Look before you leap: evidence and health policy*

Gary Banks
Chairman, Productivity Commission

The invitation from Sally Redman, CEO of the Sax Institute, to contribute to this official launch of CIPHER — a new NHMRC centre of excellence devoted to increasing the use of evidence in health policy — was on offer I couldn't refuse. I regard evidence-based policy information and advice as of crucial importance, and the organisation I lead is one significant vehicle for delivering it. The Productivity Commission's role has become stronger and its remit wider over the years — extending beyond industry assistance and other economic issues, to important areas of environmental and social policy (including aspects of health policy).

This may seem to go against Lord Keynes' famous observation that "there is nothing a government hates more than to be well-informed; for it makes the process of arriving at decisions so much more complicated and difficult". But it is also true that there is nothing *electorates* hate more than governments that inflict poorly thought out policies on them. And there are plenty of examples, some quite recent, of retribution being exacted though the ballot box. It is why, to paraphrase a former Treasurer and Prime Minister, good policy — policy that is well-informed — is ultimately good politics.

There is arguably no area of public policy of greater importance in this respect than *health* policy. As the old saying goes "If you don't have your health, you don't have much". Health policy affects us all at the most personal level.

Health policy is about to become even more important as the ageing of Australia's population progresses inexorably over coming decades — a process that has already started. It will not only require health systems to better greater treatments for older (and an increasing number of very old) people, but also to do so in more cost-effective ways. Public policy will need to deliver in both respects.

This poses some challenges that I will touch on today. The common thread in these is the imperative for health policy to be better informed by research — evidence and

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analysis — about 'what works'. And past deficiencies in policy development in this important area underline the need for a more systematic approach.

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. 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 percent.

All components of health spending have grown. But 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 our relative position has not changed much. This indicates that different countries are being influenced by similar forces. But variations in spending levels, for comparable outcomes, also suggests that some countries may have systems that can do better than others. It also suggests scope for policy learning.

Healthcare is dominated by government, and policy decisions are therefore central to outcomes. There are good reasons for this. Consumers or patients are not well pleased to choose and must rely 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 the potential for 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 unsustainable.

Thus while doctors determine treatments, governments play a significant role in determining *access* to treatment and in shaping healthcare expenditure.

That said, the key 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'.

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.

The Commission has measured the cost impacts of new technologies over a recent ten–year period, finding that they contributed around one-third of the increase in real health expenditure — with the (substantial) income growth experienced by Australians in this period being the other dominant contributor.

Some case studies that we conducted provide insights as to why new technologies were contributing so much 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 have served to reduce the length of hospital stays — such as improved anaesthetics and less invasive surgery — clearly reduce costs. However the technologies that have contributed to this have typically also led to an increase in the number of patients able to be (safely) treated.

It seems safe to anticipate that further technological advances in areas like genomics and robotics will transform our ability to detect or successfully treat diseases, and thus bring considerable benefits to many people. 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.

Further, such technological advances will require complementary investments in skill development within the health workforce, together with changes in modes of delivery of care.

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.

The demographic 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. Today it looks more like a beehive (fewer young, more old) and, by the middle of this century, it will (ominously) resemble a *coffin* — with some 25 percent of Australians aged over 65.

Reduced fertility has contributed to this transformation, but the overwhelming driver of population ageing is simply that we are, on average, living longer. For example, the life expectancy of a 50 year old man in 1950 was 73 years; today his

life expectancy has increased to 81 years. Some of this is due to better nutrition, and less 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.

That we are today living longer on average than our forebears is a symptom of success — a cause for celebration! (Especially when we consider the alternative!) 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, causing a fiscal blowout of some (5-6) per cent of GDP nationally.

Further substantial growth in health expenditure will be the dominant cause of this fiscal blow-out, with population ageing being a key underlying contributor.

In its recent study on 'The Implications of an Ageing Australia', 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. As a proportion of GDP, the increase is from 8.1 per cent to 10.3 per cent. In other words, ageing alone is expected to account for one half of the total increase in (public) health costs as a share of GDP over the next four decades.

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 choices for public policy.

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. That is also not likely to be politically palatable.

The second option is for governments to adopt a *passive* role, simply accommodating expenditure pressures through public financing. This avoids any worsening of rationing, but as noted it involves a burgeoning fiscal deficit that must be financed. Fully offsetting it 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 option 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. And that's where research, evidence and analysis come in!

For example, co-payments can provide a valuable role in constraining inappropriate demand and, by marshalling private financing, relieve some of the fiscal strains for government. 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.

'Good' co-payment design is not easy. There are potential risks and scope for unintended consequences, particularly in relation to high-risk, low-income people, who may forego effective as well as ineffective treatments. But there is some scope to extend their use, such as for services that are known 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 and how they are best designed.

As noted, 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.

A second approach 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. Choice of this kind, combined with funding premiums for higher performing hospitals and recognition of higher performing health staff could potentially improve quality of services as well as empowering consumers.

Of course, such ‘league tables’ would 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.

A further example relates to encouraging changes in consumer behaviour to avoid or reduce health risks — ‘preventive health’.

One of the biggest identified priorities in preventive health is curbing obesity, the incidence of which appears to have grown rapidly over the past decade. Obesity is causally linked to higher prevalence rates of heart disease, stroke, diabetes II, kidney disease, arthritis and some cancers. Achieving behavioural change to address this burden of disease is therefore an important goal. But doing so 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. Information obviously works best where it targets behaviour resulting mainly from ignorance, such 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.

In practice many public health interventions have relied more on regulation. 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.)

However regulation that overrides individual preferences is potentially a more fraught route to societal improvement. 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 by the potential payoffs, in others not. The calculations are not straightforward and political judgement will inevitably also 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.

Looking at what economists would call the supply-side of the health 'market’, a well-functioning system should have strong incentives to maximise productivity as well as to attain appropriate quality. In its 2006 report on the National Reform Agenda, the Commission found evidence of sizeable productivity gaps in the supply

of existing services around the country. 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 steps in that direction following on from the introduction of the 'casemix' actively-based funding in Victoria.

As arises for patient co-payments, 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 skimming' — favouring patients who, within an identifiable health category, are least costly to treat. Moreover, complex systems can be administratively burdensome, with much time spent by clinicians filling in forms and by administrators auditing them. And what works well at a state level, may not work so well if administered nationally. As in other areas, careful evidence gathering is a key to learning whether any new arrangement produces benefits.

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.

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.

Australia's health workforce also presents opportunities for win-win reforms. Much of the regulation that surrounds the health workforce 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 and fragmentation in processes that frustrate innovation, raise costs and put strains on a system where workforce shortages are growing across the country. To use economists' jargon, it is not clear that 'comparative advantage' prevails in who does what, or that the system is sufficiently responsive to changing needs and capabilities over time.

In reflecting on these and other opportunities for good evidence based policy, it is important to keep in mind that health provision is a *system*. The effectiveness of policy change in one area can depend on policy settings in others. Indeed, it can depend on areas outside the health system as such. For example, 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.

Any national reform plan needs to be cognisant of these wider inter relationships as well as emerging cost pressures related both to the demand (ageing) and supply (technology) sides of the healthcare system itself. Those pressures are inevitable and of major dimensions. They are best addressed proactively and there appears to be scope to do that. But any initiatives need to be approached with caution. After all, health policy is about devising systems that can lead to improvements in people's wellbeing — and the credo 'first, do no harm' applies as much to policy as to medical practice. While greater cost-effectiveness and efficiency must be integral to health policy going forward, mere cost containment should not be the goal.

In sum, there are clearly plenty of challenges for public policy in health, and therefore strong reasons for securing information systems to support it.

Evidence-based policy systems do not come easily. For them to be effective, a number of requirements must be satisfied. I have outlined some of the key ingredients in the ANZSOG speech of a few years ago which has been distributed today *(Evidence-based policy making* : *What is it? How do we get it?)* I will therefore be very brief. Evidence-based systems for public policy need to pay attention to methodologies and data, but also to transparency in developing and applying these. They must also ensure that research is adequately resourced — that there are enough good people doing it and wanting to do it — and, importantly, that sufficient time is allowed for such research to bear fruit.

The reality is that evidence cannot be influential unless it is the right evidence and seen by the right people at the right time. That ultimately requires policy systems that are 'receptive' to evidence — that value it and make effective use of it. Building such receptivity into our policy-making 'systems' is in my view the biggest challenge of all. I therefore end where I began, by applauding this important institutional initiative, by commending the NHMRC for supporting it, and by wishing those involved in it all the best in their important endeavours.

Thank you.