

Health care financing and public responses: use of private insurance in Western Australia during 1980–2001

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Abstract

Objectives: The aim was to identify and explain trends and cut points in payment classification (privately insured or otherwise) for episodes of hospitalisation in Western Australia.

Methods: Hospital morbidity data from 1980 to 2001 were used to produce trend lines of the proportion of hospital separations in each payment category in each year in age and clinical subgroups.

Results: The most significant changes in payment classification over time were found in all groups between 1980 and 1984, corresponding to a period when free public hospital care in Australia was abolished (Sep 1981 to Feb 1984). The trend associated with this policy change rebounded significantly just before the introduction of Medicare in 1984. These observations were consistent over all age groups except in the oldest group (70+ years). This trend was more pronounced for the surgical subgroup compared with other broad clinical categories. More recently, a trend towards increasing public episodes was reversed from 2000 following introduction of incentives for private health cover and sanctions against deferred uptake in younger people.

Conclusion: The public appeared to adopt a short-term crisis reaction to major policy change but then reversed towards past patterns of behaviour. The implications for policy makers include the need to understand the underlying culture of the population; to realise that attitudes become fixed as people age; and to recognise the difference in the effectiveness of incentive- and deterrent-based policies.

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What is known about the topic?

The introduction of Medicare in 1984 triggered a steady decline in the proportion of Australians covered by private health insurance (PHI). A series of policies aimed at increasing the proportion of Australians holding PHI have been pursued by the conservative coalition government since 1996, but the response of the public is not always predictable.

What does this paper add?

This study used historical evidence within a defined social framework to investigate the determinants of PHI usage (rather than coverage) so as to unravel the complex associations between PHI, types of hospital usage and health care policies. The Western Australian population adopted a short-term crisis reaction to major policy change (removal of free public hospital care) but then reversed towards past patterns of behaviour.

What are the implications for practitioners?

Understanding the impact of sociocultural factors on PHI usage is important in the search for sustainable policy settings in Australia's mixed public and private hospital system. The impact of "carrots and sticks" approaches may be less predictable in determining behaviour in health care than in other areas of public policy. ◆

WESTERN SOCIETIES HAVE DEVELOPED three basic types of resource allocation systems in health care. These have been implicitly grounded in three perspectives of how society works: a free market, a mixed two-tiered system, and an egalitarian system.¹ The Australian health system is a mixed two-tiered system based on the premise that different health care arrangements can and should co-exist. In this system, elements of the private sector participate in both tiers; for example, general practice, medical specialists, and laboratory and diagnostic services are within the private sector but are egalitarian. An underlying assumption is that if people can move between tiers they will not object to differences in access and treatment.¹ Two-tiered systems are set up to

ensure that everyone has a right to a minimum level of care, but if some people wish to buy more care they may do so, purchased usually by means of private health insurance (PHI).

Private health insurance is a major financing device within the Australian health system,²⁻⁴ contributing about 13% to total health expenditure in 1992-93³ and about 7% in 1999-00.⁵ Unlike the United States, however, Australia has also provided universal access to free public hospital care through Medicare since 1984.⁶ Deeble⁷ has stated that in the design of Medicare and its predecessor, Medibank, PHI was seen as a practical way of allowing those with the financial means and a strong preference for private treatment to participate in an additional private hospital market segment ("opting up") without opting out of the universal scheme to which they had also contributed. It has been argued that over time the market segmentation between private and public hospitals has become blurred to the point where PHI is now viewed as an alternative to Medicare, somewhat in competition with it rather than supplementing it.⁷

The introduction of Medicare triggered a steady decline in the number of Australians covered by private health insurance.⁸ One feature of the decline was that it was the young and healthy who dropped out. Since 1996, the conservative coalition government has pursued a series of policies aimed at increasing the proportion of Australians with PHI in the belief that falling levels of PHI might otherwise threaten the viability of both the public and private hospital systems through over- and under-activity respectively.^{9,10} The policy initiatives can be divided into three groups: those directed at the affordability of PHI; those intended to remediate PHI product deficiencies; and more general initiatives.¹¹ The major effort has concentrated on increasing the levels of PHI coverage by a mixture of "carrots" (the PHI incentive scheme in 1997, partially replaced by a 30% rebate in 1998) and "sticks" (a means-tested Medicare levy surcharge in 1997 for high income earners who did not take out PHI, and a lifetime community rating in 2000).⁸

Nationally, in the first 2 years following the introduction of the 30% rebate for PHI premiums, PHI cover stabilised but did not rise. However, the

"Run for Cover" campaign associated with the "Lifetime Health Cover" policy had a dramatic effect. This campaign was aggressive and resulted in PHI cover growing by 50%.⁷ The campaign created the perception of a crisis in the public system and a climate of uncertainty about the continued availability of Medicare. Many people believed they had no option but to insure by the age of 30 to avoid higher premiums, and its success was in the main due to a fear campaign.⁷

Western Australia covers one third of the continent and its population (1.9 million), like the remainder of the nation, has been ageing steadily over the past 20 years.¹² The challenges facing the WA health system are similar to those facing other states.

The aim of this study was to examine the trends from 1980 to 2001 in hospital payment classification in WA by gender, age group and broad clinical category in order to better understand the association between changes in utilisation of PHI and changes in health care policies aimed at promoting PHI.

Methods

The WA Data Linkage System¹³ was used to extract hospital morbidity data from 1980 to 2001, comprising encrypted patient identification and episode numbers, age, gender, Aboriginality, postcode, census collector's district, date of admission, date of separation, admission type (elective v emergency), hospital type (metropolitan private, metropolitan public teaching, metropolitan public non-teaching, country private, country public), payment classification (public, uninsured private, insured private, or other), diagnosis related group (DRG), principal condition and principal procedure.

The data were prepared for analysis by assignment of a broad clinical category to each record using either the recorded DRG or, where no DRG was recorded, by using the combination of principal procedure and principal condition to determine the most appropriate DRG. Five broad clinical categories were assigned (surgical, medical, psychiatric, obstetric, and paediatric). All episodes

involving individuals aged 16 years or under were categorised as paediatric.

The proportion of separations in each payment category in each year was calculated according to gender, age group (0–16 years, 17–39 years, 40–69 years, 70+ years) and broad clinical category. The “other” payment categories, which included workers compensation, motor accident insurance, defence force personnel and Department of Veterans’ Affairs patients, were removed from the calculations, leaving only the categories of public, private insured and private uninsured. This was done because the study was principally concerned with elective shifts between private insurance and public categories, not enforced payment classifications due to mandatory funding arrangements.

Dates and details of changes in federal health policies were identified from the literature.^{11,14,15} Local changes in the health care delivery environment were identified using pooled local knowledge from within the School of Population Health at the University of WA. Local changes in the private health care delivery environment were identified by senior managerial staff of a major local private health insurer.

Results

Federal health policy and local health care service delivery changes

Our information sources were used to identify eight changes in federal health policy and six changes in local service delivery as detailed in Box 1.

Characteristics of individuals and episodes in the data file

The hospital morbidity file contained data on 8.4 million hospital episodes of care in 1.7 million individuals. Three per cent of the records were excluded because no payment classification was recorded; a further 6% were excluded because they pertained to non-WA residents (individuals from other countries and those from other states who happened to have been hospitalised while in WA) and were thus not part of the population under investigation. The characteristics of the data file following these exclusions appear in Box

2. The proportion of males was slightly lower than females, with the most frequent payment category being public (63% of male episodes and 58% of female), followed by private insured (35% of male episodes and 39% of female). The majority of episodes involved teaching hospitals (approximately 36% of the total) or private metropolitan hospitals (approximately 25%).

Proportions of yearly episodes in each payment category by gender

The proportions of public episodes were higher in males and private episodes were higher in females (Box 3). From 1980 to 1982, a time when free public hospital care was abolished for all but health care card-holders, there was a sharp fall in public episodes (males, 63% to 47%; females, 59% to 41%) and a sharp rise in private insured episodes (males, 34% to 52%; females, 40% to 57%). Before the reintroduction of free public hospital care (Medicare) in 1984, this trend was reversed and the proportion of public episodes rose to just below 1980 values. Following this, in all years, public episodes exceeded both private insured or private uninsured episodes. Box 3 shows clearly that between 1984 and 1999, there was a steady increase in the proportion of public episodes complemented by a steady decline in the proportion of private insured episodes. This trend was sharply reversed in 2000, when there was a marked increase in private insured episodes, and a fall in the proportion of public episodes, which continued over the remaining 2 years.

Proportions of episodes per year in each payment category by age group

The proportions of public, private insured, and private uninsured episodes of hospitalisation in WA from 1980 to 2001 are shown in Box 4 for each gender in four age groups. The age groups 0–16 years, 17–39 years and 40–69 years showed similarly shaped distributions of episodes over the two major payment categories (public, and private insured). While the relative proportions differed across the age groups, the overall trend was that described above. The 70+ years age group, however, showed a markedly different pattern from the other three age groups. The most marked differ-

ence was evident over the 1981 to 1984 period where, in this age group, public episodes did not fall dramatically. In addition, over the remainder of the observation period this age group showed the least annual change in the relative proportion of episodes. In this age group the proportion of public episodes was consistently larger than the proportion of private episodes.

In 1982 and 1983, and again from about 1993 onwards, a larger relative proportion of private

uninsured episodes was observed in the two younger age groups compared with the two older age groups.

Proportions of yearly episodes in each payment category by clinical category

The proportions of public, private insured, and private uninsured episodes of hospitalisation in WA from 1980 to 2001 are shown in Box 5 for each of the five broad clinical categories. The

I Federal health policy and local health care service delivery changes

**Commencement
(and duration)
of initiative***

Description of initiative

Changes to federal health care policy

Sept 1981 (-Jan 1984)	Abolition of free public hospital care to non health care card holders
Feb 1984 (-Oct1986)	Medicare introduced (universal bulk billing and free public hospital care restored) Out of hospital rebate set at 85% of scheduled fee Maximum rebate set at \$10 Levy set at 1%
Nov 1986 (-June 1993)	Medicare levy increased to 1.25% Out of hospital rebate set at 85%/\$20 Gap set at \$150 per annum In hospital rebate set at 75% with no maximum; PHI to cover remaining 25%
1993 (-1995)	Medicare levy increased to 1.4%
1995 (-1997)	Medicare levy increased to 1.5% 0.2% surcharge introduced to pay for a guns "buy back" following Port Arthur massacre
1997 (-1999)	Surcharge of 1% introduced for high income household without PHI Gap cover policies allowed (no gap and known gap) Simplified billing (use of billing agents)
Jan 1999 (-June 2000)	Uncapped 30% PHI rebate for hospital and ancillary benefits with no means test
July 2000 (-Present)	Lifetime health cover: differential premiums allowed based on age at initial premium. Informed consent: patients provided with quotes on costs prior to procedure commencement

Changes to local health care service delivery

1985	Opening of a new private hospital in the centre of metropolitan Perth
1986	Beginning of private day patient treatment in WA due to opening of a number of private day hospitals
1987	Introduction of a private psychiatric clinic offering day programs
1994	New private tertiary care hospital with an emergency department Privatisation of the local veterans hospital
1996	Second private psychiatric clinic focusing on day patient programs or short stay admissions New collocated public/private hospital located in the extreme northern metropolitan area
1998	New collocated public/private hospital located in the extreme southern metropolitan/rural area

* Financial year unless otherwise indicated. PHI = Private health insurance.



pattern of medical episodes was similar to that previously described; however, the distribution of the surgical episodes was substantially different after 1992. There was a reduction in public episodes and an increase in private insured epi-

sodes, particularly marked in males, which lasted until 1995. This was followed by a period of relative stability until 2000, when there was a further shift from public to private insured episodes, culminating in 2001 with public episodes

2 Characteristics of individuals and episodes in the hospital morbidity data file

Data element	Number of individuals (1st episode)		% of data set (individuals)		Number of episodes		% of data set (episodes)	
Gender								
Male	796 753		46.0		3 552 495		42.5	
Female	934 520		54.0		4 814 817		57.5	
Total	1 731 273		100.0		8 367 312		100.0	
	Male	Female	Male	Female	Male	Female	Male	Female
Age group*								
0–16 years	266 921	232 466	53.4	46.6	729 385	576 847	55.8	44.2
17–39 years	247 122	411 157	37.5	62.5	818 476	1 990 919	29.1	70.9
40–69 years	225 937	213 587	51.4	48.6	1 387 298	1 496 130	48.1	51.9
70+ years	55 581	76 111	42.2	57.8	606 872	737 471	45.1	54.9
Total	795 561	933 321	46.0	54.0	3 542 031	4 801 367	42.5	57.5
Payment classification								
Public	415 281	456 863	47.6	52.4	2 232 513	2 802 529	44.3	55.7
Private insured	352 822	440 022	44.5	55.5	1 245 184	1 887 437	39.7	60.3
Private uninsured	28 650	37 635	43.2	56.8	74 798	124 851	37.5	62.5
Total	796 753	934 520	46.0	54.0	3 552 495	4 814 817	42.5	57.5
Broad clinical category								
Medical	265 020	256 254	50.8	49.2	1 588 996	1 798 079	46.9	53.1
Surgical	266 764	312 030	46.1	53.9	1 175 580	1 663 469	41.4	58.6
Obstetric	na	138 992	na	100.0	na	678 597	na	100.0
Psychiatric	8694	10 006	46.5	53.5	87 298	139 917	38.4	61.6
Paediatric	256 275	217 238	54.1	45.9	700 621	534 755	56.7	43.3
Total	796 753	934 520	46.0	54.0	3 552 495	4 814 817	42.5	57.5
Type of hospital								
Teaching	261 353	252 074	50.9	49.1	1 502 645	1 554 448	49.2	50.8
Public metropolitan	116 016	178 281	39.4	60.6	343 112	674 709	33.7	66.3
Private metropolitan	215 517	291 035	42.5	57.5	816 063	1 346 024	37.7	62.3
Public country	186 549	193 616	49.1	50.9	788 221	1 099 888	41.7	58.3
Private country	16 764	19 050	46.8	53.2	95 022	132 266	41.8	58.2
Other†	554	464	54.4	45.6	7 432	7 482	49.8	50.2
Total	796 753	934 520	46.0	54.0	3 552 495	4 814 817	42.5	57.5

* 0.3% missing values therefore excluded from age group analysis. † Other health care facilities (nursing homes and psychiatric hospital). ◆

falling below private insured episodes for the first time in any clinical category since 1984.

In the psychiatric clinical category the overall trends were similar to that for all categories combined until 1996, when the relative proportion of private insured episodes increased substantially, a trend that continued until 1998. This increase corresponded to the opening of a second private psychiatric clinic in Perth.

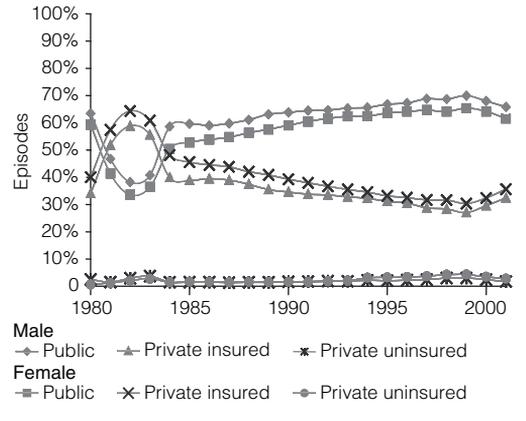
In the obstetric category the most notable feature was the exaggerated rise and fall in private insured episodes between 1980 and 1984, and the substantial rise in private uninsured episodes from 1993, which was maintained until the end of the observation period.

Discussion

Our investigation of the trends in the payment classification of hospital admissions from 1980 to 2001 by gender, age group and broad clinical category found a complex mix of changes over time. Significant error in our results is unlikely as the data were population-based and classification regimes were consistently applied. Missing demographic data items were very uncommon (<1%) and primary diagnoses were recorded accurately in 90% of cases.¹⁶

The most significant changes across all groups occurred between 1980 and 1984, corresponding to a time when free public hospital care was abolished in Australia for all except those with health care cards for a period of 3 years, followed by its reintroduction in 1984 in the form of Medicare. Although there was an initial dramatic reduction in the proportion of public episodes and a corresponding increase in private insured episodes reaching its peak in 1982, this trend was reversing well before the reintroduction of free public hospital care in 1984. The temporary removal of free public hospital care was the most influential event over the 21 years of observation. It dramatically shifted hospital episodes from the public sector into the private insured sector; however, by its third year of operation there were the beginnings of a rebound back into the public sector. This rebound was not the result of any

3 Trends in the proportion (% of episodes) of public, private insured and private uninsured episodes in each gender from 1980 to 2002



new federal policy initiative, but rather appeared to be a “correction” to initial over-reaction to the policy change.

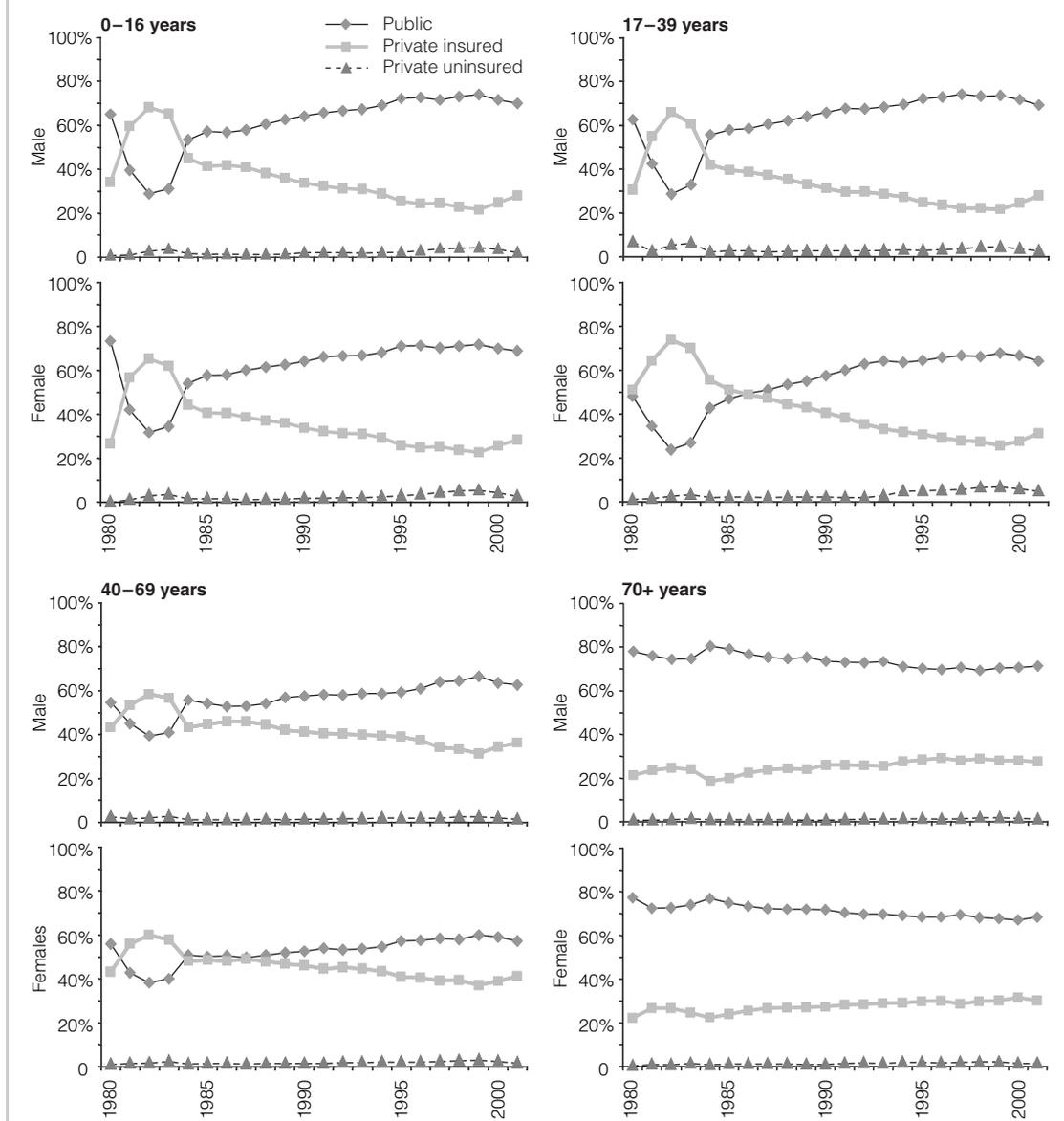
Differences in the trends between age groups indicate that the effects of policy changes differ across sections of the community. The major feature of our results was that the effect of policy changes (supportive of PHI) diminished with age. We note, however, that the abolition of free public hospital care did not apply to pensioners with health care cards, which would largely explain the markedly reduced response between 1980 and 1984 in those aged 70+ years. To some extent this result is unsurprising, as the majority of policy changes were aimed at increasing the proportion of young to middle-aged persons taking up PHI. However, the result has important implications for the PHI industry as it would seem that after a certain age, preferences for health care funding arrangements become robustly resistant to outside pressures for change. One limitation of the analysis was that the use of the 17–39 years age group did not allow an analysis of the behaviour of individuals just below 30 in 2000.

There were major differences over time between the five major clinical categories in the

response to changes in policy. Some changes were expected due to targeting of the initiative; for example, the developments in day surgery and psychiatric clinics. One unanticipated feature occurred in the obstetric category where, from 1994 onwards, there was a significant proportion

of private uninsured episodes. This period did not correlate with any specific policy change concerning PHI as the general direction of policy changes at the time aimed to increase income tax support for Medicare (ie, levy increases). Similar, but less substantial, rises in the proportion of

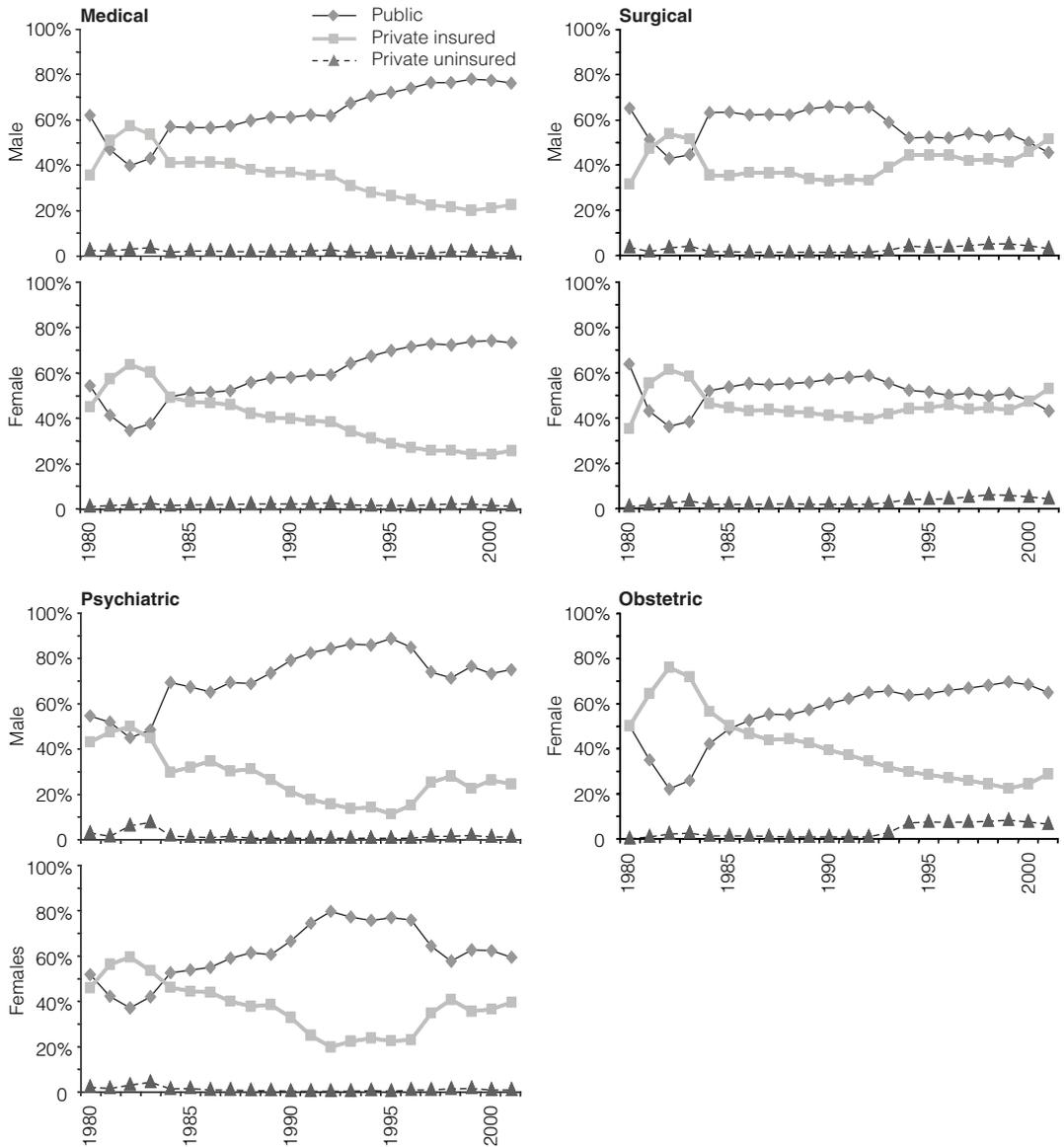
4 Trends in the proportion (% of episodes) of public, private insured and private uninsured episodes from 1980 to 2002 for each gender in four age groups



private uninsured episodes were observed in surgical patients. A possible explanation was that PHI was not considered value for money by these individuals, who then made a decision to pay for

obstetric and elective surgical services as a one-off out-of-pocket expense. Alternatively, in the case of obstetric episodes, at the time there had been concerns regarding quality of care and short

5 Trends in the proportion (% of episodes) of public, private insured and private uninsured episodes from 1980 to 2002 for the broad clinical categories



The paediatric category has been excluded because it is equivalent to the 0–16 year age group. ◆

length of stay for public obstetric patients, particularly at King Edward Memorial Hospital.¹⁷ This could have also been a driver for the increase in private uninsured episodes.

Previous peer-reviewed evaluations of policy changes aimed at supporting PHI in Australia have centred on the prevalence of PHI cover,²⁻⁴ or economic modelling of hospital costs.¹⁸ Several analyses have indicated that the introduction of Lifetime Health Cover on 1 July 2000 had the largest immediate effect, whereas the 30% rebate (January 1999) slowed the decline in PHI coverage.^{6-8,11,19} Our results are consistent in showing an increase in private insured hospital episodes commencing from 2000. This trend was most pronounced in surgical patients and, overall, was not observed in persons aged 70+ years. These two federal health policies were initiated close together, resulting in synergy between their effects, and thus the effect of Lifetime Health Cover in isolation remains unknown.

Other analyses have centred on the effect of policy changes on the financial viability of the PHI funds. Willcox⁶ found that the effect of selective contracting in Australia was different from that seen in the US where, due to contracting with private hospitals, prices fell by 10%–20%. In Australia, the PHI plans increased the average daily benefit paid to contracted private hospitals by 40% in 1996, compared with 5% over the previous 5 years. Many PHI plans chose to provide new 100% hospital coverage products, which ultimately reversed their collective financial performance from a profit of A\$34 million in 1994–95 to a loss of A\$44 million 1995–96.⁶ In the US, selective contracting reduced prices because PHI funds shifted bargaining power from the private hospitals to themselves. In Australia, however, the bargaining power remained with the consumer, who had a choice of “opting up” to PHI or relying on Medicare. In order to make PHI more attractive, the PHI plans needed to provide more financially attractive products. Unfortunately, this increased the moral hazard inherent in PHI when all costs are covered.⁷

Several Australian studies have attempted to examine the determinants of the demand for PHI,

but, to date, no rigorous studies on PHI in the context of a universal public system have been undertaken. The Industry Commission has argued that extrinsic factors such as abrupt changes in regulatory and institutional regimes are the major determinants of movements in PHI coverage.⁶

Our study has drawn on historical evidence within a defined social framework to investigate the determinants of PHI usage. We suggest major determinants for PHI usage within the context of a universal public system include sociocultural as well as financial and health status factors. Personal choice in health insurance (private or public) is affected by personal and cultural attitudes, such as whether one believes health is a private or public responsibility. Understanding the underlying culture of the population and how it reacts to signals such as health policy changes is important if effective, evidence-based health care policy making is to be achieved. We suggest that our study illustrates one example of the tendency for societies to resist policies that force them away from cultural norms. In addition, our observations indicate that cultural attitudes become fixed as people age. This has implications for current policy makers who are trying to influence the use of PHI by “carrots and sticks” methods.

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Competing interests

Professor D'Arcy Holman is a director of HBF Health Funds Inc.

HBF Health Funds Inc. was not directly involved in study design, data collection or analysis of the data. Their opinion was sought during the interpretation phase, mainly in regard to background information on changes in local service provision. In addition, prior to publication a draft of the manuscript was submitted to HBF Health

Funds Inc. and their comments sought. These were addressed by the authors and the manuscript revised where appropriate.

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