

# As good as anyone: antenatal shared care at an inner Sydney hospital

PAM WEBSTER, BARBARA ULMER, JEFF MANN,  
MICHELLE DANFORTH, MARIA ANGELIS,  
LINDA MANN, PAM IRONS, ANDREW CHILD,  
SHANE RENDALLS AND MICHAEL MIRA

The following authors are from the Central Sydney Area Health Service Division of General Practice. Pam Webster, Research Officer; Barbara Ulmer, Project Officer; Jeff Mann, Project Officer; Michelle Danforth, Research Assistant; Maria Angelis, Research Assistant; Dr Linda Mann; Shane Rendalls, Senior Planner. Dr Michael Mira is Director, Division of General Practice, and Clinical Senior Lecturer in General Practice at the University of Sydney. The following authors are from the King George V Memorial Hospital for Mothers and Babies. Pam Irons, Community Liaison/Discharge Planner; Dr Andrew Child, Director of Obstetrics and Gynaecology.

## Abstract

*An exploratory survey design was used to assess satisfaction with antenatal care over a two-month period of women giving birth in an inner Sydney teaching hospital. Patients received obstetric services from private obstetricians, midwives, the hospital outpatient clinic, or 'shared care' between general practitioners and the outpatient clinic or birth centre. Insurance status and demographic information were collected across all groups. Shared care patients gave reasons why they chose that model of antenatal service.*

*Ten per cent of women in the sample received shared care. Shared care patients were equally as satisfied as those in other modes of care in all but one factor—promptness of service (in which private obstetricians received higher ratings). They also judged shared care to have the advantages of being convenient, personal, and culturally appropriate. Significantly more patients in the shared care group were born overseas and they were less likely to hold private insurance.*

*This paper discusses the results of the current study in the context of the Australian literature, explores some issues surrounding satisfaction research, and suggests further research arising from this work.*

## Introduction

Shared antenatal care between local general practitioners and public hospitals has emerged as a viable alternative to the traditional model of care, which involved pregnant women attending the hospital for all their antenatal visits (Ratten & McDonald 1992). The proportion of patients receiving shared obstetric care has been reported to range up to 24 per cent (Ratten & McDonald 1992) or even 54 per cent (Del Mar et al. 1991) in Australian public hospitals.

Models of shared care vary and may consist of informal arrangements which operate without defined protocols (Del Mar et al. 1991), hospital-driven programs in which the general practitioner receives instructions regarding patient management (Constantino et al. 1991), or programs where the general practitioner returns a report on each shared care consultation to the specialist unit (Petrie et al. 1985). In some shared care programs, decisions regarding the organisation and policies of the program are frequently made by the specialists or hospitals involved, with only limited general practitioner input. In others, such as the program described in the current study, protocols and procedures are the result of ongoing cooperation between hospital specialists and general practitioners, and are evaluated regularly.

Formal shared care arrangements benefit the community through cost-efficient and holistic patient care, and provide an opportunity for general practitioners to become more integrated with public sector health services (Harris, Fisher & Knowlden 1993). One of the potential benefits of shared care for pregnant women is increased satisfaction without compromise in perinatal mortality (Wood 1991). It has been shown elsewhere that women participating in shared care spend less time in travel and waiting, and have greater flexibility in terms of appointments (O'Brien & Smith 1981; Thomas et al. 1987). They are also thought to receive more continuous and personalised care from general practitioners. This is particularly important for non-English-speaking women, who may choose a general practitioner who speaks the same language as themselves and who understands their cultural background. General practitioners feel that the continuity of care they can provide in helping women through a positive life experience is an important aspect of their role as shared care providers (Halloran, Gunn & Young 1992).

While the benefits of shared care with regard to the funding of health services and general practitioner involvement and health outcomes are

documented (Klein et al. 1983; Ratten & McDonald 1992), little is known about the attitudes and experiences of the women in shared care programs (Halloran, Gunn & Young 1992), and how these compare with those of women in other care models.

The present study aimed to investigate patient attitudes towards antenatal care shared between public hospitals and general practitioners. It measured the satisfaction of new mothers with shared care alongside the satisfaction rated by women in other models of antenatal care. It also investigated the perceived benefits of shared care and why shared care was chosen.

## Method

King George V Hospital is situated in an inner urban area of Sydney and draws most of its patients from the region covered by the Central Sydney Area Health Service, especially the Canterbury local government area. A high proportion of the population in this area has a non-English-speaking background. Thirty-seven per cent of Central Sydney residents and 48 per cent of Canterbury residents were born in non-English-speaking countries (Australian Bureau of Statistics 1988).

The Antenatal Shared Care Program at King George V Hospital was jointly developed by the Division of Obstetrics and Gynaecology at King George V Hospital and local general practitioners. The program started in 1990 and at the time of this study involved approximately 150 general practitioners who were accredited to provide obstetric care shared with the hospital clinic and birth centre.

The study involved distributing a self-administered questionnaire to all women who gave birth to healthy babies between mid-July and mid-September 1993 at King George V Hospital while they were in the immediate puerperium at the hospital.

The questionnaire incorporated the demography of the patients, the type of antenatal care received and the patients' experiences, awareness and attitude to their care.

In addition, patients completed the standardised Client Satisfaction Questionnaire (Nguyen, Attkisson & Stegner 1983; Pascoe & Attkisson 1983), an 18-item instrument using a four-point Likert scale to measure various factors contributing to satisfaction including promptness, comfort of the facility, the extent that the service met the patient's needs and perceived competence of the service provider.

The researchers achieved an overall measure of satisfaction by summing the scores for each item and dividing by the number of items answered. The satisfaction results were analysed by means of the Kruskal-Wallis test. When only two variables were compared, chi squared tests or the Wilcoxon rank sum test were applied, as appropriate.

## **Results**

### **Sample characteristics**

Of the questionnaires distributed to 513 consecutive new mothers, 349 were returned, yielding an overall response rate of 68 per cent. The response rate varied across individual items in the survey, and non-responders were excluded from the analysis of those items. As no identifying information was collected, it was not possible to follow up non-responders or incomplete questionnaires.

There was substantial diversity in age and ethnic origin in the sample, which is typical of the catchment population. The women's ages ranged from 15 to 44 years, with a mean of 29 years and a standard deviation of 5.3 years. Fifty-eight per cent of the sample were born in Australia, with 3 per cent indicating that they were of Aboriginal or Torres Strait Islander descent. Thirty-nine per cent of the respondents reported that they spoke a language other than English at home. The most common of these languages were Chinese languages (18 per cent), Italian (15 per cent), Greek (10 per cent), Arabic (9 per cent), Vietnamese (6 per cent), Turkish (5 per cent) and Filipino/Tagalog (5 per cent). Ten per cent of the respondents needed help in completing the questionnaire: 6 per cent received help from a relative or friend, and 4 per cent used an interpreter. Concurrent evaluation of general practitioners accredited to the shared care program indicated that 46 per cent consulted in a language other than English.

A high level of educational attainment was observed among the 344 (98 per cent) mothers who responded to the question on education. Thirty-six per cent stated that they held a tertiary degree or diploma and 12 per cent reported completing some tertiary studies. Sixteen per cent had attended a technical or trade college, 19 per cent had completed high school and 17 per cent had completed primary and/or some secondary school.

## **Types of antenatal care and insurance status**

Table 1 shows the number of women who received obstetric care from each of the various provider categories, and the insurance status of patients in each of those provider groups. The largest group of women (46 per cent) received care from a private obstetrician or private midwife, while the smallest group (10 per cent) consisted of patients whose antenatal care was shared between a general practitioner and the hospital or midwives clinic. Four per cent of patients were classified as 'Other care provider' because they either received no antenatal services or provided insufficient information regarding their antenatal care.

Three hundred and thirty-seven (97 per cent) women reported their health insurance status. Not surprisingly, the highest rate of private medical insurance was found in the patients who were cared for by a private obstetrician (84 per cent). Eighteen per cent of patients in the shared care group held private health insurance, while only 5 per cent of hospital clinic patients were privately insured. Overall, 46 per cent of women held private health insurance.

While 57 per cent of Australian-born respondents held private health insurance, only 27 per cent of overseas-born respondents did so. Women born overseas were significantly more likely to receive either shared antenatal care or obstetric services from the hospital clinic than were Australian-born women ( $p < 0.0001$ ).

## **Interest in shared care**

Of the women not involved in shared care, 278 (88 per cent) responded to the question about their knowledge of and interest in that type of antenatal service. Seventy-one per cent indicated that they were not aware of shared care. Thirty per cent of those women were interested in finding out about shared care in their next pregnancy; 28 per cent were unsure; 31 per cent were not interested in the shared care option; and the question was not applicable to the remainder.

## **Shared care patients**

Shared care participants responded to an open-ended question about why they had chosen this type of antenatal service. The reasons given most frequently were convenience (35 per cent) and liking their general practitioner (29 per cent). Other responses included the general

**Table 1: Care providers by number of patients and insurance status**

Antenatal care provider	Total number (and percentage) of patients	Number of privately insured patients	Percentage of total with private insurance
Private obstetrician or midwife	141 (42%)	119	84
Hospital clinic	91 (27%)	5	5
Midwives clinic	22 (6%)	2	9
Shared care	34 (10%)	6	18
Private obstetrician plus birth centre	13 (4%)	12	92
Birth centre	23 (7%)	7	30
Other	13 (4%)	3	23
<b>Total</b>	<b>337 (100%)</b>	<b>154</b>	

practitioner’s awareness of their medical and social history, a desire to avoid long waiting times at the hospital, wanting care by the birth centre in conjunction with that of a general practitioner, and knowing other women who had previously experienced shared care.

Seventy-four per cent of the women who received shared care had first heard about the service from their general practitioner. A further 10 per cent of women were informed about the program by friends, relatives or the hospital clinic. Two patients reported hearing about shared care either from the staff of the birth centre or from persistent questioning. No patient received care shared between a specialist obstetrician and a general practitioner, or reported that they were informed of this option by an obstetrician.

Eighty-three per cent of the women in shared care remained in the program for the duration of their pregnancy. Those who discontinued shared care gave the following reasons: medical complications (1), the general practitioner being on holidays (2), becoming a birth centre patient (1), and choosing not to return to the general practitioner after the first hospital visit (2).

**Satisfaction with shared care**

Overall patient satisfaction scores on the Client Satisfaction Questionnaire ranged from 1.8 to 4.0 (where 4 indicates highest satisfaction). No statistically significant differences were observed between women in shared

care and those in other models of antenatal care, nor between the overall satisfaction of Australian-born women and that of overseas-born women.

Variance of responses on the Client Satisfaction Questionnaire were compared using the Kruskal-Wallis test. Post hoc analyses revealed the following statistically significant differences.

Patients who received antenatal care from an obstetrician rated promptness ( $p < 0.01$ ), comfort of the facility ( $p < 0.01$ ) and competence of the provider ( $p < 0.01$ ) higher than patients of the hospital antenatal clinic.

Services at the birth centre were rated higher by its patients in regard to comfort of the facilities ( $p < 0.001$ ) and how closely they were listened to ( $p < 0.01$ ) than were services from obstetricians by their patients. Similarly, the birth centre received higher ratings of promptness ( $p < 0.01$ ), comfort ( $p < 0.01$ ), listening ( $p < 0.001$ ) and competence ( $p < 0.05$ ) from its patients than the hospital clinic did from its patients.

Shared care services were considered by their users to be as satisfactory as any other care model by their users, with one exception. Higher ratings of provider promptness were observed in patients of private obstetricians than shared care patients when the latter judged their providers ( $p < 0.01$ ).

## Discussion

Shared care patients were equally as satisfied as were patients in other models of antenatal care in regard to all factors except promptness, where private obstetricians were significantly more highly rated. Shared care provides additional benefits of convenience, cultural appropriateness and personalised service to women from a diverse range of backgrounds. The discrepancy in ratings of promptness may be attributable to the hospital clinic component of the shared care rather than to the general practitioner, especially in view of the significant difference in promptness found between patients of specialist obstetricians and those of the hospital clinic. The patient satisfaction questionnaire did not provide for separate satisfaction ratings for the constituent parts of shared care. A further indication of patient confidence in receiving shared obstetric care was the high proportion of patients who remained with that model of care throughout their pregnancy.

Only 10 per cent of patients received shared care, which is a lower proportion than some other modes of care in the current study, and lower than participation rates reported in the Australian literature. This would seem

to argue against the significance of shared care as a tenable model of antenatal service. However, the low percentage may be explained by the relatively recent implementation of the shared care program at King George V Hospital and the consequent lack of awareness of it by many patients. The majority of women receiving other types of antenatal care reported no knowledge of shared care, and only one-third of them were not interested in finding out about it in the event of a subsequent pregnancy. Ratten & McDonald (1992) described the Melbourne shared care program as having operated for 'many years' (p 297) and including 270 general practitioners, and although Del Mar et al. (1991) did not mention the history or size of shared antenatal care in Brisbane hospitals, they did comment that a loose definition of shared care status may have contributed to the relatively high proportion of shared care patients reported in their study.

A midwife has been appointed as the shared care liaison nurse at King George V Hospital as a result of the findings reported here, and advertising of shared care has been increased. Recent informal evaluation at the time of writing indicated that shared care patients comprised approximately 40 per cent of all women booking into the antenatal clinic.

It was not possible to randomly assign women to a model of antenatal care provision, thus the possibility of bias arising from self-selection raises the issue of whether the groups are validly comparable. In fact, significantly more shared care and hospital patients were found to have been born overseas than were those cared for by midwives or specialist obstetricians; a marked difference was also apparent between these groups in the proportion of women holding private health insurance. Reported levels of satisfaction may therefore reflect characteristics of patient groups, such as differing expectations of service, rather than the type of antenatal service they received. Previous research across a range of disciplines has suggested that a key determinant of satisfaction may be the congruence between consumer expectation and outcome (Thompson & Sunol 1995), which would consistently affect the ratings of each care provider group irrespective of whether a fully controlled design was employed.

Satisfaction remains a meaningful variable in evaluating health care, notwithstanding the above considerations, because it can be regarded as an outcome measure in its own right (Donabedian 1982). Satisfaction may play a role in determining the future health care choices of individuals (Ware & Davies 1983), especially in the Australian health system where consumers are free to choose from a number of alternative services.



Satisfaction results are useful for quality improvement, and can facilitate feedback to providers about consumer perceptions of various aspects of their service.

The current study provides a descriptive evaluation of patient satisfaction with a successfully functioning antenatal shared care program, and a positive direction for further research in this area of health care. In particular, the considerations discussed above in relation to satisfaction could be addressed in future research designs. They could include comparing shared care patient perceptions of general practitioner services with hospital clinic services that together comprise their overall antenatal care; measuring satisfaction at different points during and after the pregnancy and birth experience; linking satisfaction with particular aspects of care provision with service development; and correlating reported satisfaction with the congruence between expectation and outcome.

## Acknowledgements

Special thanks to the discharge planner/community liaison nurse and the ward staff at King George V Hospital for their help in distributing and collecting the questionnaires, and to the Department of Human Services and Health for funding this research.

## References

- Australian Bureau of Statistics 1988, Census Applications Small Area System, Sydney.
- Constantino M, Hoskins PL, Fowler PM & Pech 1991, 'Interaction between diabetic patients, their general practitioners and a hospital diabetic clinic', *Medical Journal of Australia*, 155, pp 515–18.
- Del Mar C, Siskind V, Acworth J, Lutz K & Wyatt N 1991, 'Shared antenatal care in Brisbane', *Australian and New Zealand Journal of Obstetrics & Gynaecology*, 31, pp 305–6.
- Donabedian A 1982, 'The criteria and standards of quality', in *Explorations in quality assessment and monitoring*, volume 2, Health Administration Press, Ann Arbor, Michigan.
- Halloran J, Gunn J & Young D 1992, 'Shared obstetric care: The general practitioner's perspective', *Australian and New Zealand Journal of Obstetrics & Gynaecology*, 32, pp 301–5.

- Harris M, Fisher RR & Knowlden SM 1993, 'Improving general practitioner involvement in urban hospitals: Departments or divisions of general practice', *Medical Journal of Australia*, 158, pp 304–7.
- Klein M, Lloyd I, Redman C, Bull M & Turnbull AC 1983, 'A comparison of low-risk pregnant women booked for delivery in two systems of care: shared care (consultant) and integrated general practice unit: obstetrical procedures and neonatal outcome', *British Journal of Obstetrics & Gynaecology*, 90, pp 118–22.
- Nguyen TD, Attkisson CC & Stegner BL 1983, 'Assessment of patient satisfaction: Development and refinement of a service evaluation questionnaire', *Evaluation and Program Planning*, 6, pp 299–314.
- O'Brien M & Smith C 1981, 'Women's views and experiences with antenatal care', *Practitioner*, 225, pp 123–5.
- Pascoe GC & Attkisson CC 1983, 'Comparison of indirect and direct approaches to measuring patient satisfaction', *Evaluation and Program Planning*, 6, pp 359–71.
- Petrie JC, Robb OJ, Webster J, Scott AK, Jaffers TA & Park MD 1985, 'Computer assisted shared care in hypertension', *British Medical Journal*, 290, pp 1960–2.
- Ratten GJ & McDonald L 1992, 'Organisation and early results of a shared antenatal care programme', *Australian and New Zealand Journal of Obstetrics & Gynaecology*, 32, pp 296–300.
- Thomas H, Draper J, Field S & Hare MJ 1987, 'Evaluation of an integrated community antenatal clinic', *Journal of the Royal College of General Practitioners*, 37, pp 544–7.
- Thompson GH & Sunol R 1995, 'Expectations as determinants of patient satisfaction: concepts, theory and evidence', *International Journal for Quality in Health Care*, 7, pp 127–41.
- Ware JE & Davies AR 1983, 'Behavioural consequences of consumer dissatisfaction with medical care', *Evaluation and Program Planning*, 6, pp 291–7.
- Wood J 1991, 'A review of antenatal care initiatives in primary care settings', *British Journal of General Practice*, 41, pp 26–30.