
Health costs and policy in an ageing Australia¹

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Introduction

Australia has traditionally been regarded as having a relatively cost-effective health system. Per capita spending has been below the OECD average, and well below that of the USA in particular, for comparable or better health system outcomes.

But there is a question as to whether this is likely to remain the case. Over the past decade, Australia's health expenditure has grown by about 70 per cent in real terms, with private sector growth outpacing that in the public sector in more recent years (though public expenditure is still two-thirds of the total). This rate of growth has exceeded that of the economy as a whole, leading to a 1 ½ percentage point rise in the health sector's share of GDP to its present 9 per cent (AIHW 2007)

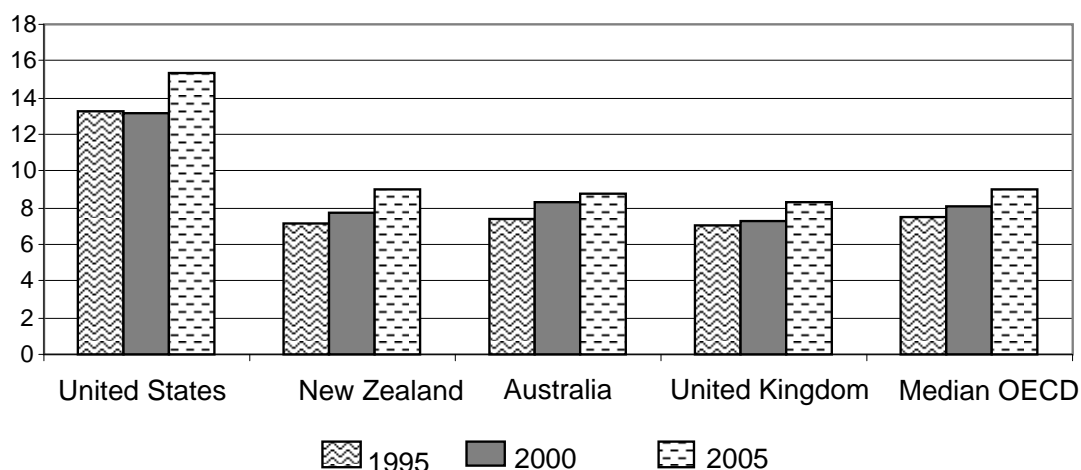
All components of health spending have grown. While inpatient and outpatient services still dominate total spending, there has been an acceleration in expenditure on pharmaceuticals and therapeutic appliances since the late 1990s.

This aggregate growth has been matched or exceeded by other countries, however, so that international relativities have not changed much (figure 1). For example, we remain a somewhat bigger spender than the UK and a much smaller spender than the USA.

This indicates that trends across countries are being influenced by similar forces. But it also suggests that some countries may have systems that can do better than others. Most are likely to be severely tested by developments in demography and technology in coming decades. It is important to understand how these forces are likely to play out, and their implications for health policy, given the size of the healthcare sector and its importance to community wellbeing.

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Figure 1 Health spending as a share of GDP (%)



The health 'market'

At a broad level, we can conceptualise the market for healthcare like the markets for other services in the economy, as being shaped by both demand and supply-side influences.

- On the demand-side, the key determinants of expenditure growth are changes in the size and structure of the population, its overall affluence or purchasing power and — related to this — societal preferences or expectations and, of course, inherent healthiness.
- On the supply-side, new knowledge and technical change have a strong bearing on the nature of health services provided, as well as on who and what can be treated. The implementation and diffusion of technology over time depends on the availability of, and access to, skilled people and capital resources.

A creature of government

These dynamic influences are comparable to other markets. But unlike most other markets, there is a bigger role for governments and only a limited role for prices in balancing supply and demand over time. Much healthcare is funded by governments or insurers, rather than being bought directly by consumers, and the provision of healthcare is constrained by regulation and by the medical profession itself.

There are good reasons for this. Consumers or patients rely to varying extents on the knowledge of healthcare professionals about which services are most appropriate. And our society rightly values accessibility to healthcare for all Australians, regardless of their financial circumstances. However, the former introduces another layer of decision making — and potential mismatches with the consumer's real needs (principal-agent problems) — while universal access and subsidised

provision could potentially mean open-ended demand growth, which would be neither efficient nor sustainable (and ultimately not equitable either).

Thus while doctors determine the nature or type of treatments, governments play a significant role in determining *access* to treatment. For example, there are limits on subsidised technologies and pharmaceuticals, with 80 percent of all pharmaceuticals on the PBS being subject to some restriction (other than for medical reasons).

The other important dimension of the supply-side in the healthcare ‘market’ is the private/public mix. As noted, private healthcare expenditure has been growing faster than public, reflecting government inducements, together with constraints in the public system. Privately funded healthcare is highly regulated, and operates as both a supplement and alternative to public provision.

So while there are some features in common with other markets, these are limited, and government policy is clearly influential in shaping healthcare expenditure. That said, the most critical underlying drivers of expenditure going forward will be further advances in medical technology, the ageing of Australia’s population and the important interactions between them.

These are complicated and contentious areas, posing significant challenges for public policy, and with much at stake for the community in ‘getting it right’. This also makes them suitable areas of inquiry for the Productivity Commission, given its independence from all stakeholders and its statutory obligations to determine, through open and consultative processes, what is in the long term interests of the wider community. Over the past decade, the Commission has been asked by government to conduct in-depth reviews of private health insurance, medical technology costs, the health workforce and the impacts of population ageing. In what follows I will draw on these studies, as well as related research by us and others.

Technological change is a key driver of health costs

It is widely recognised that technology has a major impact on the health sector and on health outcomes, but there has been some debate about whether technological advances will, on balance, serve to reduce or increase overall health expenditure in future, especially in the context of an ageing population.

Assessing expenditure impacts is not straightforward, requiring an examination of the cost of the technology for each person treated; whether it is a new treatment; whether it replaces or supplements existing treatments; its uptake, and its effect on subsequent use of the health system.

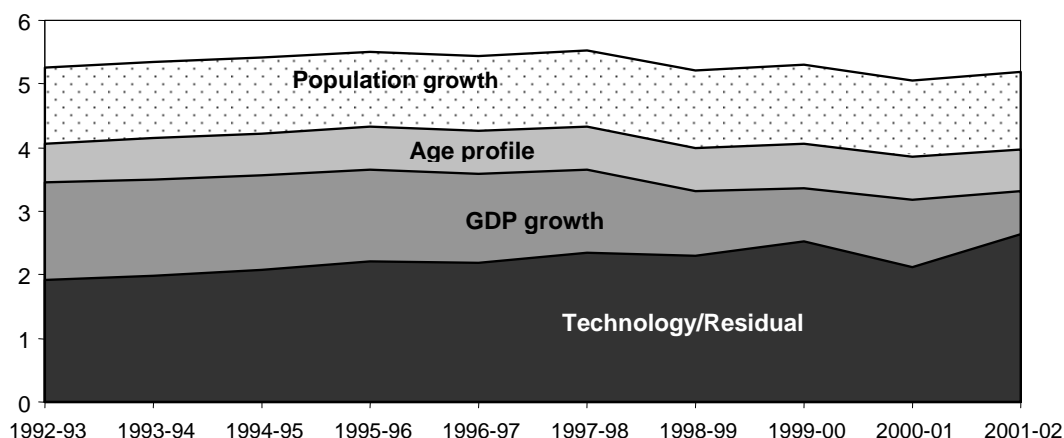
Overall spending can increase — even if unit costs decline — when improvements in a treatment expands its use. New technologies can have beneficial flow-on effects in other areas of spending, however, such as by reducing rates of hospitalization or the duration of hospital stays, or by allowing the aged to remain in their own homes and thereby reducing aged care costs. On the other hand — and probably only

economists would point this out — if one disease is successfully treated, people may live on to develop other ailments, which can themselves require expensive treatment. (I hasten to add that this is not an argument for avoiding better treatments!)

Understanding technology's cost impacts

The Commission has measured the cost impacts of new technologies over a recent ten-year period (PC, 2005a). The results of the main econometric analysis are depicted in figure 2. While the estimates depend to some extent on what is assumed about the sensitivity of demand to income growth, the results suggest that technology contributed around one-third of the increase in real health expenditure in the decade to 2003, with the (substantial) income growth experienced by Australians in this period being the other dominant contributor.

Figure 2 Drivers of past health spending
Annual growth rate (per cent) in real expenditure



Some case studies that we conducted provided insights as to why new technologies were contributing to net cost increases. The story varied in relation to unit costs, with some rising and others falling, though on average they were greater. The decisive factor, however, was the expansion of treatment associated with new technologies.

For example, inpatient/hospital care accounts for some 40 per cent of total health expenditure. So technologies that serve to reduce the length of hospital stays — such as improved anaesthetics and less invasive surgery — clearly reduce costs. There has indeed been a pronounced decline in the duration of hospital stays in recent years. For example, the average number of days spent in a public hospital by people aged 65 or more fell from around 8 in 1992 to 4 ½ in 2001. However the technologies that have contributed to this reduction in the length of hospital stays — for example, improved anaesthetics for older patients and improved cataract surgery

techniques — have typically also led to an increase in the number of patients able to be (safely) treated.

Such technologies can also involve higher costs *during* an episode of care. This has been the case, for example, with advanced pharmaceuticals, which often have also reduced the need for treatment in hospitals. However, the prices of these new drugs (such as new-generation anti-depressants) have been significantly higher than pre-existing treatments.

Moreover, many new drugs have enabled a considerable expansion in the numbers of people treated for existing conditions. For example, the use of better-tolerated statins, to reduce cholesterol levels and manage heart conditions, increased from 2 million to 15 million prescriptions from 1992 to 2004 at a cost of nearly \$1 billion. Thus increased costs have occurred notwithstanding unit costs comparable to previous drug treatments (PC 2005a).

Other new technologies such as coronary (drug-eluting) stents, and cementless prostheses for hips and knees, cost a lot more than the technologies they replace; new diagnostic imaging techniques cost more, often are used in conjunction with old technologies such as X-rays and ultrasound, and generate additional or earlier treatments.

The outlook for technology

So what does the future hold? It seems safe to anticipate that further technological advances will transform our ability to detect or successfully treat diseases, and thus bring considerable benefits to many people. Genomics is one area showing considerable promise, having the potential to provide revolutionary biological treatments, together with increased targeting or ‘personalisation’ of medicine. Another area showing considerable potential is robotics. Remote control surgical machines are now in use in Australian hospitals (and have made a number of procedures easier to perform — such as coronary artery bypass surgery) (Maddern, 2007). But such important further developments are likely to continue to increase, rather than reduce, healthcare expenditure overall. As in the recent past, the reasons are the high costs of development (particularly of biological medicines), the expansion of treatment possibilities, and more ongoing treatment.

The Commission analysed the likely cost impacts of possible medical developments targeting four key diseases (figure 3). All were assessed as likely to lead to significant increases in outlays compared with existing treatments (or non-treatment), because treated prevalence (reflecting better treatment, population ageing and, for diabetes, projected increased prevalence) *and* unit costs would likely rise, more than offsetting any cost savings elsewhere in the health system.

If anything, the Commission’s estimates tend to underplay the cost-increasing impacts of new technologies, since they did not take account of the impact of the

health costs of ‘living to die another day’ from some other condition. These costs can be appreciable.

Figure 3 Important new treatments are likely to be cost increasing

		<i>Unit cost</i>	<i>Substitute/ complement/ add on</i>	<i>Costs elsewhere</i>	<i>Volume</i>	<i>Net expenditure impact</i>
Diabetes	Insulin sensitisation drugs for prevention of type 2 DM	↑	Partial substitute	↓	↑	↑
Cardiovascular disease	IADs for control of AF and stroke prevention	↑	Substitute/ add on	↓	↑	↑
Cancer	Robotic-assisted surgery for prostate cancer	↑	Substitute	↓	↑	↑
Neurological disease	Vaccine for treatment of established AD	↑	Substitute	na	↑	↑

Further, as noted earlier, such technological advances will require complementary investments in skill development within the health workforce, together with changes in modes of delivery of care. These have additional cost implications, the size of which will depend on the adaptiveness of the healthcare delivery system, including in relation to roles within the health workforce.

Population ageing will compound future cost increases

So it seems clear that rising demand fuelled by income growth, and increased service possibilities from technological advances — which have together dominated expenditure growth in the past — will continue to be important into the future. But an emerging additional influence — of significance in its own right, as well as in combination with the others — is the ageing of Australia’s population. This inevitable, pervasive force will fundamentally change the outlook, compared with any simple extrapolation of the past.

Impacts of ageing

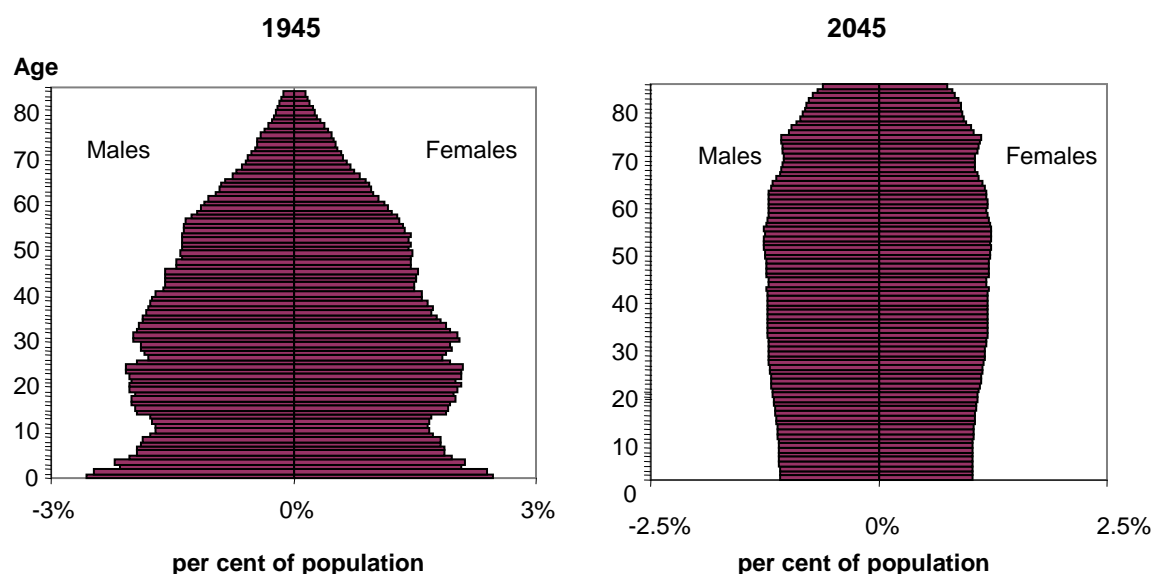
The story of population ageing has already been told many times, and indeed has become a frame of reference for thinking across a range of policy areas, akin to the

role of globalisation in policy discussion a decade or two ago. That said, elements of the story and their policy implications have not always been well understood, particularly in relation to health, and therefore bear repeating.

The facts are that after WWII the age profile of our population resembled a pyramid, with a wide base of young people and progressively fewer old people (PC, 2005b). Today it looks more like a beehive (fewer young, more old) and, by the middle of this century, it will (ominously) resemble a coffin (figure 4).

Reduced fertility has contributed to this transformation, but the overwhelming driver of population ageing is simply that we are, on average, living longer — in part due to medical advances themselves. For example, the life expectancy of a 50 year old man in 1950 was 73 years; today his life expectancy has increased by 8 years to 81 years. Some of this is due to better nutrition, and a lower incidence of smoking, but better healthcare has played a major role. For example, a recent Australian study suggests that new pharmaceutical treatments alone may have accounted for 65 per cent of the two year mean change in the age at death from 1995 to 2003 (Lichtenberg and Duflos 2008). Sustained beneficial effects on life expectancy have been found for the United States over longer periods.

Figure 4 The destiny of our demography: from pyramid to....coffin



That we are today living longer on average than our forebears is a symptom of success — a cause for celebration! But this phenomenon also poses considerable policy challenges for governments, particularly in the financing of healthcare.

In short, the pronounced ageing of Australia's population will reduce the (per capita) growth capacity of the economy — by shrinking the proportion of the population in the workforce — while simultaneously expanding the rate of government spending. The second Intergenerational Report (Treasury 2007) projected that the resulting impacts on the spending of the Australian Government

would amount to around 5 per cent of GDP by the middle of this century. Throwing in the spending pressure for State Governments will push this to around 6 per cent (PC, 2005b).

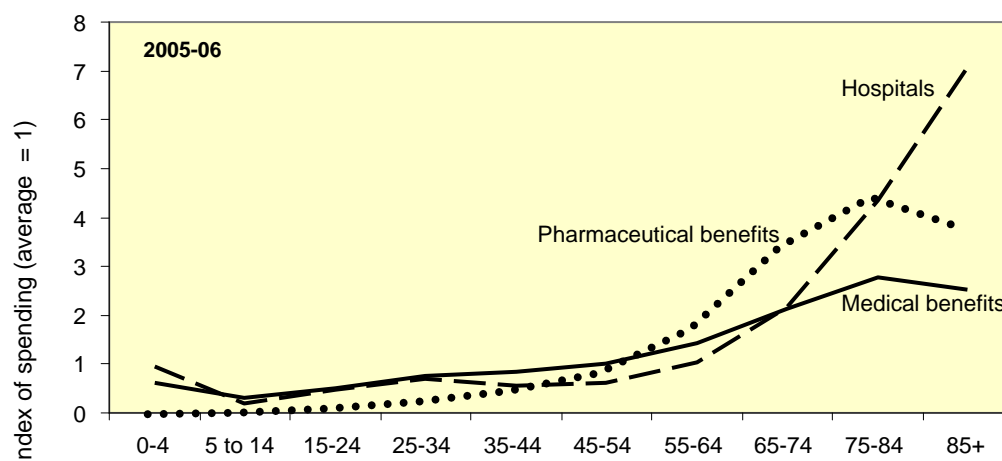
This is a projection, not a forecast; and indeed it will need to be addressed in some way by policy before it eventuates. The point that is most relevant here is that further substantial growth in health expenditure will be the dominant cause of this fiscal blow-out, with population ageing being a key underlying contributor.

Now I am conscious that this view about the impact of ageing on health spending in the future is not universally shared, including among health economists and government officials. That is concerning, because it may blur policy focus within government and necessitate costly reactive policies down the track. So I would like to spend a little time outlining the basis for our conclusions.

Health costs rise (sharply) with age

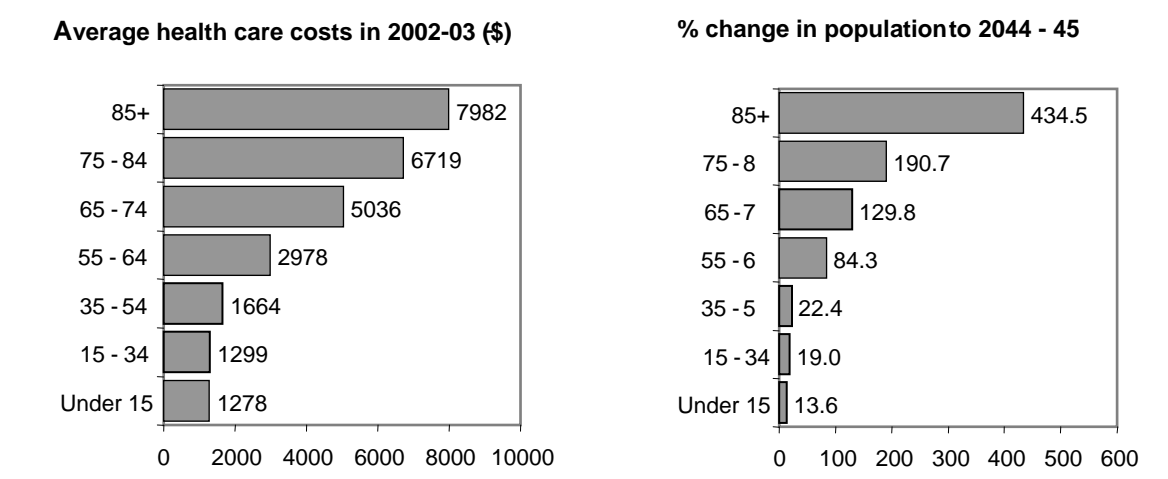
Perhaps the best starting point is what we already know empirically about how health costs vary by age groups. Cross-sectional data for public hospitals, the PBS and medical benefits are shown in figure 5. The escalation in costs for progressively older age brackets is striking. For example, the average PBS costs for a person aged 65–74 are *more than twenty times greater* than for an 15–24 year old. And public hospital costs are on average five times greater for the older group. (Treasury 2007)

Figure 5 Health costs rise steeply with age



A similar story applies for other services so that, for health services as a whole, average expenditure on those aged 65 and above in 2002–03, at around \$5 200 per person, was three times greater than for those aged under 65. (PC 2005b) And the ratio gets progressively greater for older age groups. When this age–cost profile is combined with the much higher projected demographic growth rates for older age groups to the middle of this century (figure 6) we start to get a sense of what lies ahead.

Figure 6 Ageing and costs are a potent combination



Counter-arguments don't hold up

Against this interpretation, it has been argued that cross-sectional aggregate data on health expenditure provides a false basis for projecting the impacts of ageing, because the data is merely revealing the higher incidence of deaths in older age brackets, and the relatively high proportion of lifetime health costs incurred in the period just before death. On this view, if people on average live longer, a large share of their health costs will simply be deferred, and lifetime costs won't increase much.

This hypothesis is logically appealing — and has been widely accepted — but it is not supported by the evidence.

- While it is true that healthcare spending is relatively high towards the end of one's life, the bulk of costs still relate to people not at risk of imminent death. For instance, a Canadian study found around 80 percent of costs were not death-related (Menec et al. 2004). Even studies estimating high costs of death find that the growth of health costs occurs much earlier. For example, Gray (2004) found age led to a 30 per cent increase in costs from age 65 to 85 years.
- But even if a proximity-to-death phenomenon *did* explain most of the rise in age-specific expenditure, the projected ageing of the population would still lead to a major surge in future health spending as a share of GDP. The reason for this is that the ageing phenomenon is superimposed on the bulging demographic known as the post-war Baby Boom. As the Boomers reach the end of their lives (in the period 2025–50) the incidence of deaths in the population will swell dramatically (PC, 2005b). That in turn would see an escalation in healthcare spending in that period.

A second and related argument that has commonly been made as to why population ageing would not greatly increase healthcare costs, is based on the observed fact that older people are becoming 'healthier'. If this phenomenon continues, as it

should, it is hypothesised that it will serve to flatten, over time, age–health cost profiles such as those shown in figure 5.

Again this argument is plausible. However, though the issues are complex, the weight of evidence (such as it is) is against it. While age-specific disability trends do seem to be improving (though the empirical evidence is not clear–cut) there is an upward trend in various chronic health conditions. These include diabetes (linked to rising obesity) and age-related conditions, including diabetes, Alzheimer’s, hearing loss and Parkinson’s disease. These are being managed by medical (and aged care) interventions at significant cost.

The impacts of ageing could be understated

Such recent trends are more consistent with a scenario opposite to the ‘healthier oldsters’ one; namely, that ageing and technology are forming a potent expenditure cocktail that will, if anything, see a *steepening* of the age–cost profile over time. Indeed, the evidence suggests that this is already happening. For example,

- hospital ‘separations’ (figure 7). have been increasing faster for the oldest Australians (with the rate growth of private hospital usage exceeding that for public hospitals); (PC 2005b)
- this is reflected in the steepening age–profile of separations for both hip replacement and cataract surgery in Australia;
- in the case of hip replacement surgery, the ageing–related growth is even more marked in US data (figure 8). This also reveals that in the 1980s, the incidence of hip replacements was similar across age groups, despite the need being greater for older people.

Figure 7 Hospital separations are increasing fastest for older Australians
Average annual increase (per cent)

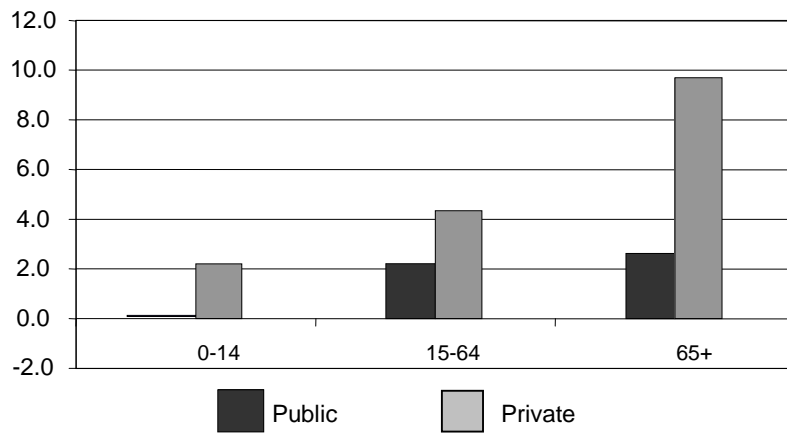
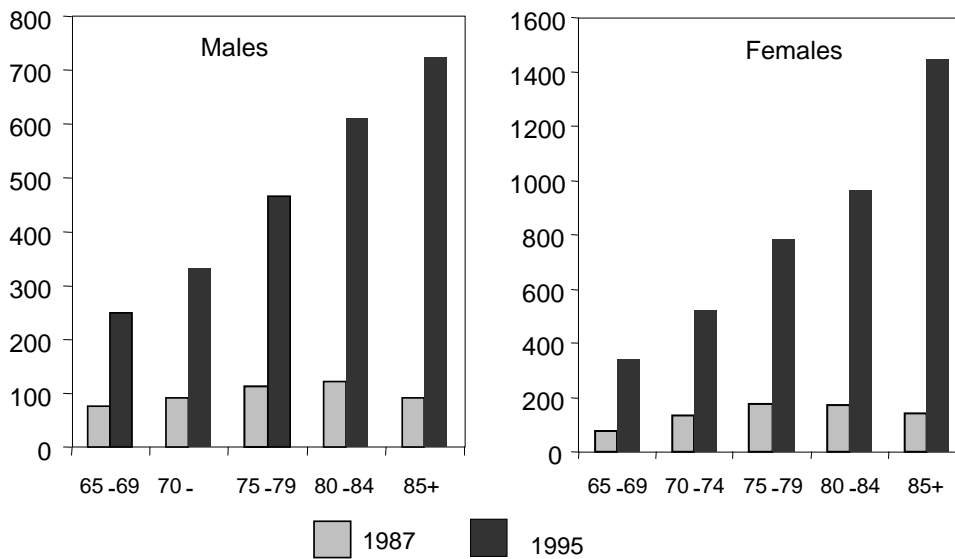


Figure 8 Longer term hip replacement trends among America's aged
Per 100,000 people



As noted, a key reason for the faster growth in hospital separations for older people is that more medical procedures can be performed safely and successfully on them than in earlier years. This of course is not happening by accident. It is inevitable that even in a market as constrained and distorted as healthcare, areas of greatest potential demand growth will elicit supply-side responses. The combination of faster demographic growth and an inherently higher disease burden in older age brackets, has led to this group's needs becoming a particular focus for research and development, and other innovations in care. For example, the Commission found that, in 2004, of some 550 drugs that were at various stages in the pipeline for trial

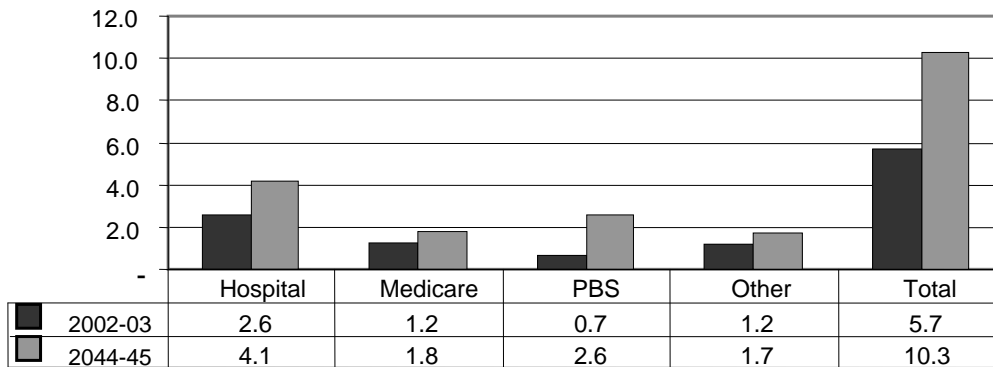
and approval, 80 per cent were targeted at what are predominantly old peoples' diseases and ailments. Cancer drugs alone accounted for about one-half of these.

In considering whether this is likely to continue into the future, we need to bear in mind that older Australians not only will comprise a much larger share of the population than ever before, they will be much wealthier on average than any previous generation. They will also be better informed about healthcare options and politically much more influential.

Projected health expenditure

In its own projections, the Productivity Commission has been relatively conservative. For example, we assumed an unchanging age/cost profile, together with a moderate projection of demographic structural change. Even so, it was projected that the combined health expenditure of governments in Australia would almost double by 2044–45, reaching just over 10 per cent of GDP (figure 9). While all components are projected to increase, the PBS share grows most — more than tripling — followed by hospital costs.

Figure 9 Projections of government health expenditure
Proportion of GDP (per cent)



If the ratio of public to private health expenditure were maintained, total spending would amount to around 15 per cent of GDP by 2045 (greater than currently in the USA).

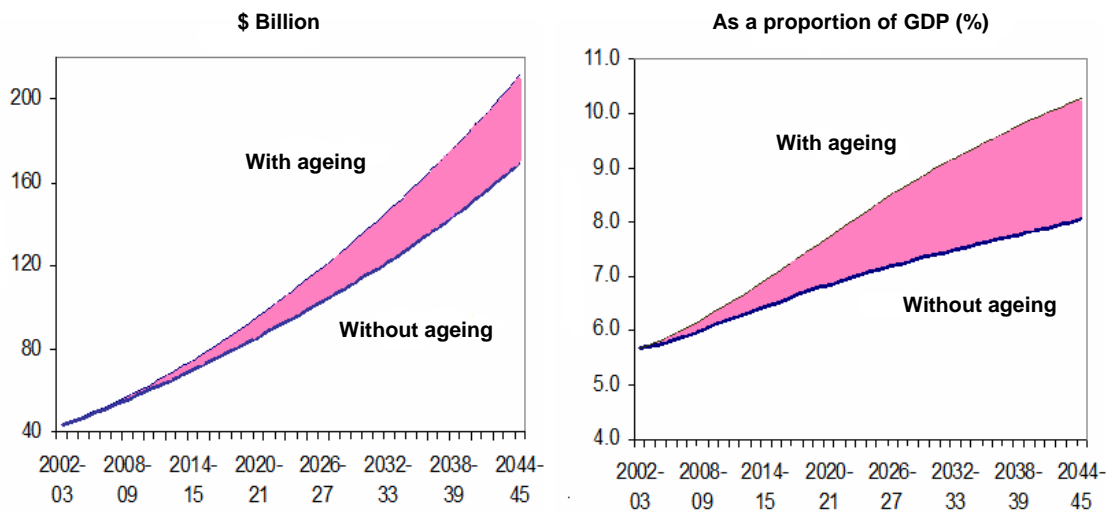
Identifying the ageing-related component

Finally, to answer the question at issue, the Commission unpacked the ageing component from population growth and demand/technology, to assess its separate contribution as an expenditure driver.

Looking firstly at the proportion of expenditure attributable to those aged 65 and over, we projected that this would rise from about 35 per cent today, to around 60 per cent by 2044–45; that is, to become well over half the health budget.

Of course, not all the increase in spending arises from ageing. So we conducted a thought experiment in which we froze the population age structure and allowed the other expenditure drivers to vary over time. Ageing alone is estimated to push up health expenditure from \$170 billion to \$210 billion by 2045, an increase of 25 per cent (figure 10). As a proportion of GDP, the increase is from 8.1 per cent to 10.3 per cent. Expressed differently, ageing is projected to account for one half of the total increase in (public) health costs as a share of GDP over the next four decades.

Figure 10 What a difference ageing makes
Projections of government health expenditure



Some policy implications

Projected health expenditure growth of this magnitude will clearly create a problem for governments, even if only because it will need to be financed. There are three broad policy choices.

Three broad options for governments

First, governments could take a reactive role, cutting services or inputs into the health sector (lower quality staff, older technologies, longer waiting periods, greater rationing of treatments). This might avoid a fiscal deficit, but it would soon create a *service* deficit — more insidious because it is less visible, with the potential to adversely affect people. It would also be pushing against the tide of demand for services generally. Health is what economists call a ‘superior’ good — demand for it increases with income. That latent demand is concealed by the largely free, but rationed, supply of publicly-funded services, but is manifest in the 30 per cent growth in the share of household expenditure accounted for by household-funded

health spending over the past decade. Community pressure, including the ascendant ‘grey’ lobby, would in any case make excessive rationing politically unpalatable.

That leads into the second option, for governments to adopt a *passive* role, simply accommodating expenditure pressures through public financing. This avoids any worsening of rationing, but as noted it creates a burgeoning fiscal deficit that must be financed. It can’t realistically be financed by cutting back other budgetary demands —like aged care, education, infrastructure, and R&D. So addressing fiscal deficits imply the ‘T’ word — taxes now or later. Some increase may indeed be inevitable, and our wealthier society of the future would be better able to bear it. But fully offsetting the health-induced fiscal pressure would require an increase in taxes of some 16 per cent. Apart from the politics (again) the costs and potential inequities of extracting more through our imperfect taxation system make this choice problematic.

The third, *proactive*, choice —identifying areas for reform in the health sector that improve its financing or functioning — looks far more attractive. But reform is easier said than done.

Attaining the ideal: a ‘market’ analogy

When considering how to give effect to this proactive option it is useful to ask ‘what would an ideal health system look like?’. Many would agree that both equity and efficiency would need to be integral, such that:

- a) clinically required services would be available to all;
- b) only services for which the benefits exceeded costs would be provided, and
- c) there would be no opportunities for producing more from existing inputs.

Fantatising for a moment that health services were like, say, the restaurant industry — supplied by a myriad of producers in approximately competitive markets and dealing with well-informed, demanding consumers — the above goals could be met by markets, supported by cash transfers to the disadvantaged (to meet goal (a)).

Fully-informed consumers would buy services that were worth the cost (satisfying goal (b)). If the price were too high for a particular health service then consumers would not buy it, but consider alternatives, including those that might mitigate the health risks in the first place (for example, better diet and exercise). That can be contrasted with the current system, where most services are free or highly subsidised, and choices about treatment rarely take account of cost tradeoffs or options outside the system (like preventive initiatives).

In such an ideal market, competition between private providers would drive them to be productive (satisfying goal (c)). A hospital with low productivity would be ripe for takeover — or closure. Doctors with poor treatment records would have few patients. Salaries would be set to attract the right people to meet the needs of users

of the system. Again this can be contrasted with the current system, where budgetary and professional compartmentalisation, monopolies and oligopolies, cost shifting, high adverse event rates, and excessive clinical variety are persistent features.

The reality, of course, is that health services are not like restaurants. And more ‘market-like’ systems, such as in the United States, produce outcomes that appear to be more expensive and less equitable than most universal systems. But some of the features of markets that achieve efficiency and consumer empowerment might be emulated *within* a universal, largely ‘free’, publicly-financed health system. Returning to our earlier framework, we can consider options on the demand and supply sides of the ‘health market’, and the institutional arrangements that connect them.

Demand-side policies

A bigger role for ‘pricing’?

Prices play a central role on the demand-side of most markets. They inform consumers about the relative costs of supplying different goods and services and they enable consumers to decide which good or service best meets their needs, given their relative costs. In health markets — whether private or public — full pricing for all services would never occur because consumers are willing to pay for insurance (through taxes or premiums) to avoid catastrophic risks. The issue is about the right level of insurance, and therefore, the right level of co-payments.

Co-payments can provide a valuable role in constraining inappropriate demand and, by marshalling private financing, relieving some of the fiscal strains for government from burgeoning health care costs. These days the choice is not really *whether* to have them — they are already here in GP services, pharmaceuticals and other services — rather it is about the types of services to which co-payments should be applied, their level and their structure.

Figure 10 **Proactive policy choices**

Demand-side	Pricing	Information & empowerment	Regulation
Supply-side	Incentives	Decision-making processes	Health workforce
System-wide	Roles of different funders	Coordination & interactions between parts of the system	Transitions: 'big bang' or incrementalism

'Good' co-payment design is not easy. There are substantial risks and there can be unintended impacts. The famous RAND experiment of the 1970s in the USA — apparently still the gold standard for examining the impacts of co-payments — found mixed outcomes (Brook et al. 1984). Modest co-payments had no apparent adverse impacts on health for people who were not high risk, while reducing their demand for services — a good outcome. However, for high-risk, especially low-income people, there were significant adverse health impacts from co-payments, with people foregoing effective as well as ineffective treatments. That result has been confirmed in more recent research, especially relating to pharmaceuticals pricing (Gruber 2006). This underlines the fact that prices work best when people are well informed about the services (an issue to which I return).

There are other potential problems with co-payments, such as diversion of demand to unpriced services. But there is also scope to extend their use, such as for services that are shown to have low cost-effectiveness. The policy challenge is for us to learn more about where their further use could yield net benefits to the community.

Information and consumer 'empowerment'

People's lack of information and knowledge about health and treatment is the fundamental 'market failure' on the demand side that underlies many of the features of the public health system. But there is scope for policy to promote better informed consumers and thereby to achieve better outcomes at lower social cost.

One avenue is to provide information, and advertise information sources, that could enable consumers to be more discerning in their use of the health system. For example, in the United States, consumer education on antibiotic prescribing for adults with acute bronchitis and children with sore throats prompted a significant reduction in unnecessary antibiotic use (Gonzales et al. 2005).

A second step might be to provide information on outcomes by hospital and doctor, and give consumers more choices about both. For example, in the USA (and now UK) data has long been available on the individual performance of cardiac

surgeons. Recent changes to the National Health System in the United Kingdom have enabled patients to choose public treatment among competing hospitals, with information about their relative performance, including feedback from patients, available on the web (UK NHS, 2008) Choice of this kind, combined with funding premiums for higher performing hospitals and recognition of higher performing health staff can improve quality of services as well as empowering consumers.

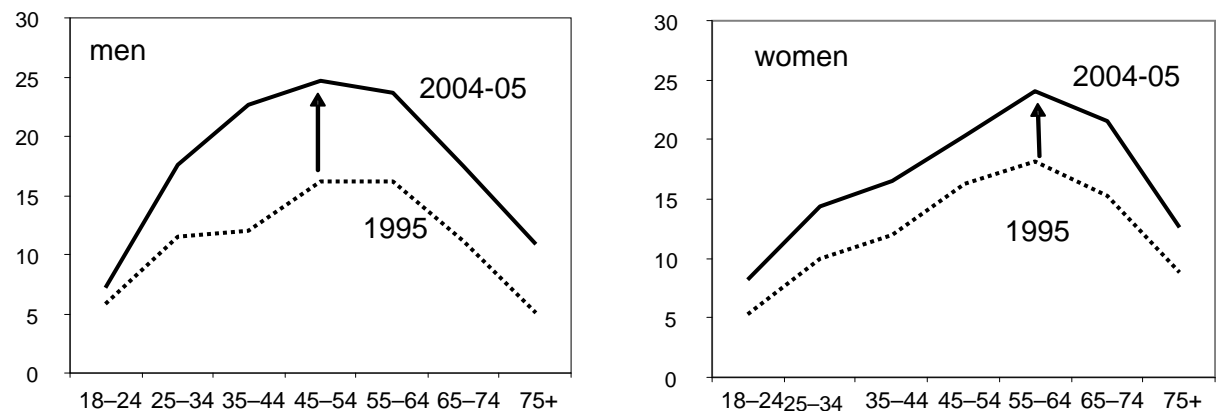
Of course, such ‘league tables’ need to be designed carefully to avoid perverse outcomes such as discouraging surgeons to take on high-risk patients. As in most areas of health reform, careful evidence-based change, supported by trials if possible, is the best way of proceeding.

Preventive action

A third step relates to encouraging changes in consumer behaviour to avoid or reduce health risks — ‘preventive health’. There is evidence that information can have powerful impacts. (For instance, in Australia, information about the prone positioning of infants has dramatically reduced the incidence of sudden infant death syndrome. And the HIV/AIDS campaign has contributed to reducing the incidence of cases.)

One of the biggest identified priorities in preventive health is curbing obesity, the incidence of which has grown rapidly over the past decade (though probably still short of the Baker Institute’s estimate of 26 per cent of the adult population, which seems to have been inflated by response bias). Obesity is a significant health and social issue. It is causally linked to higher prevalence rates of heart disease, stroke, diabetes II, kidney disease, arthritis and some cancers, as well as social marginalisation.

Figure 11 Obesity is on the rise
Share of obese Australians (per cent)



Data source: ABS 2006, *National Health Survey: Summary of Results, 2004-05*, Cat. No. 4364.0.

However, while achieving behavioural change to address this burden of disease is an appropriate goal, doing so effectively through information provision and social marketing alone is likely to prove demanding. Evidence about what works and why in public health campaigns is not as advanced as evidence concerning medical interventions (Wanless et al. 2004). Information obviously works best where it targets behaviour resulting mainly from ignorance, that consumers would be motivated to change. For example, in the UK, campaigns to encourage pregnant women to have a better diet and take vitamin supplements appear to have been successful, whereas a major campaign to encourage physical activity ('Active for life') did not (NICE 2004). Given the complex individual and societal influences on obesity, 'informational empowerment' may not be enough. More effective may be conventional medical interventions, such as new types of drugs. While these will come at a cost, they may still avoid greater system costs overall. Even if that were not so — for example, because people lived longer as a result — there would be societal gains through people's enhanced wellbeing and productivity.

Regulatory options?

From a policy perspective, the obvious alternative approach is regulation.

Many successful public health interventions have in fact been based on regulation, rather than information provision. Well-known examples include safety belt regulation and drink driving penalties; smoking bans in workplaces; addition of fluoride to water and removal of carbon monoxide from domestic gas supply. (Suicide by gas accounted for 40 per cent of British suicides in 1963 and none by 1975. Substitution to other forms of suicide was low, with total suicides falling by around 2000 people per year (Clarke and Mayhew 1988).)

However regulation is potentially a more fraught route to societal improvement, to the extent that it overrides individual preferences. For example, rules about what foods can be advertised on television, made available in school tuckshops, or sold at supermarkets, involve progressive encroachment on an individual's right to choose. In some cases that may be warranted, in others not. The calculations are not straightforward and political judgement will inevitably be called upon.

Therefore, as in the case of public education campaigns, it will be very important to subject all new regulatory proposals to careful analytical scrutiny in advance and subsequent formal evaluation following implementation. This is rarely done well; and sometimes the latter is not done at all.

Supply-side policies

When people think of the health system, they mostly think about the supply side; doctors, hospitals, chemists and pharmaceutical components, health bureaucrats and

systems for public financing. This preoccupation with the supply side is in itself an indication of the currently attenuated role of the consumer.

Incentives and productivity

In normal markets, the costs for consumers are the rewards for suppliers. That price nexus is all but severed in the health system. Instead, the most important incentives provided to suppliers come from governments.

A well-functioning health system should have strong incentives to maximise productivity as well as to attain appropriate quality (as occurs routinely in the business world). In its recent report on the National Reform Agenda, the Commission found evidence of sizeable productivity gaps in the supply of existing services around the country (PC, 2006a). We estimated that the gains from even partly closing these could amount to nearly \$2 billion a year.

As noted above, information about performance, combined with a degree of consumer choice and financial incentives, can stimulate performance improvement by competing services. The role of such demand-side incentives on the supply-side is increasingly recognised. Indeed, Australia has taken some innovative early steps in that direction with the introduction of the casemix funding system (initially in Victoria in 1993-94). Under casemix, hospitals are now funded for specific diagnosis-related groups, so that differences in the funding of hospitals reflects the nature of their outputs rather than their negotiating capacity, past funding, politics or merely populations served.

Nevertheless, there are some jurisdictions where this has still not caught on. Moreover, Australia does not appear to be as innovative in its use of incentives as the United Kingdom (which in many other respects has similarities to our system). In May 2008, the UK Government outlined a system of payments to UK hospitals that would be linked to patient satisfaction and health outcomes. The experience with this could provide valuable lessons.

As arises for co-payments for patients, there are tricks and traps associated with incentives for service providers, especially where patient characteristics and outcomes are hard to measure. One potential problem (cited with casemix) is premature discharging of some patients. Another obvious problem is ‘cream skinning’ — seeking patients who, within an identifiable health category, are least costly to treat. Complex systems can be administratively burdensome, with much time spent by clinicians filling in forms and by administrators auditing them. As in other areas, careful evidence gathering is a key to learning whether any new arrangement produces benefits.

Better decision-making processes

In part, higher productivity may be achieved by simply adopting better processes, such as avoiding wasteful cost shifting between parts of the health system funded by different parties, and the application of evidence-based treatment protocols to reduce adverse events and unnecessary clinical variation. Structural changes, such as re-organising the system to realise economies of scale and scope may also offer gains.

The desirability of good processes also extends to ‘technology assessment’, which provides the basis for approving the (subsidised) use of new technologies, including new PBS drugs. Assessment should consider the full benefits of any new treatments, including reductions in work absences or reduced side-effects. Once in use, new technologies need to be subject to greater systematic review of their efficacy and cost effectiveness. In its research into medical technologies (PC, 2005a), the Commission also found a need for greater procedural transparency and community involvement in health technology assessment. This could help foster greater acceptance of technology funding decisions and limit the risk that technology assessment is used as ‘soft’ rationing at the cost of (greater) benefits foregone.

Health workforce, regulation and remuneration

Australia’s health workforce is highly regulated. Much of that regulation is appropriate. Occupational certification of surgeons, general practitioners and other health professionals is an effective way of signalling their competence to patients.

But there are also some rigidities in workforce regulation and fragmentation in processes that frustrate innovation, raise costs and put strains on a system where workforce shortages are growing across the country (PC, 2005c). To use economists’ jargon, it is not clear that ‘comparative advantage’ prevails in who does what, or that the system is responsive to changing needs and capabilities over time. The Commission proposed a set of national structures to this end, with COAG now pursuing some of these, including changes to national accreditation and registration. The question of how remuneration systems might be modified to create better incentives for effective utilisation and workforce change, without jeopardising quality of care, is also on the table.

Pharmacists’ remuneration — and indeed the complex structure of regulation throughout the pharmacy industry — has proved remarkably impermeable to policy reform. Pharmacies are generally required to be owned by pharmacists, and there are locational restrictions, price controls, and ‘ethical’ restrictions on advertising. While there are good grounds for certification of the profession of pharmacists — and potentially valuable extensions to their clinical role — it seems hard to justify

key parts of the existing regulatory structure on either clinical or consumer welfare grounds. At the threshold of an unprecedented escalation in health costs, we need finally to conduct a rigorous re-appraisal.

System-wide issues

Health provision *is* a system. The effectiveness of policy change in one area depends on policy settings in others. Indeed, the health system is more even than the resources and structures devoted to health care. The complex causal factors behind persistent Indigenous disadvantage provide a vivid illustration of this. Having a good health clinic in a remote Indigenous community is unlikely to achieve better health outcomes if there are barriers to access, if housing is overcrowded, diets are poor, and substance-abuse is widespread.

The notion of health as an interconnected system is becoming better understood, both in the extreme case of indigenous health policy and in the mainstream. This is illustrated by the piloting of coordinated primary healthcare. This has been suggestive of significant benefits through more integrated service provision; though it also has revealed considerable underestimation of the administrative complexities entailed (Department of Health and Ageing 2007).

In its report on Private Health Insurance, the Commission advocated a major public review of the health system as a whole, and it has since reaffirmed that view (IC 1997, PC 2005). While there are obvious advantages in undertaking such a holistic assessment, the most effective way of implementing changes to achieve system-wide improvement is likely to continue to be through incremental steps, rather than any ‘big bang’ reform. The latter is probably too risky, given that we can never know for sure how people, doctors, hospitals and bureaucrats would actually respond in a world very different from the one they inhabit, and the downsides from failed large-scale policy experimentation in this field could be potentially damaging. The challenge with an incremental approach to reform, however, is to ensure that it is consistent with a coherent strategy for improvement of the system as a whole.

Recent developments within COAG provide an opportunity to advance reform in an evidence-based way, such that individual reforms can be devised which enhance the operations of the system. The relevant COAG working group has the task of advancing some key areas, and the new National Health and Hospitals Review Commission has been given a mandate to “report on a long-term health reform plan”, by the middle of next year. This is a big job, but there is considerable policy groundwork from a variety of experts over recent years on which to build (including the inaugural presentation in this series, Podger, 2006).

Any national reform plan needs to be cognisant of the emerging cost pressures related both to the demand (ageing) and supply (technology) sides of the healthcare

market. Those pressures are inevitable and of major dimensions. They are best addressed proactively and there appears scope to do that. However this brief excursion through various areas that are seen as prospective is suggestive of caution. Ultimately, health policy reform is about changes that can lead to improvements in people's wellbeing. While greater cost-effectiveness and efficiency must be an integral part of this, mere cost containment should not be the goal.

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