

The effect of the 30% private health insurance rebate on the purchasing behaviour and intentions of the Australian population

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Abstract

This article examines the likely effect of the 30% private health insurance rebate on private health insurance coverage. It is based on a survey of the Australia population conducted in April–May 1999 which collected information on health insurance purchasing behaviour and intentions. These data are used to predict the subsidy's likely effect on hospital insurance coverage, with estimates ranging from 30.5% to 34.3% by May 2000. Ancillary insurance membership is forecast to increase to between 32.7% and 37.2% of the population over the same period. The 30% insurance rebate will probably produce, at best, a small increase in hospital insurance membership. The cost of the rebate is estimated at \$1.4 billion in 1999–2000. Given the small increases in projected membership, the cost of the initiative is very high.

Introduction

Over the past few years there have been several policy initiatives designed to increase the proportion of the population holding private health insurance. The most costly is the 30% rebate for private health insurance that came into effect on 1 January 1999 (Department of Health and Aged Care 1998a). This study used a telephone survey to assess the effect

of the rebate on the purchasing behaviour and intentions of both insured and uninsured people. Like any other intervention designed to change health-related behaviour, the outcomes of the subsidy should be assessed as a prelude to its evaluation.

Since the full effect of the rebate is likely to take time to emerge, the survey collected information on future purchasing intentions in addition to the changes in insurance coverage in its first four months of operation. While consumer intentions have not previously been used to forecast health insurance coverage, they are routinely used in market research to predict the demand for other types of goods and services (Urban and Hauser 1980).

Method

Sample recruitment and description

A random sample of 2300 residential telephone numbers (including mobile phone numbers) and contact addresses were selected from the current electronic listing of the white pages of the telephone directory. Selected households were initially sent a letter and an information sheet on private health insurance. Households were then contacted by telephone between four and ten days later. Interviews were conducted by a market research organisation between 24 April and 21 May 1999. Only the member of the household who makes decisions regarding private health insurance was interviewed. The protocol for the survey was approved by the ethics committee of the Australian National University.

Following the changes to health insurance arrangements contained in the Federal Budget of 11 May 1999 (that is, the introduction of lifetime community rating), it was decided to restrict the analysis to the 1467 households contacted prior to this date (Australia, Parliament 1999). A total of 284 of these households were not contacted, due to the telephone number being either disconnected or unanswered after five attempts (a rate of 19%). In a further 25 households the respondent was not sufficiently fluent in English to answer the survey questions. Of the remaining 1158 households there were 855 successful interviews (73.8%). Except for a slight under-representation of Queensland households (14% compared with 18% in the population) the sample was representative of the Australian community.

Outline of the questionnaire, information sheet and analysis

Pilot testing of the telephone survey and information sheet was conducted by experienced telephone interviewers on three separate occasions between February and April 1999. After each round of testing, modifications were made to the wording of the information sheet and several questions in the survey.

The information sheet was divided into two parts. The first part contained a brief description of hospital and ancillary insurance and the range of premiums (after adjusting for the 30% rebate) charged by health insurance funds in the respondent's State or Territory. The premiums were derived from a recent survey of all funds by the

Australian Consumers' Association (Australian Consumers' Association 1998). The second part foreshadowed several questions that would be asked in the subsequent telephone interview, including whether the respondent intended to purchase private health insurance in the next 12 months. The inclusion of these questions was designed to provide respondents with an opportunity to consider their answers prior to the telephone interview.

The final version of the telephone survey was divided into three sections:

- demographic and socioeconomic details of the respondent's household, including the age and sex of each person potentially covered by a health insurance policy and the household income (that is, the combined income of all persons in the household who would be covered by insurance)
- household coverage of hospital and ancillary insurance in December 1998 and whether the household's insurance status had changed following the introduction of the rebate on 1 January 1999
- intention to purchase or remain in hospital and ancillary insurance over the next 12 months.

Data from each completed survey form were entered twice into a computer database and the records matched to ensure the verification of data entry. Descriptive and bivariate analyses were undertaken to examine the effect of the subsidy on purchasing behaviour and intentions.

Results

A total of 345 respondents, or 40.4% (95% CI, 37.1%–43.6%) of the sample, had hospital insurance and 37.1% (95% CI, 33.8%–40.3%) had ancillary insurance in December 1998. While ancillary and hospital insurance can be purchased separately, a high proportion (78%) of those holding hospital insurance also had ancillary insurance cover. Two of the respondents with hospital insurance had dropped their cover between December 1998 and May 1999 (0.6%; 95% CI, -0.2%–1.4%) and eight of the 510 respondents without hospital insurance had purchased it (1.6%; 95% CI, 0.5%–2.6%). In comparison, three of the 317 respondents with ancillary insurance had dropped their cover (0.9%; 95% CI, -0.1%–2.0%) and six had purchased it (1.1%; 95% CI, 0.2%–2.0%).

Intentions in the next 12 months

All respondents were asked to state their purchasing intentions in the next 12 months. Respondents with private insurance were asked if they intended to change any aspect of their policy. Those who intended to make changes were asked further questions on the likelihood of maintaining hospital cover and ancillary insurance cover. They were asked to classify themselves into one of the following categories according to their degree of intention to maintain their cover:

- 'yes definitely'
- 'yes probably'
- 'not intending to maintain/purchase cover', or
- 'don't know'.

Those with insurance who did not intend to change their policy were automatically assigned to the 'yes definitely' category. Proportions of insured people in each category are reported in Figures 1 and 2.

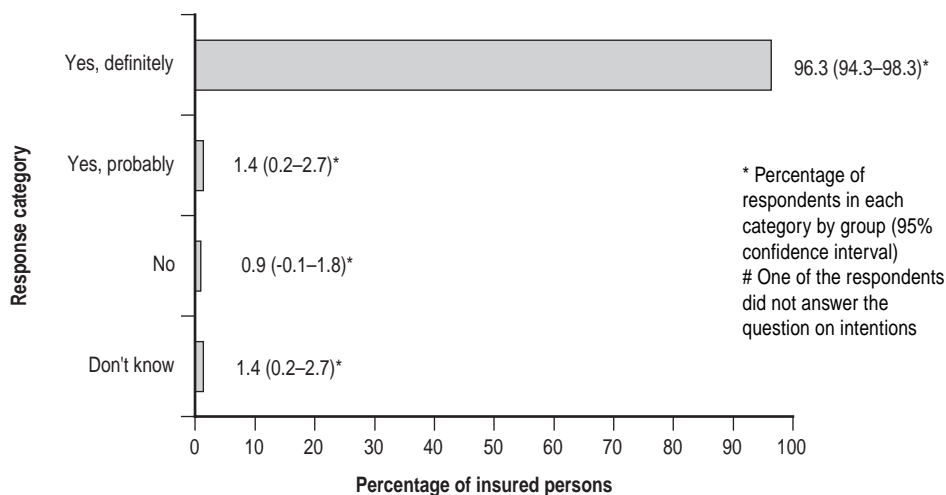


Figure 1: Insured respondents' intentions on whether to continue their hospital insurance cover over the next 12 months (n=350)[#]

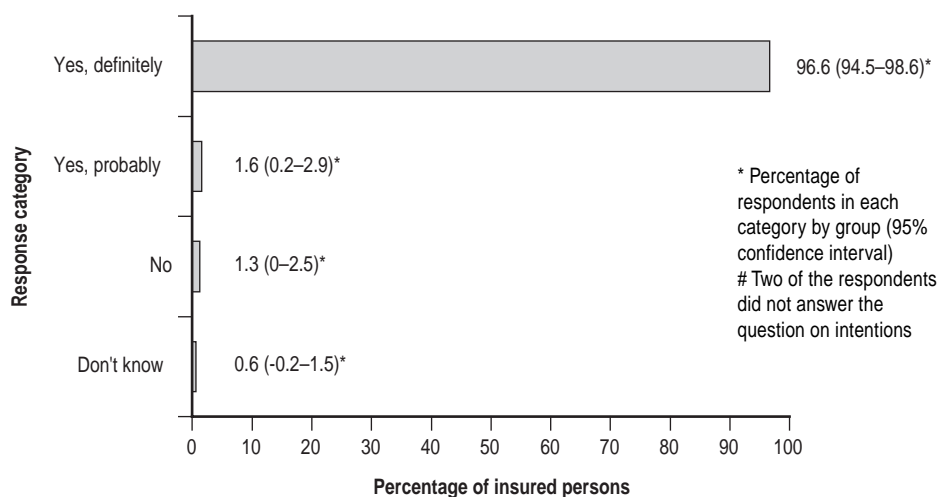


Figure 2: Insured respondents' intentions on whether to continue their ancillary insurance cover over the next 12 months (n=319)[#]

A total of 96.3% of respondents with hospital insurance and 96.6% with ancillary insurance were classified in the 'yes definitely' category. A further 1.4% of respondents with hospital cover and 1.6% with ancillary insurance classified themselves in the 'yes probably' category. The remainder of the insured group either did not intend to maintain their insurance cover or did not express an intention and were classified in the 'don't know' category.

Respondents without private insurance were asked whether they would purchase hospital or ancillary insurance in the next 12 months using the same four categories. These results are reported in Figures 3 and 4.

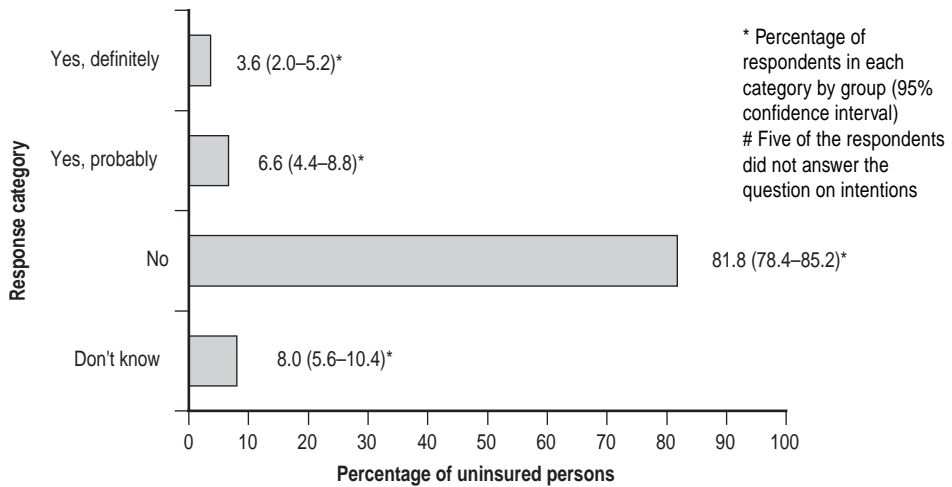


Figure 3: Uninsured respondents' intentions on whether to purchase hospital insurance cover over the next 12 months (n=499)[#]

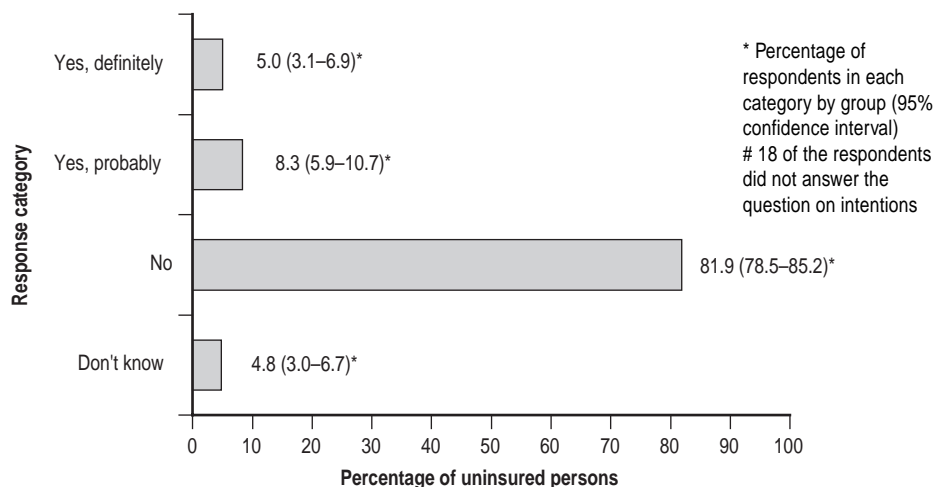
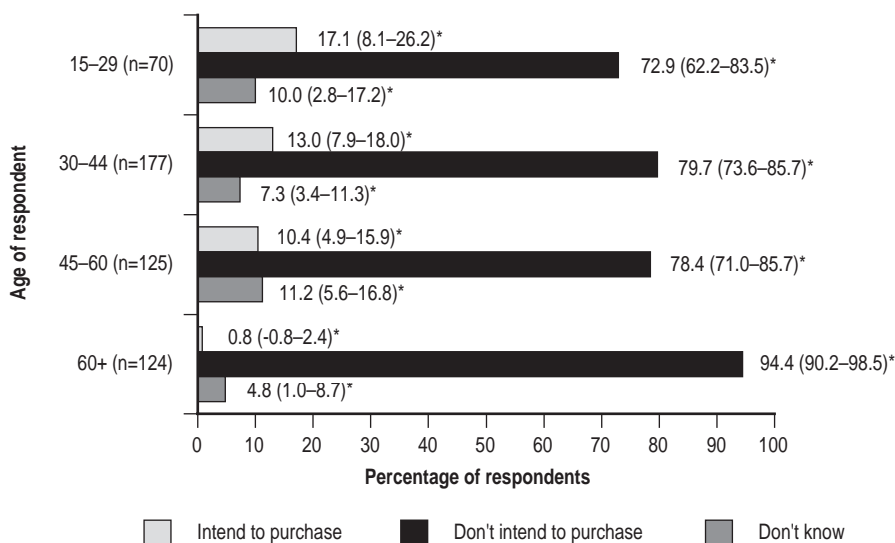


Figure 4: Uninsured respondents' intentions on whether to purchase ancillary insurance cover over the next 12 months (n=518)[#]

Only 3.6% of respondents stated 'yes definitely'; a further 6.6% stated 'yes probably' when asked the likelihood of purchasing hospital insurance. A slightly higher proportion definitely intended to purchase ancillary insurance (5.0%) or indicated they would probably do so in the next 12 months (8.3%).

Hospital insurance purchasing intentions by age and income group

Figures 5 and 6 compare hospital insurance purchasing intentions of the uninsured by age and income.



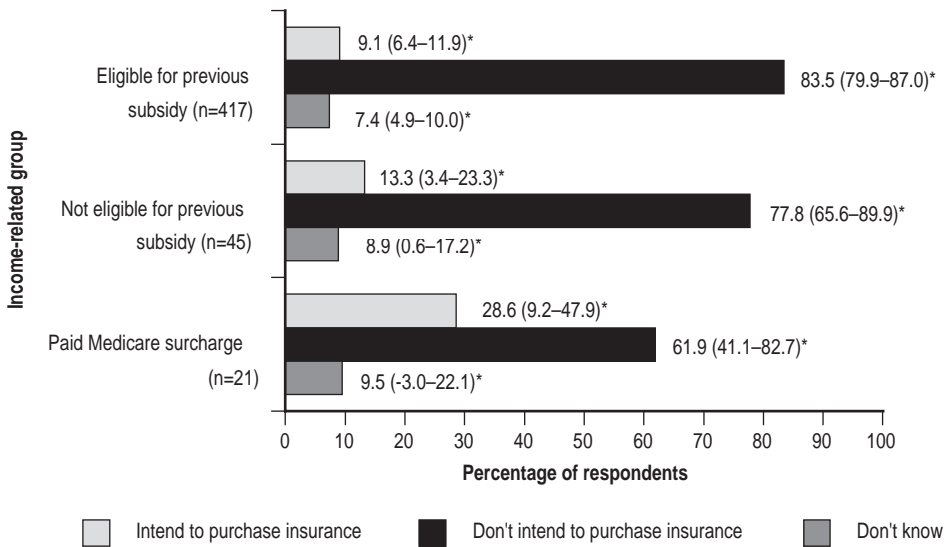
* Percentage of respondents in each category by group (95% confidence interval)

Eight of the respondents did not answer either the question on intentions or age

Figure 5: Purchasing intentions of uninsured respondents by age group[#]

Figure 5 suggests that the rebate is likely to have its greatest effect on those under 30 years of age, with 17.1% of the 15-29 age group intending (that is, 'yes definitely' or 'yes probably') to purchase private health insurance. In contrast, only 0.8% of those over 60 years had the same intention. After excluding respondents who did not express an intention, and taking into account the ordered nature of the age categories, there was a significant negative association between age and the intention to purchase private health insurance: ($\chi^2=16.82$, 1 df, $P < 0.01$).

The current 30% rebate for private health insurance replaces the means-tested rebate which came into affect on 1 July 1997. Under the previous scheme a rebate was paid to single people earning less than \$35 000 and families earning less than \$70 000 (Industry Commission 1997). The Medicare levy surcharge on higher income earners remains. This applies when single people earning over \$50 000 per year or families earning over \$100 000 per year do not take out private health insurance cover.



* Percentage of respondents in each category by group (95% confidence interval)

28 of the respondents did not answer either the question on intentions or household income

Figure 6: Purchasing intentions of uninsured respondents by income group[#]

Figure 6 compares the intentions and behaviour of three income-related groups: those eligible for the previous subsidy; those whose income made them liable for the surcharge; and those who neither benefited from the previous rebate nor paid the levy. The highest proportion intending to purchase insurance were those who were liable for the surcharge, but the numbers in this group are small and the confidence interval is wide. Purchasing intentions were positively associated with increasing income:

($\chi^2=8.15$, 1 df, $P<0.01$).

Discussion

The main finding of this study, namely that purchasing intentions and behaviour are relatively unresponsive to premium changes, accords with two US studies (Marquis & Phelps 1987; Holmer 1984) which have shown an inelastic demand for health insurance. When demand is inelastic, a decrease in the price produces a less than proportionate increase in purchasing. The benefits of the rebate are thus largely confined to those already holding private health insurance. Purchasing intentions decreased with age and increased with income.

Based on data provided under statute by the health funds, the Private Health Insurance Administration Council has reported that 30.1% of the Australian population was covered by hospital insurance at 31 December 1998 and that 31.3% held ancillary insurance (Private Health Insurance Administration Council 1999). The relevant proportions in the sample were 40.4% and 37.1% respectively. The sample therefore

overstated insurance cover by about one-third. The most likely explanation is that non-participation was highest among the uninsured. They may not have regarded a survey on private health insurance as having any relevance to them. In fact, of the 1158 households initially contacted, 30% held hospital cover, which mirrors the actual proportion in the population.

Estimating the effects of the subsidy

The Private Health Insurance Administration Council figures show that hospital insurance coverage rose by 0.2% of the population (to 30.3%) over the 3 months to 31 March 1999 and that the coverage of ancillary insurance rose by 0.3% (Private Health Insurance Administration Council 1999). Applying the separate sample results to the proportions of the population who were insured and uninsured on 31 December 1998 gives point estimates of a 0.9% increase in hospital cover and a rise of 0.5% in ancillary membership. The survey therefore slightly overstated the initial effects. However, the periods were not identical and the differences were within the range of sampling error.

Future effects are difficult to estimate, because intentions are not always translated into action. The nexus between a respondent's stated purchasing intention and subsequent behaviour has been studied in a variety of different contexts by market researchers (Urban & Hauser 1980). Although most research shows a clear association, there is by no means a one-to-one correspondence. It is therefore common to apply probability weights to stated intentions (for example, an X% probability that people who indicate a 'definite' intention to purchase will actually do so). Unfortunately, no universally accepted weighting scheme exists, because the relationship varies between products (Jamieson & Bass 1989) and there are no published probability weights for health insurance products. However, one can posit that the intentions of insured people are likely to be closely correlated with their subsequent behaviour, because insurance is often paid automatically through pay deductions and requires no positive action to maintain it. Even so a proportion will discontinue their insurance cover due to events not realised at the time of the survey (for example, an unforeseen period of unemployment). Conversely, it is likely that a lower proportion of the uninsured will actually carry out their intentions, because the act of purchasing is one which takes time and costs money.

The scenarios used to forecast changes in insurance coverage are shown in Box 1. They employ high and low probability weights which are likely to encompass the true values.

Box 1: Assumptions used to forecast health insurance coverage*'High estimate' scenario*

- 90% of uninsured persons stating they 'definitely' intend and 60% of those stating they will 'probably' purchase insurance do so within the next 12 months.
- 99% of insured persons who 'definitely' intend or will 'probably' continue are covered in 12 months time.

'Low estimate' scenario

- 60% of uninsured persons stating they 'definitely' intend and 20% of those stating they will 'probably' purchase insurance do so within the next 12 months.
- 95% of insured persons who 'definitely' intend or will 'probably' continue are covered in 12 months time.

In the first scenario, 90% of the uninsured who 'definitely' intend to buy insurance and 60% of those who will 'probably' purchase, do so in the next 12 months (that is, a positive 7.2% of those without hospital insurance and 9.5% of those without ancillary insurance). In the insured group, 99% of those who were insured in December 1998 and who intended to continue (that is, those in both the 'definite' and 'probable' categories) are insured one year later. The effective drop-out rate would then be about 3.3% and 2.9% of the existing hospital and ancillary membership respectively. Applying these proportions to the insurance status of the population at 31 March 1999 gives a net increase in the number of insured people of around 13%. Expressed as a proportion of the population, the net increase would be 4.0%, that is, from 30.3% to 34.3% by May 2000. The calculations for ancillary membership were similar. The projected increase in membership was 5.6%, with the proportion of the population covered rising to 37.2%

In the second scenario, only 3.5% of uninsured people purchase hospital insurance and 4.7% purchase ancillary cover. The drop-out rate increases to 7.2% and 6.8% respectively. The second scenario thus produces the much more modest result of 30.5% of the population holding hospital cover and 32.7% holding ancillary insurance. The rebate is likely to have a greater effect on ancillary insurance membership than on hospital cover.

While both scenarios suggest that the subsidy will produce a slight increase in coverage, these calculations should be viewed with caution for several reasons. First, if the uninsured people who did not respond to the survey were less inclined to take insurance than those in the same category who did participate, the intentions of the uninsured group as a whole will be overstated. The forecast coverage may therefore be on the high side. Second, premium rises in June 1999 will reduce the impact of the rebate. Finally, the introduction of lifetime community rating, which allows health funds to charge

different premiums depending on the age at which a person joins the fund, is likely to influence purchasing behaviour. However, its likely effect on coverage is uncertain.

Long-term effects

A recent report by the Industry Commission (1997) found that the major contributors to the rise in premiums since 1990–91 were:

- the substantial rise in the proportion of fund members using private hospitals rather than public ones
- the increase in private hospital charges due to changes in technology and clinical practice, and
- an increase in the average hospital usage of private patients.

The subsidisation of private health insurance through a 30% rebate addresses symptoms rather than the cause of premium increases. It is a 'one-off' reduction which leaves the rate of premium increase unchanged. Unless the introduction of lifetime community rating changes the community's propensity to buy private insurance, the proportion of the population holding it will resume its downward path.

The Commonwealth Department of Health and Aged Care estimates that the net cost of the rebate will be just over \$1.4 billion in 1999–2000, rising to \$1.6 billion 2001–02 (Department of Health and Aged Care 1998b). Since most of its effect is the initial price reduction, it can be expected to have its maximum effect in the first few months of operation. After that it will be taken for granted by those who benefit from it, making it difficult to remove, but it will probably have less long-term effect upon the level of coverage. The data from this survey suggests that any changes in membership will be small and the cost of achieving them will be very high.

Acknowledgements

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