. The budget for this item was based on estimated prosthesis costs as indicated in the results of the national teaching hospital cost survey, but with an increment of 19 per cent. The increment was based on analysis of the difference between the DRG amounts and actual expenditure history at the hospital.

The separation of prostheses payments only applied to Calvary Public Hospital (and not to The Canberra Hospital). This was because Calvary undertakes most of the elective joint surgeries, and the DRG rates were considered to be particularly inadequate with respect to artificial joints.

Mental health services were funded in two main parts. First, there was a target volume of 816 inpatients, for which the unit price was the average cost per inpatient after deduction of the emergency department and prosthesis components, as described above for other inpatients. Second, there was a target of 3634 outpatient occasions of service. In this case the unit price was set at the estimated average cost for all outpatient clinic services.

The separation of mental health services funding was necessary because it is required under the Australian Health Care Agreement between the ACT and the Commonwealth "... in order to provide increased transparency in the allocation of funding". The Department also considered it justified in order to facilitate the implementation of strategies regarding transfer of more care to the community.

With respect to revenues generated by the hospital, the budget simply indicated a reasonable expectation. If actual revenues exceeded the forecast, the hospital was permitted to retain the surplus. However, ACT Health reserved the right to approve the uses to which any surplus might be applied.

The hospital was paid in two-week installments in advance. The amounts were based on the estimated share of total volume of patient care in each two-week period.

During 2000-01, a parallel payment schedule was operated in order to test the planned method for 2001-02. The main difference in the test process was that payment in anticipation of work done would be replaced by payment for actual performance against the contracted volume.

An 'incentive funding' account was created. Payments from this account were to be made only where hospitals met specified goals intended to show increased efficiency, provision of better services, or identification of unmet needs for care.

Improvements for which incentive payments would be made included exceeding the targets of 43 per cent of surgery patients treated on a same-day basis (\$5000 per month), and of 80 per cent of overnight-stay surgery patients admitted on the day of surgery (\$5000 per month). Additional payments would be made for the treatment of patients on the basis of Hospital in the Home (HITH). The rates were \$250 per patient for less than 24 hours, and \$500 for 24 hours or longer. The HITH patient incentive payments were in addition to the amounts paid according to DRG.

Incentive payments also applied to reporting. In particular, they related to timely submission of inpatient discharge summaries (morbidity data) with at least 98 per cent of coding completed, waiting list records, and emergency department data.

An incentive payment of \$300 was made for every Aboriginal inpatient. The main aim was stated to be that of ensuring that better data on service use would be available for management in future. However, the Department also noted that the additional funding would help ensure that "... culturally sensitive services and discharge policies are in place to meet the needs of the Aboriginal community" (ACT Health 2000c).

Finally, an incentive payment of \$27,000 per month would be made where there were no Category 1 (long wait) patients on the waiting list. These are patients who are categorised as requiring care within 30 days (Category 1), and not actually treated within that period of time (long wait).

The contract for The Canberra Hospital

In general, the contract for 2000-01 was of much the same kind as that summarised above for the Calvary Public Hospital. The key details are shown in Figure 7.

Figure 7: Budget for The Canberra Hospital, 2000-01

Services	Throughput	Benchmark price in \$	ACT cost factors and transitional funding in \$	Total funding in \$
Inpatient cost weighted separations	33,563	100,554,748	5,687,066	106,241,814
Critical care (beddays)	9,418	14,975,602	2,595,828	17,571,430
Emergency department (CWOOS*)	62,171	8,452,147	7,547,853	16,000,000
Outpatients		23,582,000		23,582,000
Renal dialysis		9,013,187		9,013,187
Nursing home type patients	1,709	381,107	352,054	733,161
Long stay outliers	16,513	3,682,399		3,682,399
Research and training		11,529,420		11,529,420
Other services		828,000		828,000
Mental health services		16,681,589		16,681,589
Equipment greater than \$5,000		2,450,000		2,450,000
Total Expenditure				208,313,000
Revenue				(-)8,972,000
Incentive Funding				2,150,000
Totals		192,130,200	16,341,801	201,491,000

* Cost-weighted occasions of service

For inpatient services, prices were based on AR-DRG Version 4.0 public hospital teaching costs, but excluding the critical care and emergency department components. Services were purchased at a price of \$2,996 per cost-weighted separation.

There was a separate budget for long stay outliers. The threshold was set at the DRG average length of stay plus 11 days, and payment was \$223 per bedday (but with a capped total budget). The Department argues that the payment rate "... is based on the principle of sharing the risk for outlier patients between the Department and hospitals." It recognises that many long stay patients are low users of resources, whereas others have unusually high costs for reasons such as the need for high-cost drugs.

The idea of risk sharing is unclear. I assume the Department means that the number of long stay outliers is difficult to predict, as is the degree to which they need high-cost care, and the payment rate per day and the target volume have been set according to best estimates which may be unreliable. However, this is generally true for all kinds of payment systems. A more plausible justification for the use of any form of outlier payment is that hospitals differ in the extent to which they are likely to have outliers that they cannot control. Perhaps this is the case here: The Canberra Hospital is more likely to receive the more complicated and costly referrals than Calvary Public Hospital. If so, this should be clearly indicated in the available documentation.

It is interesting to note that there is provision for additional funding for high-cost outliers (presumably meaning patients whose longer length of stay is a poor indication of the additional cost by itself). Again, this seems a sensible arrangement to me. However, the documentation could be clearer. Moreover, it would help if there were more precise rules: Departmental documentation simply says that "... the Department will consider claims for additional funding for high cost outliers on a case by case basis within available funding limits."

A separate budget line was established for renal dialysis (AR-DRG L61Z). For in-hospital, satellite and home haemodialysis, services were purchased by occasion of service. 16,633 were purchased at a price of \$407 per episode. The volume was set at the 1999-2000 activity level plus 8.7 per cent growth.

Peritoneal dialysis care was purchased from the hospital at a price of \$35612 per patient, for an estimated 63 patients. This separate budget excluded dialysis undertaken as where end-stage renal failure was a comorbidity, and patients receiving plasmapheresis in the Renal Ward (admitted under AR-DRG B62Z).

The distinctive funding of renal dialysis was justified by the Department on the grounds that the services have a high and predictable volume. This claim is difficult to understand, since the degree of predictability of expenditures has the same effect regardless of whether budget lines are separately identified. However, a more precise basis for funding is surely justified.

Figure 8: Critical care funding, The Canberra Hospital, 2000-01

Service Type	Price per bedday in \$	Throughput (beddays)	Benchmark price in \$	Transitional funding in \$	Funding in \$
Intensive Care Unit	2,194	3,238	7,104,172		
Coronary Care Unit	1,081	3,630	3,924,030		
Neonatal Intensive Care Unit	1,548	2,550	3,947,400		
Total		9,418	14,975,602	2,595,828	17,571,430

The critical care budget line applied only to adult intensive care unit level 3, the neonatal intensive care unit level 3, and acute coronary care services as defined in Version 9 of the National Health Data Dictionary (AIHW 2000). The volume for intensive care was set at the actual level in the previous year. There were no precise data for coronary care in the previous year, and therefore a preliminary estimate was made – which would be subject to revision during the year. The target volume for neonatal intensive care was based on the use of 8 beds at an occupancy rate of 87.3 per cent.

Separate funding is justified by the Department because “... there is a risk to funding very high cost services on the basis of averages.” It argues that separate funding of critical care is not necessary for Calvary Public Hospital because average DRG costs include a critical care component and Calvary “... provides services that fit closely with the services provided by the average major urban hospital in Australia.” In contrast, The Canberra Hospital provides more critical care services than the average Australian hospital and therefore “... the cost of critical care services at The Canberra Hospital may be greater than the amount provided for in the AR-DRG classifications.”

Again, the justification is not entirely clear. It is not the overall level of provision of critical care that is important, but rather the extent to which critical care costs are explained by the DRG classification. Nevertheless, the justification for funding intensive care in a more precise way than by DRG is surely overwhelming. To put it simply, there would be serious injustice in paying equal amounts to The Canberra Hospital and Calvary Public Hospital for critical care when most services (and especially the most complicated elements) are delivered at the former hospital as a matter of sensible policy.

Care for nursing home type patients (NHTPs) was purchased at a price of \$223 per OBD. NHTPs were defined to be those patients who, after 35 consecutive days as an inpatient, had not been declared by a medical officer as continuing to need acute care. If an assessment by the Aged Care and Assessment Team (ACAT) had not occurred during the 35 consecutive days, it was required that an assessment by ACAT be undertaken after that time.

Funding for Mental Health Services comprised the five components shown in Figure 9. In essence, the amounts were based on actual expenditures in the previous year, but with adjustments for volume and input price changes.

Some degree of imprecision was accepted by both sides. This was in recognition of the intention to conduct a review of mental health services during the year. It was expected that throughput targets would be finalised following the review.

Figure 9: The budget schedule for mental health services, The Canberra Hospital, 2000-01

Service Area	Total in \$
Inpatients	6,027,952
Outpatients	375,926
Community and extended care	8,964,411
National Mental Health Strategy	377,300
Forensic	300,000
Child & Adolescent Mental Health	636,000

The budgets for emergency department, outpatient, and equipment were set in much the same way as for the Calvary Hospital.

For the purpose of comparison with the funding models of other States and Territories, I have reported in Figure 10 the imputed payment rates for The Canberra Hospital in 2000-01 for two DRGs: appendicectomy without complicating factors (G07B) and vaginal delivery without complicating diagnosis (O60D).

As noted earlier, cost relativities were taken from the results of the National Hospital Cost Data Collection for public teaching hospitals. Critical care and emergency department services were funded separately, and the rate per cost-weighted separation for the other components was \$2996. I have therefore applied the public teaching hospital cost weights to this residual amount.

Figure 10: Imputed payment rates for DRGs G07B and O60D for 2000-01, The Canberra Hospital

DRG version 4.1		G07B (appendectomy without complicating factors)	O60D (vaginal delivery without complicating diagnosis)
Cost weight		1.09	0.8
Component rates per case in \$:			
Ward medical	Direct	261	227
	Overhead	66	45
Ward nursing	Direct	621	961
	Overhead	192	258
Pathology	Direct	142	31
	Overhead	42	8
	Imaging Direct	37	3
	Overhead	7	1
Allied	Direct	14	14
	Overhead	6	9
Pharmacy	Direct	93	40
	Overhead	19	16
Operating rooms	Direct	798	66
	Overhead	212	12
Supplies	Direct	172	96
	Overhead	107	119
Procedure suites	Direct	1	0
	Overhead	6	0
Prostheses		26	3
Oncosts		159	157
Hotel		109	127
Depreciation		94	72
Other		83	133
Subtotal in \$		3,266	2,397
Critical care	Direct	8	37
	Overhead	2	7
Emergency dept	Direct	166	16
	Overhead	54	7
Total in \$		3,496	2,463

I have made no adjustments for the ACT cost factors or the transitional funding because these two additional types of funding are not separately identified in the available documentation. Actual payment amounts would therefore be a little higher than those shown in Figure 10.

Management of hospital waiting lists

Over the last decade, waiting times and numbers of waiting patients in the ACT have been similar to those for Australia as a whole. The Department correctly argues that the existence of waiting lists is not a problem, but rather an appropriate response to the need to manage demand if costs are to be kept within control.

However, the waiting lists need to be well managed. As in other jurisdictions, the ACT has recently shifted its basis for waitlist management from numbers of patients on waiting lists to waiting times. In recent years, performance for Category One (treatment regarded as necessary within 30 days) has been satisfactory. For less urgent categories, there has been greater reason for concern. Several remedial measures were proposed by a study conducted in 1999 (ACT Health 1999).

In 2000-01, ACT Health allocated \$10 million specifically for the purpose of selectively purchasing services in order to ensure waiting times were not excessive. It also encouraged hospitals to improve the quality of their waiting list data, with emphasis on ensuring patients were appropriately categorised and that priorities for admission were consistent with the government's goals.

Strategic directions in acute care

The 1998 report titled *Setting the Agenda* emphasised the need to review the role and operations of hospitals "... to reflect technological and therapeutic advances and growing opportunities for ambulatory care and community care." Later the same year, a more detailed review of acute care services was conducted (ACT Health 1998). It involved the analysis of trends and consultation with care providers, and made proposals about hospital roles and various forms of networking. Several planning groups were established, including a Ministerial Clinical Advisory Committee. In 2001, the Department drafted the Acute Health Services Plan (AHSP) which is the latest available documentation on care strategies (ACT Health 2001).

The AHSP made predictions about the demand for acute care to 2005. A major factor contributing to expected growth was the ageing of the population, especially in the ACT. It was predicted that demand from outside the ACT would grow, but at only half the rate of the previous decade.

Mean lengths of stay were expected to decline. By 2005, it was anticipated that 61 per cent of admissions would be same-day for ACT residents, and 52 per cent for patients from New South Wales. The number of inpatient beds would decline, but the demands for most other services such as operating rooms and diagnostic services would increase.

As noted earlier, many patients treated in the ACT reside in New South Wales. It was predicted that inflows would continue to increase. However, Southern AHS has incentives to reverse flows for routine overnight and same day care that can be provided locally. Therefore the mix of cases might change, and there would be increasing uncertainty about the overall volume.

The main strategies

The AHSP outlines three main strategies for improved management: role delineation, establishment of practical partnerships with clinicians, and strengthening the strategic partnership with Southern AHS.

It is argued that precise delineation of the roles of the two public hospital campuses is essential to make the best use of the available workforce and infrastructure, ensure that economies of scale are maintained and ensure that scarce resources are used efficiently. The Department notes that rivalries between hospitals have been common in most parts of Australia, and "... there is a history of competition between The Canberra Hospital and Calvary Hospital."

Revised roles need to be considered for several reasons. One is that there will be important changes in clinical practice. Overall, there will be a move towards shorter hospital stays. There will also be changes at the specialty level: for example, the demand for respiratory medicine, rehabilitation and general medicine overnight beddays will increase and requirements for obstetrics, neonatology, and general surgery are expected to decline.

Another factor is appropriate staffing. Problems are arising as a consequence of increased sub-specialisation in medicine and nursing (ACT Health 2000b). There have been shortages of intensivists and ICU nurses, difficulties in controlling the use of specialised and expensive infrastructure such as cardiac catheterisation laboratories, increasing expectations for rehabilitation in dedicated units, the trend towards integrated cancer care models with satellite medical oncology clinic options, difficulties in the management of anaesthetics, and so on. Inter alia, better role delineation will provide greater stability in staffing, and reduce inappropriate duplication between facilities.

It is intended that The Canberra Hospital will continue to be the major trauma and regional referral centre, and have appropriate air retrieval, emergency department, and intensive care services. It will have primary responsibility for complicated trauma, cardiothoracic, neurosurgery, and orthopaedic surgery. It will, however, have a reduced role in elective surgery although a mix will need to be provided in order to support medical education.

It will also have a regional role in the provision of other services including inpatient care for high acuity mental illness, acute rehabilitation, paediatrics, medical and radiation oncology, clinical haematology, invasive cardiology, and high risk obstetric and neonatal services.

The AHSP envisages that Calvary Public Hospital will continue to function as the community hospital for the northern part of the Territory. Inter alia, it will also provide the majority of elective surgery and continue to provide hospice care.

The second main strategy involves moving from a campus to a clinical stream model of care. By this, ACT Health means that services should be reorganised around categories of care needs (each of which will be met through integrated care across a variety of settings) rather than around particular facilities and settings. The same idea is being pursued elsewhere in Australia.

For various reasons, it is envisaged that the model will be implemented through a series of transitional steps. The first is intended to be the 'networking' of services across the two acute care hospitals. This is likely to include the sharing of scarce resources (such as intensive care and emergency department facilities), and collaboration in the allocation of resources defined by the purchaser.

Other possibilities are being considered as extensions to the starting model. They include the establishment of budget holders for each stream who would have the responsibility for negotiation of sub-contracts with specific care providers, and reorganisation of staff management so that the clinical stream leader rather than the facility (that is, the hospital) is the employer.

Finally, the AHSP proposes enhancement of collaboration with Southern AHS, in recognition of the high degree of mutual dependence. Current arrangements are considered to be deficient in several respects including a lack of clarity regarding long-term plans.

An underlying cause of friction is that the cost of care for New South Wales residents provided in ACT hospitals is significantly higher than the average price paid by New South Wales Health. On the other side, there is concern within NSW Health that the ACT's costs are being poorly managed. There continues to be the possibility that Southern AHS might make greater use of services of teaching hospitals in Sydney.

In recent years, the negotiations between the ACT and NSW Health on cross-border flows have tended to be difficult and have usually resulted in the need to seek arbitration. The AHSP notes that "... neither party is entirely happy with the outcomes when compromise payment arrangements are established."

Conclusion

There is good reason to believe that residents of the ACT and adjacent parts of New South Wales receive high-quality care for the most part from dedicated and skillful health care professionals. Levels of financing are probably appropriate to the community's needs and willingness to pay, and resources are allocated in a predominantly open and fair way.

In some respects, the Territory government is in the lead with respect to the trend towards integrated care that has its roots in the community. It is particularly pleasing to note the establishment of convenient points of entry

to multiple kinds of services that are supported by high-quality advice, and of more closely integrated allied health services based in the community (thus promoting the model of 'inreach' to hospitals rather than the old model of 'outreach' by hospital-based services).

I do not believe that too much money is being spent. I doubt if I am among a minority among ACT residents in believing that an adequately financed public health care system deserves moral and financial support. At least, few people in the ACT can claim they are not aware of the issues: hardly a week passes without pleas from care providers for more funding and accusations of waste and irresponsible financial management from the other side. There may be better models for involving the community in decisions about the level of health care financing, but I am not sure there are demonstrably better approaches being used elsewhere in Australia.

However, it is hard to believe that all the money is being well spent. My major concern is that doctors may not be playing their part. The evidence is sparse, but most informed observers suspect the Department is right in claiming that "... the high cost of Visiting Medical Officers (VMOs) in the ACT" is a major cause of the cost differences relative to other parts of Australia (ACT Health 1998). There have been frequent reviews, and some of them have been of poor quality. However, there is a consistent theme with regard to the VMOs' role – that they not only contribute to the higher costs per unit of input, but are also less than enthusiastic about participating in the control of levels of service utilisation. There has been some progress of late, including the establishment of contracts with medical staff at The Canberra Hospital that include a requirement for formal performance appraisal. However, more may need to be done.

The fundamental problems are cultural. Many VMOs believe they have a special role to play in protecting medical autonomy and therefore the 'sacred relationship between doctor and patient.' Whatever the justification for this view (and I think it is weak), it sits uncomfortably with many of the strategic goals of the Department like a single purchaser, coordinated care, and capped budgets. Many more dramatic crisis headlines can be anticipated in The Canberra Times before there is good health and quiet breathing in Canberra.

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