

Homer CSE. Increasing private health insurance uptake and the impact on the rate of normal birth and costs of maternity care: a hypothetical model. *Australian Health Review*. 2002 25 (2): 32-36.

## **Private health insurance uptake and the impact on normal birth and costs: a hypothetical model**

Caroline SE Homer

Caroline Homer is the Midwifery Consultant in Practice Development at St George Hospital and a Senior Research Fellow with the Centre for Family Health and Midwifery in the Faculty of Nursing, Midwifery and Health at the University of Technology Sydney.

Email: [homerc@sesahs.nsw.gov.au](mailto:homerc@sesahs.nsw.gov.au)  
Fax 02 9350 3198

### **Abstract**

Recent Australian government policy has encouraged large numbers of women of childbearing age to enter private health insurance. This paper describes how increased uptake of private health insurance may impact on the rate of normal birth, caesarean section and the costs of providing maternity care in low risk primiparous women in New South Wales.

A hypothetical model was developed using data from the NSW Midwives Data Collection. Costs were calculated using data established from previous research in NSW (Homer *et al* 2001).

It suggests that, as the proportion of low risk primiparous women with private health insurance increases, the rate of normal birth may decrease with a subsequent increase in rate of caesarean section. As the rate of caesarean section rises, the cost of providing intrapartum and postpartum care may also increase.

I argue that increased rates of private health insurance membership have the potential to increase the rate of caesarean section and the cost of providing maternity care to low risk women. It is evident that government policy can impact on the outcome of maternity care in Australia in ways that might not have been predicted. Paradoxically, the care of healthy childbearing women may cost the Australian government more to provide in the future.

### **Introduction**

Recent policy changes by the Australian Government have resulted in significant increases in the uptake of private health insurance. This policy change is known as Lifetime Health Cover (LHC). LHC is designed to slow down the rate of premium increases and make private health insurance more affordable. LHC recognises the length of time that a person has had private hospital cover and rewards that loyalty by offering lower premiums.

People who join early in life are charged lower premiums throughout their life compared to people who join later (Commonwealth of Australia 2000). LHC follows an early policy initiative, the 30% rebate, which is also designed to encourage the uptake of private health insurance (Willcox 2001).

The assumptions behind LHC and the 30% rebate are that by increasing the uptake of private health insurance, the burden on public health systems will be reduced. However, private health insurance is subsidised from government and private medical providers receive significant payments from government often at the expense of funding within the public sector.

Effects of LHC and the 30% rebate have not been reported thus far in the technical literature and the government's own estimate of the effects have been inadequate. Various authors have,

however, commented on some of the theoretical effects. For example, Hindle (1999) has suggested that as a result of the LHC policy the private sector will be better off, at the expense of the public health system. The public sector will remain under pressure with an overall decline in the cost effectiveness of the health system. Hindle (1999) argues that it is likely that public hospital demands will increase without additional funding with a subsequent decline in standards of care. Ultimately, LHC maybe counterintuitive to the notion of improving public sector funding and effectiveness. Likewise, the 30% rebate has been seen as problematic and unhelpful in terms of improving the health system. In their submission to the Senate Inquiry on Hospital Funding, the University of New South Wales suggests that while the rebate may have been a sensible taxation policy, it was entirely unhelpful to the health care system (Hansard, 2000). The effect of the rebate has been to transfer patients from the public sector into the private sector which is inherently more costly to provide. During the recent federal election campaign, the Australia Institute indicated that the 30% rebate costs the government at least \$2 billion dollars per year and this could rise to \$3 billion within 18 months (Collyer & White 2001). Collyer and White (2001) also suggest that an overlying privatised system, or 'corporate medicine', threatens the gold standard of health services and ultimately means the end of universal healthcare. Clearly there needs to be more public debate on these issues and this evidence and others should help inform policy direction and reform.

The LHC policy has been particularly targeted at younger people thus it is likely that it will result in more women of childbearing age taking up private health insurance for care during pregnancy and childbirth. Recent research has demonstrated that privately insured women experience more obstetric intervention than their non-insured counterparts (Roberts, Tracey, & Peat 2000). It is therefore important to consider the impact that increased uptake of private health insurance will have on the rates of obstetric intervention and the costs to the Australian government (and the community) of providing maternity care.

This paper aims to model a hypothetical increase in the uptake of private health insurance in low risk childbearing women in NSW and demonstrate the subsequent effect of clinical outcomes and related costs. The intention was to answer the question: what are the possible clinical outcomes and related costs associated with an increase in the rate of private health insurance?

## Methods

The baseline sample comprised of low risk primiparous women who delivered a live infant in NSW from 1 January 1996 to 31 December 1997. The sample was obtained from the NSW Midwives Collection (NSW Health Department 1998b; NSW Health Department 1998a) and was used in research comparing intervention rates among private and public women in Australia (Roberts *et al* 2000). Thirty-six per cent of the sample in the Roberts *et al* (2000) study were privately insured, attending either private or public hospitals for labour, birth and postnatal care. The proportions of normal birth and caesarean section in 1997-1998 (Roberts *et al* 2000) were used and mapped against an increasing proportion of women with private insurance to model the potential effect of increased private health insurance. The rate of private health insurance was increased incrementally (by 10%) from 36 per cent to a hypothetical 96 per cent. An excel spreadsheet and calculations were used to map the effect of increasing private health insurance on rates of normal birth, caesarean section and costs of providing care. The costs used were based on a previous analysis conducted in our hospital (Homer *et al* 2001).

## Costs

Antenatal costs for publicly insured women was based on a standard antenatal clinic in a Sydney metropolitan hospital as calculated in a previous cost analysis (Homer, Matha, Jordan, Wills, & Davis 2001). Each women costs an estimated \$230 for antenatal care, assuming a median of 8 antenatal visits. Antenatal costs for privately insured women were based on Medical Benefits Scheme from the Australian Health Insurance Commission (November 2000) for Schedule 104 (first visit) and 105 (subsequent visits). Again, it was assumed that each woman had a median of

8 antenatal visits. It was understood that all women with private health insurance attending a public hospital would have antenatal care through a private obstetrician, thus attracting a Medicare rebate.

Baseline costs used an uncomplicated normal vaginal birth. The assumption of 10 hours of midwifery care per woman was based on data currently used within the hospital to calculate staffing requirements. This time includes direct care as well as telephone support and advice, liaison with team members, transfer and restocking. Background costs, that is, costs of providing a service even though it was not specifically required (for example, obstetric and paediatric cover) were also included. All other assumptions were based on the usual estimates within the hospital.

The costs for a complicated vaginal birth, elective caesarean or emergency caesarean section used the baseline resources for a normal birth with costs added incrementally. For example, it was assumed that an obstetric registrar, anaesthetist and paediatric registrar would provide care and a consultant obstetrician and paediatrician would be on-call. There was an increased use of goods and services, such as an epidural anaesthetic and an intravenous line. Operating theatre costs were included for women who underwent emergency or elective caesarean sections. These were taken from current estimates used in the hospital. The 'care during labour' cost was not included for women who underwent an elective caesarean section. Instead, midwifery and medical time to prepare the woman for the operating theatre were substituted.

The cost of providing postnatal care fell into two general categories: after a vaginal birth (normal or complicated); or, after a caesarean section (elective or emergency). The length of time that midwives spent with a woman after a vaginal birth was estimated at 1.5 hours per woman per day. The length of time that midwives spent with a woman after a caesarean section increased to 3 hours per day. These estimates of midwifery time were made from recent research in our unit. (Stacey 2000) Medical care after a vaginal birth was one visit by a resident medical officer to authorise discharge from hospital. Medical care increased to 20 minutes per day for women who had a caesarean birth. A paediatric resident medical officer reviewed all neonates. Background support included a midwifery manager, a lactation consultant and an administrative assistant. Goods and services included meals, consumables, pharmacy, cleaning, linen and laundry.

## Results

The overall costs of providing antenatal care would increase as the proportion of women with private health insurance increases (Figure 1).

In 1996 and 1997, the rate of normal birth in low risk primiparous women studied by Roberts et al (2000) was 66 per cent with thirty-six per cent of women having private health insurance. The hypothetical model suggests that as the proportion of low risk primiparous women with private health insurance increases, the rate of normal birth will decrease with a proportion of this being an increase in rate of caesarean section (Figures 2, 3).

In 1996 and 1997, with a caesarean section rate of 11.9 per cent, the cost of providing intrapartum and postpartum care was \$34,750,000. Each 20 per cent increase in private health insurance uptake would result in a one per cent increase in the rate of caesarean section and a one million dollar increase in the cost of providing intrapartum and postpartum care. As the rate of caesarean section rises, the cost of providing antenatal, intrapartum and postpartum care will also increase (Figure 4).

## Discussion

The hypothetical model suggests that increased levels of private health insurance may impact on the rate of normal birth in low risk primiparous women in Australia and effect the overall cost of providing maternity care. Private providers and hospitals are heavily subsidised by government and

so the additional costs are costs to the Australian community, not merely additional costs to women and their families.

The model is limited in its capacity to accurately predict the effect of the LHC policy however, it hopes to add to the debate about the unexpected effects of a policy that encourages private health insurance. Clearly, the rates of private health insurance will never reach the proportions suggested, nonetheless, the model does provide evidence of a change to clinical outcomes with a non-clinical intervention, that is private health insurance. It is hoped that this analysis can contribute to the ongoing discussion on the unexpected impact of government policy on clinical outcomes.

The model does not include additional costs incurred by families in terms of extra charges from private providers. Many private providers charge above the 'schedule' fee, that is, the fee that the Australian Medical Association recommends. The schedule fee is usually higher than the Medicare rebate and may not be covered by private health insurance.

The possible reduction in the rate of normal birth with the theoretical increase in private health insurance is concerning particularly as the population of women is at low risk of complications. These are the very women for whom a normal birth would be the expectation. The concerns are for more reasons than cost alone, although it is clearly an important consideration. Caesarean section, while much safer than in years past, still carries risks as a major surgical procedure. The effect of a significantly higher caesarean section rate on rates of maternal mortality and morbidity and on future pregnancy outcomes is unknown. It might be surmised that an increase in primary caesarean would ultimately translate to a decrease in the number of women having a vaginal birth after a caesarean section. This 'follow-on' effect will again raise the rate of intervention and costs associated with childbirth as well as the morbidity including placenta previa and increased risk of ruptured uterus (Lydon-Rochelle, Holt, & Easterling 2001; Hendricks et al. 1999; Rageth, Juzi, & Grossenbacher 1999; Zaideh, Abu-Heija, & El-Jallad 1998).

It seems extraordinary to move to a system where the healthiest women in the community receive care from the most expensive provider (the specialist obstetrician). It is well recognised that qualified midwives are the most appropriate (and least expensive) providers of maternity care for low risk women. A system of high levels of private health insurance means that midwives are essentially excluded from providing care, particularly in the antenatal period. The costs associated with such a move are concerning.

## **Conclusion**

The LHC Policy has been sold to the Australian public as one that will benefit families and the overall health system. This hypothetical analysis questions this premise. It is possible that clinical outcomes for women will be adversely affected through a policy of high rates of private health insurance. Equally, it is not clear how higher expenditure within the health system brought about by increased intervention will be beneficial. More public discussion of the issues relating to the Lifetime Cover Policy is necessary for Australian women to make informed and well advised decisions about their maternity care. This debate is lacking in the public domain to this point. It is hoped that this paper will contribute to an important discussion within the health care system and the wider community.

## References

Collyer F, White K 2001, 'Corporate Control of Healthcare in Australia: Discussion Paper Number 42'. The Australian Institute, Canberra.

Commonwealth of Australia. Lifetime Health Cover. Accessed 15-9-2000.  
[www.health.gov.au/lhc/section\\_02/sec\\_02.htm](http://www.health.gov.au/lhc/section_02/sec_02.htm).

Hansard 2000, 'First Report: Public Hospital Funding and Options for Reform. Senate Community Affairs Committee'. [www.aph.gov.au/senate/committee/clac\\_ctte/phealth\\_first/contents.htm](http://www.aph.gov.au/senate/committee/clac_ctte/phealth_first/contents.htm).

Hendricks MS; Chow YH; Bhagavath B; Singh K 1999, 'Previous cesarean section and abortion as risk factors for developing placenta previa', *J Obstet Gynaecol Res*, vol 25, no 2, pp. 137-142.

Hindle D 1999, 'Out with the old, in with the young: Lifetime community rating', *Australian Health Review*, vol 22, no 1, pp. 156-160.

Homer CSE; Matha D; Jordan LG; Wills J; Davis GK 2001, 'Community-based continuity of midwifery care versus standard hospital care: a cost analysis', *Australian Health Review*, vol 24, no 1, pp. 85-93.

Lydon-Rochelle M; Holt VH; Easterling TR 2001, 'Risk of uterine rupture during labour among women with a prior cesarean delivery', *New Eng J Med*, vol 345, no 1, pp. 3-8.

NSW Health Department 1998b, 'New South Wales Mothers and Babies 1997', NSW Health Department, Sydney.

NSW Health Department 1998a, 'NSW Mothers and Babies 1996', NSW Department of Health, Sydney.

Rageth JC; Juzi C; Grossenbacher H 1999, 'Delivery after previous cesarean: a risk evaluation. Swiss Working Group of Obstetric and Gynecologic Institutions', *Obstet Gynecol*, vol 93, no 3, pp. 332-337.

Roberts C; Tracey S; Peat B 2000, 'Rates for obstetric intervention among private and public patients in Australia: population based descriptive study', *BMJ*, vol 321, no 7254, pp. 137-141.

Stacey T 2000, 'Describing postnatal care: a qualitative analysis', Unpublished Masters of Public Health treatise, University of New South Wales, Sydney.

Willcox S 2001, 'Promoting private health insurance. Do Australia's latest health reforms represent a policy in search of evidence?' *Health Affairs*, vol 20, no 3, pp. 152-160.

Zaideh ZN; Abu-Heija AT; El-Jallad JF 1998, 'Placenta praevia and accreta: analysis of a two-year experience', *Gynecol Obstet Invest*, vol 46, no 2, pp. 96-98.

Figure 1: Costs of providing antenatal care as the proportion of private health insurance increases

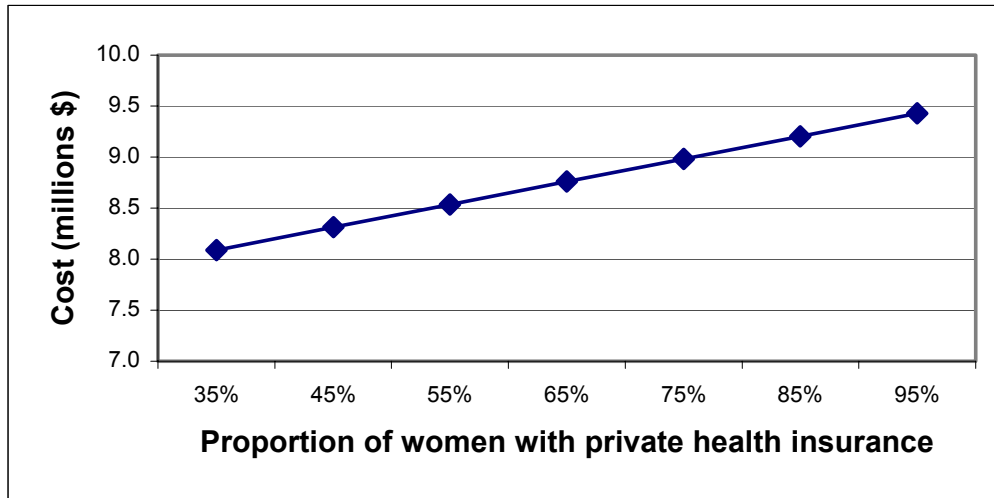


Figure 2: Rate of normal birth as the proportion of women with private health insurance increases.

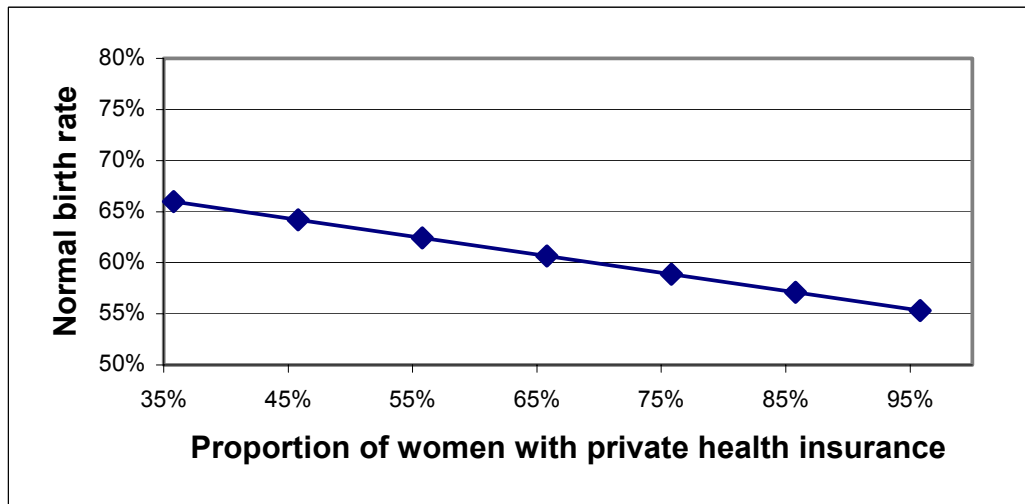


Figure 3: Rate of caesarean section as the proportion of women with private health insurance increases.

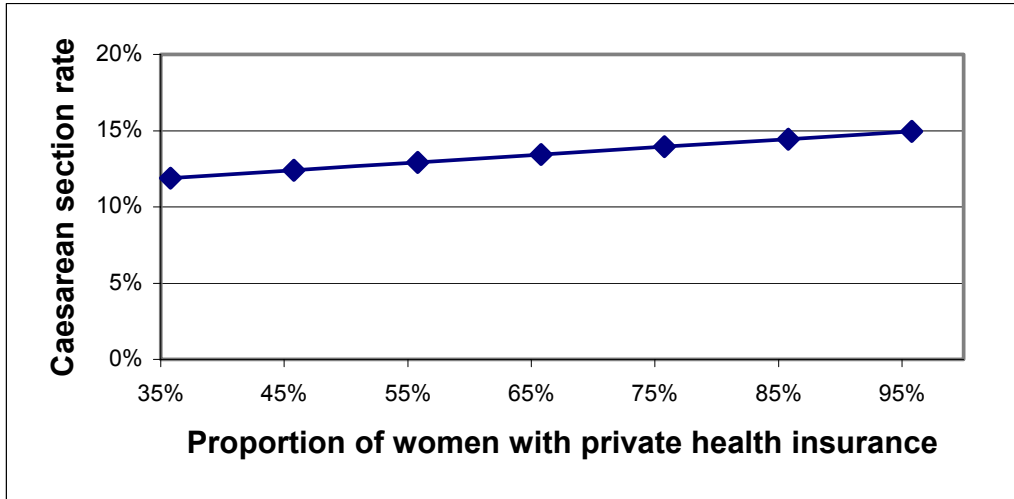


Figure 4: Overall costs of providing antenatal, intrapartum and postpartum care for low risk primiparous women as the proportion of private health insurance increases.

