Distributional impact of higher patient contributions to Australia's Pharmaceutical Benefits Scheme

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Abstract

This paper uses NATSEM's Pharmaceutical Benefits Model to analyse the effects of a hypothetical 25 per cent rise in patient contributions to prescribed medicines under Australia's Pharmaceutical Benefits Scheme (PBS). The model, based on microsimulation techniques, is able to provide a much broader range of outcomes information, at a much greater level of detail, than is possible with traditional methods.

Higher patient contributions are analysed in terms of their impact on the government to patient split in PBS costs, as well as the distribution of such costs across age groups, family incomes, family types and 36 prescribed medicine types. Also considered are changes in the shares of family disposable incomes spent on prescribed drugs arising from the higher patient contributions.

Introduction

The purpose of this paper is to illustrate, through an application of relevance to policy, some of the capabilities of NATSEM's microsimulation model of the PBS. The model considers Australians living in households only. It excludes those in institutions like hospitals or nursing homes. Technical details of the PBS model are in Walker *et al* (1998b).

The simulations concern a hypothetical 25 per cent increase in per unit patient contributions. As will be seen in the next Section, increases of that magnitude are not exceptional when viewed in a historical context.

In an earlier paper the PBS model was used to simulate what might happen by 2020 if the current scheme remained unchanged. A key finding of that paper was that the impact of PBS cost increases on government expenditures was likely to be *four times* greater than the impact of population ageing alone. This result arose from simulations assuming a 5 per cent per annum increase in the prices of medicines prescribed under the PBS. By comparison, the actual growth rate over the 1992–93 to 1997–98 period was around 10 per cent per annum in real terms (Walker *et al* 1998a, p.16).

Results such as those reported above, together with the uncapped nature of the PBS suggest that, unless GDP growth in future will consistently be well above what it had been in recent decades, the pressures on the Budget from PBS cost increases would be likely to grow. If this occurred, then the issue of how the PBS could be altered so as to lessen budgetary pressures, would become important.

In this study we explore one particular alternative: the reduction of government's share in total PBS costs through higher patient contributions.

I start by summarising the history of the PBS. Then I describe the scenarios associated with the 25 per cent increases in patient contributions and comment on the limitations of the simulations. The results are presented in terms of a range of distributional effects and some conclusions are drawn.

The Pharmaceutical Benefits Scheme

The Pharmaceutical Benefits Scheme was introduced by the Commonwealth government in 1948 to provide reliable and affordable access to medicines to all Australians. It is generally seen as having served Australians well for over 50 years.

Today some 1700 medicines are subsidised under the scheme. In 1997, the base year for our simulations, government expenditures on the PBS amounted to nearly $2.5 billion.

Under the PBS, the Commonwealth government subsidises the cost of PBS-listed prescribed medicines to eligible Australian residents. The extent of the subsidy depends on whether the patient's family has certain social security cards and whether they have reached certain Safety Net Thresholds (SNTs). Those with eligible social security cards are classified as 'Concessional patients'. The concessions cover people with the Pensioner Concession Card, the Commonwealth Seniors Health Card, the Health Benefit Card and the Health Care Card. In June 1995, around one-third of the Australian population was covered by a Department of Social Security concession card of some kind (Walker *et al* 1998b, p.3). All other Australians are classified as 'General patients'.

The level of subsidy is greater for concessional than general patients, with patient contributions correspondingly lower. If the total amount that families spend on eligible prescribed drugs within a calendar year is above a specified limit (the Safety Net Threshold), then there are further reductions in the level of copayment. Concessional and general patients are only treated differently in terms of the extent of the contributions they are required to make.

Initially patients were not required to make a contribution towards the cost of prescribed PBS medicines. However, this situation changed gradually. Lofgren (1998, p.118) documents how PBS patients have been slowly conditioned to 'price signals' and how attempts to limit government cost increases have resulted in tighter controls on the range of drugs eligible under the PBS. A copayment was first introduced in 1960, applying to general patients only. At that time pensioners were the only concessional group. In 1983 the concessional PBS category was extended to several other disadvantaged groups, although these had to make a copayment of $2.00, while no copayment was required from pensioners.

In 1986 the level of the copayment from general patients doubled (from $5 to $10) and, for the first time, a significant number of drugs became non-eligible under the PBS. Another substantial increase occurred in 1990 (from $11 to $15) and, in the same year, a copayment of $2.50 was introduced for pensioners to bring them into line with other concessional card holders. This was accompanied by a corresponding increase in pension payments. The settings of the PBS in 1996–97, the year for the 'Base case' (or 'Do nothing case') in the PBS model, are described in the next section.

A conclusion from the above description is that the hypothetical 25 per cent increases in patient contributions simulated in this study are within the range of the policy changes made over the past 50 years.

Two issues are of particular significance to this study. One is that the higher the administratively set copayment level to general patients, the higher will be the proportion of PBS medicines with costs fully met by such patients. The same however is unlikely to apply to concessional patients. This is because to date their copayment levels tended to remain below the lowest priced PBS medicines (at the pharmacy level). This point can be illustrated by considering the average prices (or 'average total costs') of PBS medicines (ie those attracting a government contribution) within the 36 drug categories considered by the PBS model (Walker *et al* 1998b, Appendices B and D). In the year of that study, 1995–96, the lowest average 'total cost' was $6.27 for drug category 29, 'Hypnotics and sedatives'. This was below the copayment level for general patients ($16.80), but well above that for concessional patients ($2.70). By comparison, the highest average price in 1995–96 was $147.81 for drug category 8, 'Insulins'. In that case the government contribution towards each prescription to a general patient would have been $147.81 – $16.80 = $131.01, until the patient's family's eligible expenditures reached the Safety Net Threshold of $600. Beyond that point the general patient's contribution would have decreased to $2.70 per prescription. It follows that, as we simulate increases in copayments, some lower priced PBS drugs purchased by general patients will no longer attract a government subsidy, while the same drugs purchased by concessional patients will continue to qualify for a subsidy.

The second issue is that, in recent years, around 80 per cent of total PBS subsidies were for medicines supplied to concessional patients. Any further increases in copayments and Safety Net Thresholds would thus be expected to have a considerable impact on the one third of Australians covered by concession cards.

The options studied and limitations of the simulations

Two scenarios were simulated. Option 1 involves a 25% increase in the copayments and the SNTs of both the concessional and general patient groups. Option 2 involves a 25% increase in the copayments and the SNT of concessional patients only.

The latter option was included for two reasons. First, it was expected to facilitate identification of the specific contributions made by each patient group to lowering costs to government. The second was that our study identified the poorer people amongst general patients as being the most vulnerable and, if there were concerns about their vulnerability to further increases in contributions, then Option 2 may be preferred.

Table 1 describes the policy settings for the Base case (1996–97), while Table 2 indicates the policy settings for the two scenarios.

Table 1: Policy settings of the Pharmaceutical Benefits Scheme, Base case, 1996–97

	From 1/7/1996 to 31/12/1996 $	From 1/1/1997 to 30/6/1997 $
Copayment — Concessional		
Below safety net	2.70	3.20
Above safety net	0	0
Copayment — General		
Below safety net	17.40	20.00
Above safety net	2.70	3.20
Safety net — Concessional	140.00	166.40
Safety net — General	600.00	612.60

Source: unpublished information supplied by the then Department of Health and Family Services.

Table2: Policy settings of the Pharmaceutical Benefits Scheme, Scenarios

	Option 1* $	Option 2* $
Copayment — Concessional		
Below safety net	4.00	4.00
Above safety net	0	0
Copayment — General		
Below safety net	25.00	20.00
Above safety net	4.00	3.20
Safety net — Concessional	208.00	208.00
Safety net — General	765.75	612.60

* Option 1: 25% increase in copayment and Safety Net Threshold – Concessional and General patients
* Option 2: 25% increase in copayment and Safety Net Threshold – Concessional patients only

When considering PBS copayment increases, an important issue is whether there would be significant behavioural responses. This question concerns the extent to which higher payments by patients might discourage doctor visits, or whether doctors might be more cautious in prescribing PBS-listed medicines to their less critical patients.

International research suggests that behavioural response is most likely to be significant in the case of patients with low incomes (Walker 1999, Section 3). However, the PBS model does not consider possible behavioural responses. Our simulation results are unlikely to be significantly affected by this, except for the 'vulnerable' group identified later in this paper – 'general' patients in the lowest disposable income quintile.

Another limitation relates to the nature of the data that was available as input to the PBS model. It concerns the difficulties associated with applying the SNT rules to the PBS model's survey-based input dataset (Walker *et al* 1998b, pp 27–31). Raising the copayments and the SNTs by the same percentage in the simulations (25%) was our way of minimising the impact of this limitation.

Results of the simulations

Table 3 shows the differences between the Base case and the two scenarios in terms of scripts, costs to government, contributions by patients and total costs. Part 'a' shows that, in the Base case (1996–97), around 129 million *prescriptions* of PBS listed drugs were subsidised by the government. Although it is not shown in the Table, the majority (some 113 million, or 87 per cent) of these were for concessional patients and the minority (16 million, or 13 per cent) for general patients.

As expected, the total number of scripts did not change under Option 2 since, at $4.00 per script, the new copayment level set for concessional patients was still below the 'average total cost' of the lowest priced drug category. However, under Option 1 the number of scripts declined by 0.8 per cent, due to the 'drop out' of certain general patients – those who purchased medicines costing between $20 and $25 and were no longer eligible for government assistance under the PBS.

Part 'b' of Table 3 shows that under Option 1 the savings to government were estimated at $181 million a year (or 7 per cent). Although concessional patients accounted for close to 80 per cent of scripts, their contribution amounted to less than half of these savings ($87 million out of $181 million). This was due to the much lower levels of copayments applying to concessional patients. The contribution of general patients was estimated at $94 million.

Under Option 2, only concessional patients were affected. Therefore all savings by government ($87 million) arose from the higher copayments applying to concessional patients.

Part 'c' of Table 3 shows that, for concessional patients, the savings to government equaled their additional contributions. For general patients, the additional cost arising from medicines that remained subsidised under the PBS amounted to $65 million, which was lower than the $94 million savings attributed to them in Part 'b' of the Table. This was because – as seen earlier – some general patients have 'dropped out' of the scheme.

Table 3: Effect on scripts and on government, patient and total costs, Base case, Option 1 and Option 2, 1996–97

(a) on PBS Scripts

	Base Case	Option 1*	Change (number)	from Base %	Option 2*	Change (number)	from Base %
Scripts (number)	129,220,944	128,226,667	994,277	-0.77	129,220,944	0	0.00

(b) on Costs to Government

	Base Case	Option 1*	Change $m	from Base %	Option 2*	Change $m	from Base %
Gov costs ($m)	2500	2319	-181	-7	2413	-87	-4
Concessional	2015	1928	-87	-4	1928	-87	-4
General	485	391	-94	-19	485	0	0

(c) on Costs to Patients

	Base Case	Option 1*	Change $m	from Base %	Option 2*	Change $m	from Base %
Pat costs ($m)	496	647	152	31	582	87	17
Concessional	241	328	87	36	328	87	36
General	254	320	65	26	254	0	0

(d) on Total costs (Government plus Patients)

	Base Case	Option 1*	Change $m	from Base %	Option 2*	Change $m	from Base %
Total costs ($m)	2996	2966	-30	-1	2996	0	0.00

* Option 1: 25% increase in copayment and Safety Net Threshold – Concessional and General patients
* Option 2: 25% increase in copayment and Safety Net Threshold – Concessional patients only
NOTE: some figures may not add up due to rounding

Part 'd' of Table 3 presents the difference in total costs between the Base case and Option 1. The additional costs to those who dropped out were around $30 million. Thus, allowing for rounding errors, the additional costs to those patients who in the Base case fell into the general category were close to the $94 million. This is equal to the savings to government from higher copayments to general patients under Option 1 (as reported in Part 'b' of Table 3).

Ignoring at this stage the distributional impacts of the simulated options, the results presented in Table 3 suggest that a 25 per cent increase in the settings of the PBS could results in significant savings to government (around $181 million in 1996–97 prices), and that over half of these savings would arise through additional payments by general patients.

Table 4 shows the effects of Option 1 on the distribution of government costs across broad age groups. As expected, the differences in the distribution of scripts and government costs across the age groups between the Base case and Option 1 are negligible, since the PBS population only changes very slightly between these two states.

Table 4: Effects on scripts and government costs by age group, Base case and Option 1, 1996–97

(a) Distribution of Scripts

Age group**	Base (million)	Share in total %	Option 1* (million)	Share in total %
0–14	20	16	20	16
15–39	24	19	23	19
40–64	43	33	42	33
65–74	26	20	25	20
75 and over	16	13	16	13
ALL	129	100	128	100

(b) Distribution of Government Costs

Age group**	Base ($m)	Share in total %	Option 1* ($m)	Share in total %
0–14	100	16	372	16
0–14	391	16	372	16
15–39	467	19	436	19
40–64	867	34	791	34
65–74	490	20	455	20
75 and over	285	11	265	11
ALL	2500	100	2319	100

(c) Change in Government Costs

Age group**	Base ($m)	Option 1* ($m)	Change ($m)	from Base %
0–14	100	372	-19	-4.9
15–39	467	436	-31	-6.6
40–64	867	791	-76	-8.8
65–74	490	455	-35	-7.1
75 and over	285	265	-20	-7.0
ALL	2500	2319	-181	-7.2

* Option 1: 25% increase in copayment and Safety Net Threshold – Concessional and General patients

** Note that since the PBS model is based on survey data onof Australian households, people in institutions have not been accounted for. Thus, for example, people in hospitals or in nursing homes are excluded from the PBS model.

NOTE: columns may not add up due to rounding

Parts 'a' and 'b' of Table 4 show that children under 14 accounted in 1996–97 for around 16 per cent of all scripts and government costs, young adults aged 15–39 for nearly 20 per cent, those aged 40–64 years for around one third, and those aged 65 years or over for a further third of all scripts and government costs. Table 4 also shows the script distribution for Option 1. This distribution will be similar for Option 2.

Table 5 shows the distribution of the savings to Government under Option 2 across the 36 drug types considered by the model. As seen in Table 3, under Option 2 the model estimated a 4 per cent decline in government costs, amounting to around $87 million. Table 5 suggests that around $18 million of that total would come from users of drugs in the 'Heart and blood pressure' group, with 'Calcium channel blockers' accounting for more than a third of that $18 million. A further $7 million would come from users in the 'Analgesic medications' group, with $34 million falling into the 'other medications' category and the rest being distributed across the remaining drug classes.

Table 5: Government costs by medicine type, Base case and Option 2, 1996–97

Drug description	Base case (1) $ million	Option 2 (2) $ million	Difference (2–1)/1 %
Arthritis drugs			
Anti-inflammatory & antirheumatic products, non-steroids	59.9	54.7	-8.6
Specific antirheumatic agent	2.5	2.4	-1.1
Allergy drugs			
Nasal decongestants for topical use	4.3	4.2	-2.6
Antihistamines for systemic use	6.2	5.8	-7.2
Asthma medications			
Adrenergics & inhalants	104.6	99.9	-4.4
Other anti-asthmatics & inhalants	231.6	228.1	-1.5
Other anti-asthmatics for systemic use	9.4	8.8	-7.2
Diabetes			
Insulins	70.9	70.6	-0.4
Oral blood glucose lowering drugs	27.3	25.4	-7.0
Heart and blood pressure drugs			
Cardiac glycosides	7.1	6.1	-13.8
Anti-arrhythmics	11.1	10.8	-2.6
Vasodilators used in cardiac disease	33.7	32.4	-3.9
Anti-adrenergic agents, centrally acting	8.1	7.6	-5.7
Anti-adrenergic agents, peripherally acting	11.7	11.1	-4.8
Arteriolar smooth muscle agents	0.5	0.4	-8.8
Arterial smooth muscle, agents acting on	158.7	154.0	-3.0
Beta blocking agents, plain	38.5	34.7	-9.9
Calcium channel blockers	149.3	143.0	-4.2

Fluid/diuretic medications			
Low-ceiling diuretics, thiazides	4.1	3.6	-10.6
Low-ceiling diuretics, excl. thiazides	14.4	13.7	-4.7
High-ceiling diuretics	11.5	9.9	-14.0
Potassium-sparing agents	4.7	4.5	-4.7
Diuretics & potassium sparing agents in combination	6.9	6.3	-9.1
Serum lipid reducing agents			
Cholesterol & triglycerid reducers	108.8	107.0	-1.7
Analgesic medications			
Opiods	6.7	6.2	-6.6
Other analgesics & antipyretics	46.6	40.1	-14.0
Psycholeptic medications			
Antipsychotics	16.1	15.3	-5.1
Anxiolytics	9.0	7.7	-14.3
Hypnotics & sedatives	5.5	4.7	-13.9
Medications for anxiety/depression			
Antidepressant	88.2	85.8	-2.6
Other medications			
Vitamin & mineral supplements	39.0	37.2	-4.5
Cough/cold medications	6.3	6.0	-5.1
Skin ointments & creams	69.4	65.6	-5.5
Stomach medications	203.2	199.1	-2.0
Laxatives	7.8	7.5	-3.6
Other medications	431.1	407.8	-5.4
ALL	2014.6	1928.2	-4.3

Source: PBS Model simulations.

Table 6 shows spending by concessional and general families on subsidised PBS drugs as a share of their disposable incomes. The population was divided into quintiles, based on families' disposable cash incomes. The quintiles were computed for the part of the Australian population that used PBS subsidies drugs in 1996–97, and are not for the whole Australian population. The usual comments regarding the difficulties of using survey-based income data to identify the disadvantaged apply – see for example Travers (1999).

Table 6: Spending by families on PBS drugs in the two weeks 1–14 January 1997, by disposable income quintile, Base case and Option 1

Income quintile	Mean disposable income (1)	Per person income#	Spending on PBS drugs, Option 1* (2)	Spending as share of income, Option 1* (2)/(1)	Spending as share of income, Base Case
	$ per fortnight per income unit	$ per fortnight per person	mean, $ per fortnight per income unit	%	%
Concessional Patients					
1	330	285	10.79	3.3	2.6
2	421	331	11.30	2.7	2.1
3	595	273	19.55	3.3	2.6
4	770	279	21.59	2.8	2.2
5	1301	293	26.52	2.0	1.6
All	684	290	17.96	2.6	2.1
General Patients					
1	458	145	39.46	8.6	7.4
2	960	271	37.89	3.9	3.4
3	1384	373	41.06	3.0	2.4
4	1790	363	39.92	2.2	1.9
5	2860	596	42.01	1.5	1.2
All	1494	372	40.07	2.7	2.2

Computed as mean family (ie income unit) income divided by mean number of people in family.
* Option 1: 25% increase in copayment and Safety Net Threshold – Concessional and General patients
NOTE: quintiles refer to disposable cash incomes computed for the prescribed drug user population subsidised under the PBS (ie they are not quintiles for the whole Australian population).

As expected, Table 6 shows that, in 1997, the family situations of concessional and general patients differed significantly. For example, in the Base case the mean disposable family incomes of concessional patients ranged from $330 to $1301 a fortnight compared with $458 to $2860 for general patients.

Patients had been granted concessions because their families had low incomes. So the higher mean incomes in the higher quintiles were due to the welfare system providing greater transfers to couples with children, than to single persons. Due to the structure of Australia's social security system, however, the per person income in this concessional group is relatively constant across quintiles.

Table 6 also shows that in the Base case families' out-of-pocket expenditure on government subsidised PBS drugs was relatively low on average. It ranged from around 1 per cent of their disposable incomes to just over 7 per cent, the average being around 2 per cent of families' disposable incomes Australia-wide. Under Option 1 this increased to close to 3 per cent. The largest share was for general patients in the lowest disposable income quintile. In the Base case it was estimated at 7.4 per cent and under Option 1 at 8.6 per cent. Most would consider these to be large shares of a family's budget just for prescribed medicines.

Table 7: Concessional patients, age distribution of family heads and family types by income quintiles, Base case, 1996–97

Income quintile#	Age distribution of family heads		Family type	
	Age group	%	Type	%
1	15–39	30.8	married, no dependents	4.0
	40–64	25.6	married, with dependents	0.3
	65–74	21.7	sole parent	0.0
	75+	21.9	single	95.7
2	15–39	14.7	married, no dependents	3.3
	40–64	31.0	married, with dependents	2.2
	65–74	23.4	sole parent	5.3
	75+	30.9	single	89.2
3	15–39	11.6	married, no dependents	79.2
	40–64	39.7	married, with dependents	2.4
	65–74	32.5	sole parent	13.5
	75+	16.3	single	4.9
4	15–39	20.1	married, no dependents	60.6
	40–64	36.2	married, with dependents	16.7
	65–74	29.5	sole parent	20.2
	75+	14.2	single	2.5
5	15–39	59.5	married, no dependents	11.5
	40–64	34.4	married, with dependents	80.1
	65–74	5.4	sole parent	8.4
	75+	0.7	sole parent	0.0
All	15–39	27.4	married, no dependents	31.8
	40–64	33.4	married, with dependents	20.4
	65–74	22.5	sole parent	9.5
	75+	16.8	single	38.4

quintiles refer to disposable cash income quintiles computed for the Concessional prescribed drug user population (ie they are not quintiles for the whole Australian population).

Tables 7 and 8 show the distributions by the age of family head, family type and income for concessional and general patients. Although the distributions are for the Base case, they would be the same under Option 2, and similar under Option 1. As seen earlier, this is because in the model the original PBS population is only altered under Option 1 due to a slight contraction of the general patient group (general patients who used prescribed PBS drugs with an 'average total cost' of between $20 and $25).

Table 8: General patients – Age distribution of family heads and family type by income quintiles, Base case, 1996–97

Income quintile#	Age distribution of family heads		Family type	
	Age group	%	Type	%
1	15–39	12.4	married, no dependents	62.6
	40–64	34.6	married, with dependents	5.8
	65–74	39.4	sole parent	0.2
	75+	13.6	single	31.4
2	15–39	17.9	married, no dependents	53.0
	40–64	49.7	married, with dependents	16.1
	65–74	19.9	sole parent	3.3
	75+	12.6	single	27.6
3	15–39	33.5	married, no dependents	45.5
	40–64	60.2	married, with dependents	41.3
	65–74	4.3	sole parent	2.0
	75+2.1	single	11.2	
4	15–39	26.7	married, no dependents	31.9
	40–64	65.6	married, with dependents	66.3
	65–74	3.6	sole parent	0.2
	75+	4.1	single	1.6
5	15–39	59.5	married, no dependents	33.5
	40–64	34.4	married, with dependents	62.4
	65–74	5.4	sole parent	0.0
	75+	0.7	single	4.0
All	15–39	22.6	married, no dependents	45.0
	40–64	60.0	married, with dependents	38.7
	65–74	14.0	sole parent	1.1
	75+	7.1	single	15.1

quintiles refer to disposable cash income quintiles computed for the General prescribed drug user population (ie, they are not quintiles for the whole Australian population).

For all quintiles, Table 7 indicates that about 40 per cent of the family heads in the concessional population were aged 65 years or more, with a further 33 per cent falling into the 40–64 age group. This reflects the composition of those Australians who are eligible for concessions. As far as the model's PBS population is concerned, the majority of card holders were individuals or families with Pensioner concession cards (usually those receiving the age pension). The second most important group comprised people with Health care cards (which included the unemployed).

Within quintiles, the age and family structures of concessional patients reflected the basic characteristics of Australia's social security system, in that the larger the family, the higher was its income from government. As a result, in the lowest two quintiles some 90 per cent of patients were single, with around half being over 65 years of age. In the third and fourth quintiles married couples without dependents dominated, with a considerably lower proportion of 15–39 year olds than in quintile 1. By contrast, adult patients in the highest quintile were much younger, with around 60 per cent of family heads being aged 39 years or less, and 80 per cent of these living in couple families with dependent children.

Compared with the concessional group, the general patient population was considerably younger. Over 80 per cent of family heads in this group were aged 64 years or less (Table 8).

Within quintiles amongst general patients, the poorest group (quintile 1) contained either couples without dependent children (63%), or single persons (31%), with around a third of the family heads falling into the 40–64 age group, and a massive 39 per cent into the relatively narrow 65–74 age group (Table 8). This suggests that general patients in quintile 1 contained a very high proportion of the 'younger old' – ie 65–74 year olds whose cash income was just above the cut off for the age pension. However, it is hard to know what proportion of people in this group were cash-poor but asset-rich (ie, how many had considerable assets, usually in the form of owning their home (Walker 1998c, pp19–23). Quintile 1 also contained the 'working poor', including the 40–64 year olds (35%) who may have worked in casual jobs, moved in and out of the workforce, and earned just above the cut off levels set for government benefits.

Amongst general patients, the second lowest quintile comprised either couples without dependent children (53%), or single persons (28%), with some three quarters of family heads falling into the 40–74 age group. In the third quintile couples without dependent children (46%) and those with children (41%) dominated, with nearly all being under 64 years of age, while two thirds of the fourth quintile was made up of couples with dependents, with family heads aged 40–64 years.

The age and family structures of the top quintile of general patients were similar to that of quintile 4. However, in this group family heads were somewhat older. It is likely that quintiles 4 and 5 comprised a high proportion of 40–64 year-old family heads who had progressed to highly paid positions, with a high proportion of families having both partners earning high incomes. In this respect Travers (1999, p.16) notes the Australia-wide predominance of multiple income earners among the most affluent. The majority in the top quintile were couples with dependants (63 per cent), a significant proportion were couples without dependants (34 per cent), and a few were single persons with exceptionally high incomes (2–4 per cent).

Discussion

The Pharmaceutical Benefits Scheme has served Australians well for over 50 years. It was introduced in 1948, with the then government fully meeting the costs of the associated medicines (ie at that time patients were not required to contribute). Since then, however, growth in costs well above the rate of growth of GDP had resulted in successive governments introducing 'price signals' in the form of patient contributions. Over time the required contributions had become greater and more widespread.

Real PBS-related costs to government have increased by 10 per cent a year since the early 1990s, and have placed pressures on successive Budgets. Since international experience suggests that the rate of growth of PBS expenditures is unlikely to decline significantly in future, the issue of how the scheme could be altered so as to alleviate future cost pressures is likely to remain of interest.

In this study, we used NATSEM's PBS model to explore two scenarios: a 25% increase in the copayments and the Safety Net Thresholds of both concessional and general patients (*Option 1*), and the same increases but for concessional patients only (*Option 2*).

The greater contribution by general patients to the savings by government from Option 1 is likely to be perceived by most as being fair. Indeed, if the government opted to compensate concessional patients for their PBS costs being 25 per cent higher – eg, by corresponding increases in social security payments, as it did in 1986 for pensioners – then Australians on government benefits would be able to maintain their current living standards. At the same time they would be encouraged to be more responsive to price signals. However, with such a compensation the net savings to government from Option 1 would be considerably lower than the estimates reported in this study.

Even with such compensation, the problem of how the most vulnerable (ie the poorest of the general patients) could be shielded, would remain. If compensation to that group was also offered, then the estimated savings to government would be further eroded. Under such a scenario there could be extra administrative costs, which would need to be added to the costs associated with the compensation itself. Once all these factors had been accounted for, the '25 per cent higher patient contributions' scenario of Option 1 may no longer seem particularly attractive.

Overall, the results of this study suggest that a 25 per cent increase in patient contributions could result in significant savings to government (up to around $180 million out of a total expenditure of $2.5 billion in 1997). However, had the disadvantaged groups been compensated, then the savings to government would have been at least halved. Since some 80 per cent of PBS patients rely on government benefits, the potential to substantially increase patients' contributions is at best limited. If PBS-related government costs continued to rise at rates well above that of GDP, and if this continued to cause concerns, then alternatives other than the raising of patient contributions may need to be considered.

Acknowledgements

The author is grateful to Richard Percival (NATSEM) for comments on an earlier draft of this paper, and to Robert Brazenor (Department of Health and Aged Care) for valuable comments on the Section which describes the history of the Pharmaceutical Benefits Scheme.

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