"Take your medicine!: the PBS, productivity and future prosperity"

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There's been a lot of debate in recent times about the Pharmaceutical Benefits Scheme, or PBS.

Pharmaceuticals and the PBS are a key part of Australia's national health policy.

Spending on medicines has the potential to boost productivity by providing real cost-offsets in other areas of the health system and improving worker participation.

However, these benefits are not being sufficiently recognised in the current debate about the appropriate level of spending on the PBS.

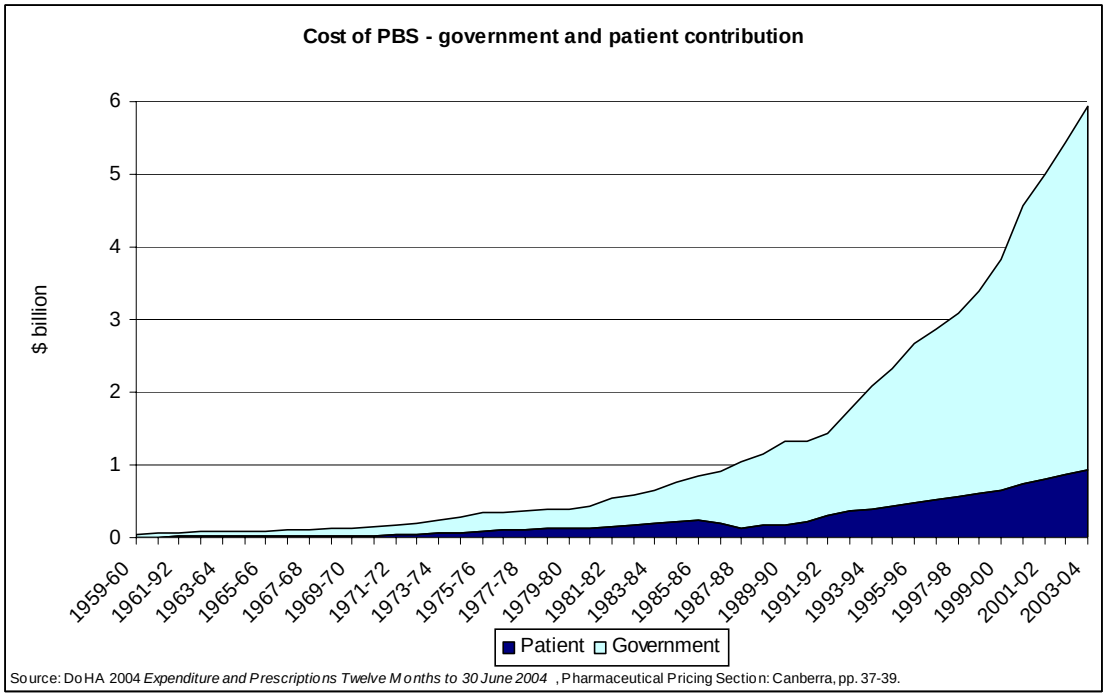
The current debate about the PBS

The current debate about the PBS is driven in part by a concern about the potential for Australia's ageing population to lead to significant increases in expenditure.

There is no doubt that the PBS is a significant and important part of the Commonwealth's Government health care expenditure and that some sort of long-term reform is probably required.

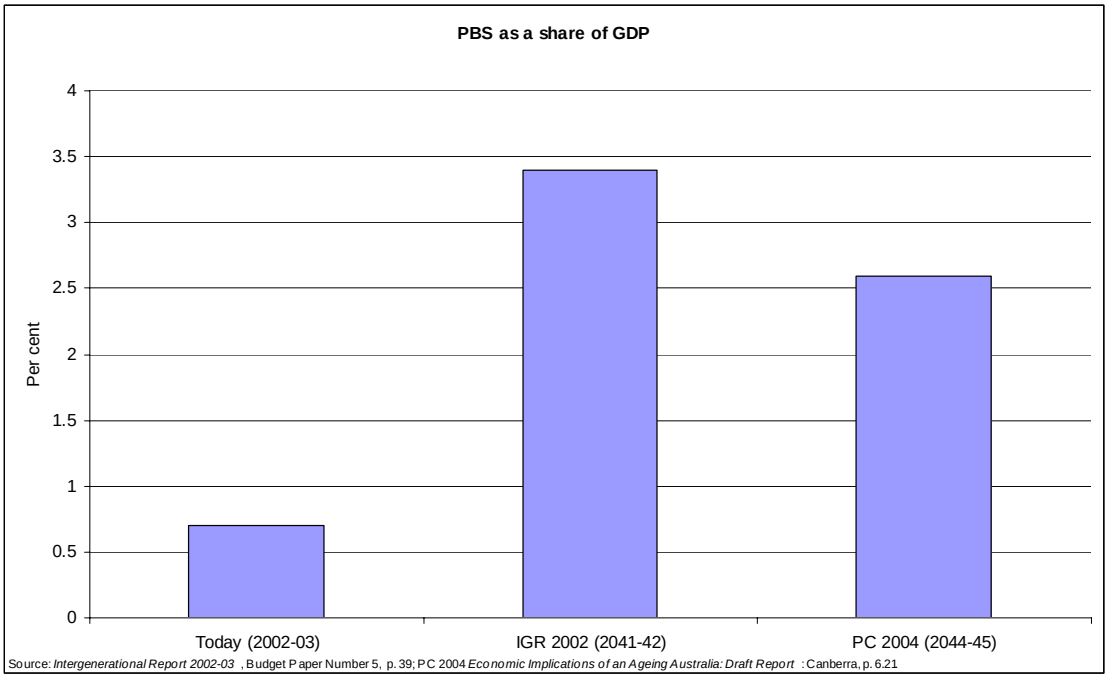
In 2003-04, the Federal Government spent about $5 billion on the PBS, with the community contributing a further $938 million[1].

[1] DoHA 2004 *Expenditure and Prescriptions: Twelve Months to 30 June 2004*, Canberra, p. 2. http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pbs-general-pubs-pbbexp-jun04.htm/$FILE/coverp.pdf (accessed 22 March 2005).



In the last few years we have had several reports highlighting the potential future growth in the PBS.

Both the Intergenerational Report and the Productivity Commission's more recent draft report on ageing, suggest that the PBS will be the fastest growing area of Commonwealth healthcare expenditure, growing by four- or five-fold over the next forty years or so.



The overriding message in the 2002 Intergenerational Report, and other documents like the Treasury's more recent Australia's Demographic Challenges report, is that spending on the PBS is a cost that must be curtailed for the sake of financial sustainability.

Recent indications from the Government suggest that it is considering ways to reign in spending on medicines in Australia.

For example, we have had the Government introduce the 12.5 per cent PBS generic pricing measure to extract greater savings from the PBS.

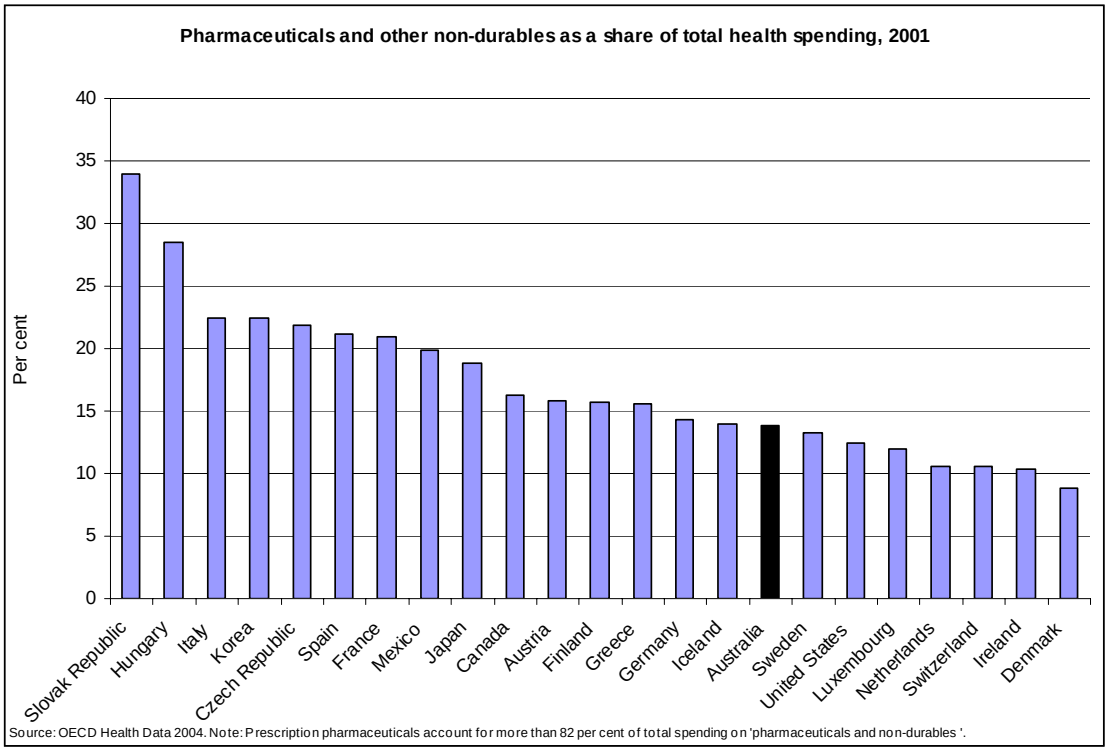
And more recent press reports suggest that the Government is exploring other avenues for saving costs in the PBS.

The role of the PBS in productivity

However, in all of this debate, the focus has been on reducing spending on the PBS.

There are a range of counter-arguments that can put some of this into perspective, not least of which is that, by OECD standards, Australia's spending on pharmaceuticals is below average.

In terms of spending on pharmaceuticals as a share of health expenditure, Australia is in the bottom half of countries, spending 13.8 per cent of its health budget on medicines[2].



More fundamentally, however, in the current debate over the PBS there has been little consideration of the other side of the equation, namely the benefits that individuals and society receive from new medical technologies like new medicines.

The Treasurer has said: *"There are three drivers of economic growth – the population ... their participation ... and their productivity ... I call it 'the law of the three Ps'. If population is working against us, participation and productivity have got to work for us ..."*.

The key point that is often not recognised is that spending on medicines can help redress many of the issues identified by the Treasurer.

Medicines play an important role in improving the health of Australians and the economy.

[2] OECD Health Data 2004.

It is an obvious point, but one that sometimes gets lost in the debate about cost blow-outs.

There is no doubt that one of the reasons why Australians are living longer, have a better quality of life and are actively involved in society is precisely because of this spending on medicines.

As well as improving the lot of individual patients, medicines can also improve productivity by improving the participation of workers in the workforce and improving the efficiency of the health system.

Reducing hospital costs

As an example, the top four medicines by value currently on the PBS reduce the risk of cardiovascular disease, stomach ulcers and asthma attacks.

Top four medicines on the PBS, 2003-04

Medicine	Cost to PBS ($m)
Atorvastatin	427
Simvastatin	373
Omeprazole	209
Salmeterol/fluticasone	177

Source: DoHA 2004 *Expenditure and Prescriptions: Twelve Months to 30 June 2004*, Canberra, p. 21. http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pbs-general-pubs-pbbexp-jun04.htm/$FILE/coverp.pdf (accessed 22 March 2005).

Atorvastatin and simvastatin, the two largest products, help reduce the risk of heart attacks and strokes which are treated in hospitals.

Similarly, omeprazole assists in healing stomach ulcers, reducing the need for surgery, and salmeterol/fluticasone helps manage asthma which also reduces hospital costs.

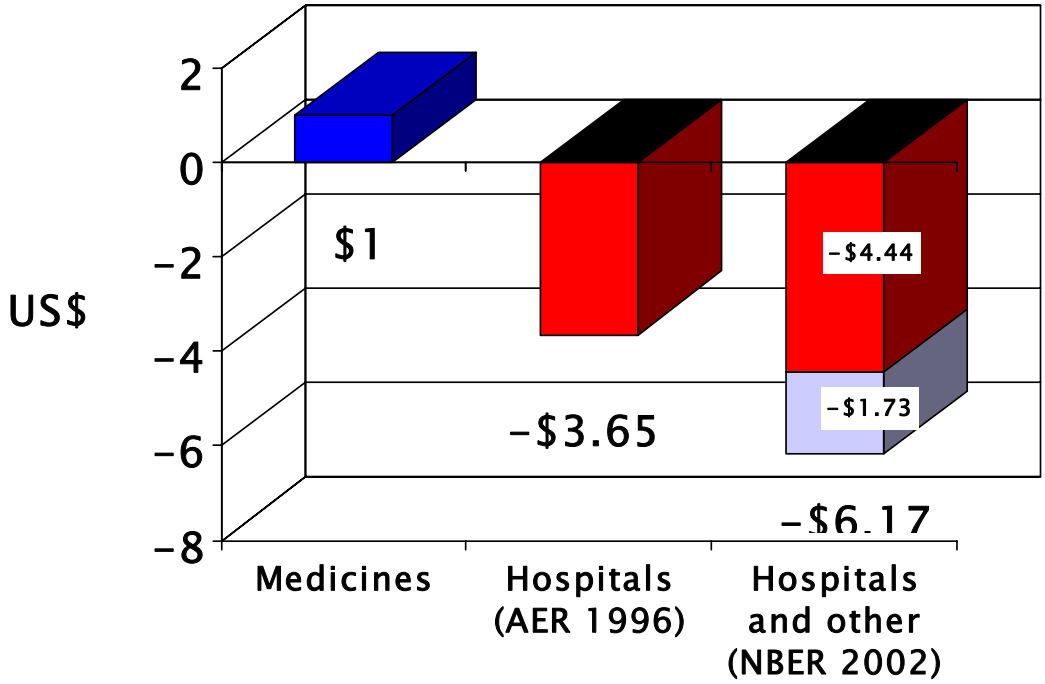
The point is that all of these help reduce the use of hospital services in some way.

There is a growing body of evidence to suggest that medicines do help offset costs in other parts of the health system.

For example, in several studies over the years Frank Lichtenberg has found that an increase in spending on new medicines by one dollar leads to savings in the hospital sector of between three and four dollars[3].

[3] Lichtenberg, F. 1996 "Do (More and Better) Drugs Keep People Out of Hospitals?," *American Economic Review* 86, May, 1996, 384-388; Lichtenberg, F. 2002, *Benefits and Costs of Newer Drugs: An Update*, Cambridge, MA: National Bureau of Economic Research, June.

Lichtenberg – health cost offsets from spending on medicines



Source: Lichtenberg 1996, 2002.

In his review of studies into the impact of rising medicine costs on overall health budgets, Kleinke concludes that new, more expensive medicines save costs in other parts of the health sector[4].

He suggests that the change from expensive, labour-intensive health treatments such as hospitalisation and surgery, in favour of capital-intensive treatments such as medicines is a major structural shift in healthcare towards a more efficient kind of health expenditure.

Kleinke also raises the example where the restriction of the re-imbursement of three medicines in the US Medicaid program "increased the rates of institutionalization in nursing homes, emergency mental health visits, and full-day or half-day hospitalizations in community mental health centres - all at costs far in excess of the medicine savings"[5].

Various other studies have suggested that newer, better medicines are reducing the overall cost of healthcare.

For example, a US study from 2003 found that medicines reduced the cost of treating a depressed person. In this study, per patient spending fell by 19 per

[4] Kleinke, J. 2001 "The Price of Progress: Prescription Drugs in the Health Care Market", *Health Affairs*, 20(5), Sept-Oct.
[5] Ibid.

cent during the 1990s as the method of treating depressed persons changed from hospitalisation to medication[6].

And the use of a new drug to treat Alzheimer's Disease (donepezil) led to a fall in overall costs to treat the disease. While medicine costs were more than US$1,000 higher, overall medical costs fell by almost US$4,000 per patient, or one-third, due to reduced costs in hospital and nursing services[7].

In an Australian observational study, the total cost of treating a person for schizophrenia fell by $2,800 per year over three years. This happened as the use of newer "atypical" antipsychotic medication increased, leading to increased medication costs. However, total health costs fell due to reduction in hospitalisation costs[8]. A similar story emerges from US studies[9].

Nobel laureate economics professor, Gary Becker, makes the point that:

"The share of drugs in future medical spending is likely to increase sharply. But even without full cures, drugs that greatly delay the onset and severity of major diseases will reduce expensive and unproductive time spent in hospitals, nursing homes, and under the care of family members … New drugs have the potential to cut the growth of medical spending sharply.[10]"

Productivity benefits

As well as providing offsetting savings the in health system, medicines improve workers' productivity and participation in the workforce.

Frank Lichtenberg confirmed that pharmaceutical technical progress has increased per capita output via its effect on employment rate and hours worked per employed person. Each successive vintage of innovative medicines has produced a progressive increase in per capita output[11].

A review of a decade of research, mostly from clinical trials, has shown "the evidence is very good for about a dozen medicine classes that pharmaceuticals reduce productivity losses caused by respiratory illnesses (i.e. asthma, allergic disorders, bronchitis, upper respiratory infections and influenza) diabetes, depression, dysmenorrhea and migraine" [12].

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[6] Greenberg, P. et al. 2003 "The Economic Burden of Depression in the United States: How Did It Change Between 1990 and 2000?" Journal of Clinical Psychiatry, 64, pp. 1465-1475.
[7] Hill, JW et al. 2002 "The Effect of Donepezil Therapy on Health Costs in a Managed Care Plan," Managed Care Interface, March, pp. 63-70.
[8] MTAG 2004 *Schizophrenia Care and Assessment Program – 3 year report*, February: Sydney.
[9] Hamilton, S. et al 1999 "Clinical and economic outcomes of olanzapine compared with haloperidol for schizophrenia – results from a randomised clinical trial", *Pharmacoeconomics*, 15, pp. 469-480.
[10] Becker, G. "New Drugs Cut Costs, And Medicare Can Help", *Business Week*, 22/3/04, p. 32.
[11] Lichtenberg, F. 2002 *The Effect of Changes in Drug Utilization on Labor Supply and Per Capita Output,* National Bureau of Economic Research: Cambridge: MA.
[12] Burton, W.; Morrison, A. & Wertheimer, A. 2003 "Pharmaceuticals and workers productivity loss: A critical review of the literature", *Journal of Occupational and Environmental Medicine***,** 45(6), June, p. 610.

Health researcher, Paul Gross, has shown that better health outcomes obtained with modern innovative medicines lead to higher gross domestic product (GDP) by increasing both workforce participation and productivity[13].

Finally, Bloom, Canning and Jamison found that better health has significant benefits for GDP growth[14]. They found that good health raises per capita incomes by improving labour productivity.

New treatments

Right now there are a range of new medicines currently undergoing clinical trials that offer potential new treatments in almost all of Australia's National Health Priority Areas.

For example, at last count around 579 medicines are currently undergoing clinical trials to treat asthma, cancer, cardiovascular disease, mental health, diabetes, injury prevention, arthritis and dementia.

Obviously, not all of these will be a success, but if you accept that around 1-in-5 medicines in Phase 1 or 2 of clinical trials will make it to market, the number of new medicines that could soon be available to treat these conditions could be in the hundreds.

For example, there are currently 42 medicines in clinical trials for rheumatoid arthritis and 28 medicines in trials for Alzheimer's Disease.

There is real potential that some of these new medicines that treat Australia's National Health Priority Areas will soon be available.

As well as providing obvious clinical and quality of life benefits for the individuals themselves and their families, there are also broader economic and society-wide benefits coming from new medicines.

If a new treatment for arthritis allows someone to continue working for another five years, that person could not only continue working, but also pay taxes and not be on a pension.

A new treatment for Alzheimer's Disease could have significant cost savings for the health system.

Even if that treatment only delayed the onset of Alzheimer's by a few years, a person with that condition could potentially continue living at home and not need high level nursing in an aged care facility.

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[13]Gross, P. 2003 *The Economic Value of Innovation: Measuring the Linkages of Pharmaceutical Research, Use of Innovative Drugs and Productivity Gains*, Institute of Health Economics and Technology Assessment: Dee Why.
[14] Bloom, D.; Canning, D. & Jamison, D. 2004 "Health, Wealth and Welfare", *Finance and Development*, 41(1), pp. 10-15.

Such benefits are going to become more important as Australia's population ages.

Future debate

However, the problem is that these benefits are not being given sufficient weight in the current debate about the future of Australia's health system and the PBS.

The debate about the PBS on questions like how big it should be, whether it is growing too fast, whether new medicines are assessed appropriately, and whether taxpayers can afford to fund medicines in the future are all important.

But what is not sufficiently recognised in the debate is the potential benefits that medicines have to society, the Budget's bottom line, and to Australians themselves.

Right now there is a debate going on about the future of the PBS that will have major implications for Australians' future access to new medicines.

There is a policy debate underway that will lay down the framework for the PBS in future years.

However, the concern is that if we do not get it right, there is a potential that Australians may find it harder to access some of these new treatments that are in the pipeline now.

A continual focus on cost-cutting may make it more difficult for these new medicines to be available in Australia on the PBS.

The chief problem is that the benefits of medicines are not being given sufficient air time in the debate over the PBS.

You can tell because when the sustainability of the PBS is being discussed, most commentators are talking about the *financial* sustainability of the PBS, not the overall sustainability in terms of its interaction with broader health outcomes.

Obviously the cost of the PBS needs to be appropriately managed.

However, a concern is that longer-term reform to the PBS needs to be carefully thought out.

One wag made the comment to me recently that the cheapest PBS would be one that has no medicines on listed it.

It might be an offhand comment, but it does illustrate the point that there is a balance to these things.

One way to stop the growth in the PBS is indeed to stop putting new medicines on it.

Although I suspect that if that if that did occur, in a few years you would start to see differences in health outcomes between Australia and the other countries that continued to fund new medicines, as well as differences in the efficiencies of their health system.

Make no mistake, while the impact might not be felt for a number of years, the decisions about how to manage medicines in the future in Australia are being made now. And it is important that Australians, young and old, get involved in that debate.

To conclude, in debating how we can afford new medicines for Australians in the future, we need to recognise the benefits these medicines can bring to society, the economy, the health system and individuals.

We need to ensure that Australians will be able to enjoy the benefits of the new medicines being developed, and in so doing help Australia improve two of the Treasurer's three 'P's – participation and productivity.