

Gynaecological day surgery and quality of care

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Abstract

The aim of the study was to explore the experiences of Australian public and private patients undergoing gynaecological day surgery in a public hospital. A telephone survey was conducted with 315 women within two days of hospital discharge. The findings indicate that patients generally favour the "in and out" experience of day surgery, with some reservations. Prior to hospital admission, private patients were less likely to have access to multiple sources of information as well as information that they found easy to understand. Alternative means of supporting women recovering from day surgery may be needed for those whose family members and/or friends cannot provide sufficient support following discharge. This study contributes to discussion on setting objective standards to evaluate the health system in the field of day surgery.

Day surgery: International and Australian context

Day surgery is a planned non-resident investigation or operation that involves some form of anaesthesia and requires special recovery facilities (Otte 1996, CDHAC 1999:17-18). Day surgery patients are admitted and discharged on the same day (CDHAC 1999). Outpatients and accident and emergency department patients are excluded by this definition of day surgery. Patients who are discharged from hospital no longer require immediate medical supervision (unless complications arise), although their convalescence continues at home.

Day surgery has become increasingly prevalent worldwide. For example, in the UK and the US, 60% of all elective procedures are conducted as day surgery, and in Canada the figure is about 50% (Millar 1997, CDHAC 1999, Mitchell 2000). Day surgery rates in Australia have increased significantly over the last two decades. In the 1980s, the prevalence of day surgery procedures, as a proportion of all surgery in Australia, was 7% (AHOL 2001). In 1997/98, about 39% of all surgical procedures in public hospitals were performed as day surgery. During this period, the percentage of day surgeries was slightly higher (44%) for private hospitals (CDHAC 1999:4-5). Victoria was close to the national level, and in 1997/98, 38.71% of surgeries were performed as day surgery (CDHAC 1999:35). In the late 1990s, following international trends, the Australian Federal Government set a goal to have most surgical procedures performed as day surgery. It anticipated that within the following five to ten years, the rate of day surgery should be at least 60% (CDHAC 1999:8). The prevalence of day surgery procedures is currently 55% (AHOL 2001). Hence, it appears that Australia has moved closer to the recommended target and international experience.

The reasons for this increase in day surgery are multifold. Firstly, improved anaesthetics and the use of fast-acting anaesthetic agents result in a shorter period of recovery and associated need for medical supervision (Stephenson 1990, Moran and Kent 1995). Secondly, other technological advances in medicine (eg, laser) and

in particular an opportunity to perform minimally invasive surgery, no longer require in-hospital stay, consequently contributing to the same outcome (Moran and Kent 1995, Otte 1996, Mitchell 2000). Thirdly, the health system is expected to reduce waiting lists, and day surgery is one strategy to assist in meeting this goal (Sierra et al. 1995, Edwards 1996). For example, a study in Spain indicated that day surgery contributed to the decrease in the general surgery waiting list from 13 months to 3 months (Sierra et al. 1995). In 1994-95, the National Day Surgery Committee of Australia also estimated many thousands of bed days could be saved by performing day surgery (Roberts 1996). Fourthly, government funding policies create an incentive for hospitals to increase day surgery procedures. For example, the Victorian Department of Human Services has indicated that hospitals that do not achieve the day surgery targets to be set by the Department will not be eligible for a bonus payment (DHS 2001). Fifth, governments expect that services delivered to the public, including those related to health, are cost-effective. According to the Australian Society of Anaesthetists, significantly reduced hospital stays for patients (from 5.6 to 2.1 days in the past 20 years) have resulted in an estimated \$1.7 billion savings annually to the Australian community (AHOL 2001). Patients themselves are in favour of day surgery since it reduces the demand on families and friends such as visits to in-patients, and for private patients the costs associated with paying for a hospital bed for a longer period are reduced. In addition, it is less time consuming, very convenient for employed people, mothers of small children and other carers, and involves minimal disruption to the daily lives of patients (Read 1990, Stephenson 1990, Otte 1996). A recent newspaper account of growing demand for after-hours and weekend surgery illustrates the value employed people place on being able to resume their work shortly after surgery (Kerin 2001).

Aim and objectives

Drawing on overseas studies on gynaecological day surgery (Bain et al. 1999, Bonhomme et al. 1999, Mitchell 1997, Roberts et al. 1995) and limited research in Australia on this issue (O'Connor et al. 1991), our study aims to analyse how women undergoing various gynaecological day surgeries experienced the health care system. Further, we investigate how hospital policy associated with day surgery impacts on the quality of health care. The concept of the quality of care relates both to professional health care and informal help at home following discharge, and it was operationalised as information provision prior to hospital admission and women's perceptions on overall and convalescence time spent in hospital, and access to informal support following discharge.

The ultimate goal was to investigate the quality of health care provided to patients from different socio-demographic backgrounds and to identify the factors that predict poor quality health care. We specifically focus on analysing the quality of health care provided to public/private patients. The Australian government through tax incentives aims at increasing the number of people who have private health insurance, and we examined how private patients fared in a day surgery setting. While the study was conducted in an acute public hospital in Victoria, the findings are relevant for other day surgery settings with similar policies. Specific objectives, selected for presentation here, are as follows:

- To assess the extent to which the information needs of women undergoing day surgery were met by health professionals prior to hospital admission
- To analyse women's experience of recovery in hospital
- To identify the availability of informal support to women during convalescence at home, and
- To explore women's perceptions of advantages and disadvantages of day surgery.

Public health implications of day surgery are also discussed.

Study design

All women undergoing gynaecological day surgery in an acute public hospital in Victoria from August to October 2000 were invited to participate in the study. In the studied hospital, the percentage of day surgery is slightly below the national level. Women were recruited on the day of their surgical procedure in the waiting area prior to surgery. This approach ensured the recruitment of private patients who do not attend public clinics and accommodated daily adjustments of theatre lists. Initially, 451 agreed to participate (about 27% of total

surgeries planned in that period, $N = 1683$), but we were able to follow-up 315 women (70% of the initial sample; about 19% of total surgeries). Reasons for not being able to follow-up women ($N=136$, 30%) include inability to establish contact ($N=119$, 26.3%), overnight stay following surgical procedure ($N=12$, 2.6%) and withdrawals from the study ($N=5$, 1.1%).

A telephone survey was conducted with 315 women within two days of discharge from the hospital. Data were collected by employing a semi-structured questionnaire, pre-tested with 20 day surgery patients prior to commencement of the main study. Women's feedback was incorporated into the final questionnaire that comprised 35 open-ended and closed questions. Choices in closed-ended questions (e.g. socio-demographic background, general health, information provision prior to hospital admission, previous day surgery experience, time spent in hospital from admission to discharge, appropriateness of the time spent in recovery, informal support following discharge) were read to women, while for open-ended questions (e.g. perceptions on advantages and disadvantages of day surgery, suggestions for improving patient's experience of day surgery), we recorded women's responses to our queries. On average, the interview lasted about 16 minutes. The research team interviewed non-English speaking women in their preferred language, applying their linguistic skills to conduct interviews in Bosnian, Chinese, Croatian, Serbian, Tamil and Vietnamese. For other women who wished to be interviewed in a language other than English, we used the Telephone Interpreting Service. The study included 106 (33.7%) women from non-English speaking backgrounds.

We applied descriptive and bivariate statistical analysis to investigate women's experiences. In addition, logistic regression was conducted for dichotomous dependent variables to predict the presence or absence of the following outcomes: provision of single (written or verbal) versus multiple (both written and verbal) sources of information prior to hospital admission and women's self-reported understanding of the information, general satisfaction with the information, adequacy of time spent in hospital and recovery, and perceptions of advantages and disadvantages of day surgery. SPSS computer software was employed to conduct statistical data analysis.

Results

Socio-demographic data of study participants

More than half of the women (57%) had had day surgery prior to our study. Nearly three quarters (74.3%) of study participants were public patients. Among the private patients (25.7%), only 27.9% had private health insurance, and among those insured, the procedure was covered by their health fund in 6.7% cases. The reason for the latter is that many women had recently joined a private health fund, and newly joined members usually cannot claim for their treatment. Most women (52.4%) had multiple procedures (dilation and curettage combined with hysteroscopy, laparoscopy or pelviscopy were most common – 19.4%) and 47.6% had single procedures, such as pregnancy termination, investigative breast surgery or laser therapy.

The majority of women were born in Australia (62.5%). Among women born overseas (37.5%), nearly 90% were born in a non-English speaking country. Most women were in the 26-45 years age group (58.4%), followed by 16-25 age group (18.1%), 46-55 age group (16.5%), and 56 years or older (7.0%). The mean age of women was 36.68. Women were most likely to have completed secondary schooling (56.8%), followed by tertiary and higher degrees (25.7%). Almost 60% of the women were married or were in a de facto relationship, 26% were single, and the rest were divorced or separated (12.4%), or widowed (1.9%). About 80% lived with family members, 11.4% shared with others, and 8.3% lived alone. The majority of women (63.9%) were employed (full-time job 41.3%, part-time job 14.6%, and casual jobs 8%), almost a quarter were homemakers (23.2%), 7% were students and pensioners, and 6% were unemployed.

Information to women prior to surgery

The majority of women ($N=303$, 96.2%) received information prior to hospital admission and there were no statistically significant differences between public and private patients. However, there are statistically significant differences between these two groups, whereby public patients received better quality care operationalised as access to multiple information sources (see Table 1). Further, the status of the patient was the only socio-demographic factor predicting the provision of multiple sources of information. Logistic regression

demonstrated that public patients were about 2.7 times more likely to have access to multiple sources of information prior to day surgery ($p \leq .000$, regression coefficient 2.697, 95% CI 1.572 - 4.627).

Table 1. Sources of information and patients status

Information source	Public patients		Private patients		Total	
	Number	%	Number	%	Number	%
Written or verbal	55	24.3	36	46.8	91	30
Both verbal and written	171	75.7	41	53.2	212	70
Total	226	100	77	100	303	100

$p \leq .000$

As demonstrated in Table 2, women who had access to multiple sources of information were statistically significantly more likely to report being satisfied with the information.

Table 2. Number of information sources and general happiness with information

Source of information	General happiness with information				Total	
	Yes		No			
	Number	%	Number	%	Number	%
Verbal or written	81	28.2	10	62.5	91	30
Multiple (verbal + written)	206	71.8	6	37.5	212	70
Total	287	100	16	100	303	100

$p \leq .004$

While the majority of women (83.8%) reported that it was easy to follow the information provided, there were statistically significant differences between public and private patients. Private patients were more than three times more likely to find information inadequate in that respect ($\chi^2 = 9.670$; $p \leq .002$). Again, the status of the patient was the only socio-demographic factor predicting patients' response to the question on whether it was easy to follow the provided information, with public patients about 3 times more likely to report this ($p \leq .002$, regression coefficient 3.209, CI 95% 1.639 – 6.283).

Time in hospital

Nearly three quarters of the women (71.4%) felt that the time they spent in the hospital from admission to discharge was adequate, and there were no statistically significant differences with regard to socio-demographic background of patients. In open-ended questions, women indicated that they understood that some delays were unavoidable, but suggested that staff convey this message to patients in the waiting area to reduce their anxiety prior to surgery:

The longer you sit, the more anxious you are (Australia-born, breast surgery, 45 years).

Following the operation, a patient spends time in bed in the recovery room, then she gets dressed, walks to a lounge room with recliner chairs to have tea or coffee, and subsequently is discharged. A nurse applies an individual assessment of a patient to be discharged from the hospital. Nearly three quarters of women (72.4%) studied felt that the time they spent in recovery following surgery was adequate. About one quarter of women felt that the time in the recovery was inadequate (either too short 15.6% or too long 12.1%). None of the socio-demographic factors, including public/private status of the patient, predicted women's self-assessed adequacy of the time spent in the recovery room.

Convalescence at home

Since after discharge, the patient needs to rely on self-care or care from a support person, whose role includes both everyday tasks, e.g. (e.g. household chores, childcare), but also responsibility of monitoring whether the health status of the patient requires professional medical care (Frisch et al. 1990), the study also explored patients' experience of convalescence at home. Current hospital policy is that day surgery patients must be accompanied home and have access to support at home, which was the case with most women (84.4%), but 21.6% reported that the help they received was not sufficient. The only socio-demographic factor predicting women's access to informal support at home was related to living arrangements. Women living with someone (either family members or in a shared household) were about 2.4 times more likely to have help at home ($p = .016$, regression coefficient 2.453, CI 95% 1.186-5.074). While the majority of women were cared for by others, 11.4% had responsibility of caring for other family or household members, including pets, when they got home from the hospital. Women who reported that it was inconvenient for their carers to take care of them were also more likely themselves to provide care to others following hospital discharge ($\chi^2 = 18.21$; $p \leq .000$). Open-ended questions indicate that inconvenience for family members or friends taking care of women predominantly related to employment issues:

[Inconvenient] because of the workload, but his [her husband's] main priority was me (pregnancy termination, 33 years, married).

No [not convenient], my husband had to take time off work, but you do what you have to do (laparoscopy, 36 years, married).

No, my husband lost \$100, but he worries about me (breast surgery, 42 years, married).

Women's perceptions on advantages and disadvantages of day surgery

Most women (93%) commented on the advantages of day surgery, and none of the socio-demographic factors, including the public/private status of the patient, determined this outcome. Women's open-ended answers suggest that day surgery was advantageous for themselves, their own family, and other patients needing hospital care. Day surgery was perceived as a convenient option, and the experience was often described as "in and out". Patients also commented on the lower costs, both direct and indirect, in terms of the impact on the household by comparison to in-hospital stay. Many valued the opportunity to be in control of recovery at their own pace, rather than submitting to a hospital regime:

...you don't use too much of hospital time because nurses are needed for other patients (44 years, married, public patient).

It's convenient, when you are in hospital, it throws the whole family out (I spent some time in hospital last year), so it's wonderful (36 years, married, public patient).

Couldn't afford (to stay overnight). I'd rather be home (28 years, de-facto relationship, private patient).

Fewer women (43.8%) commented on perceived disadvantages of day surgery. The only socio-demographic factor predicting women's comments on disadvantages of day surgery was higher education ($p \leq .010$, regression coefficient 1.621, CI 95% 1.124 – 2.338). Reported disadvantages related to the limited emotional support they received:

You're handled like a piece of cattle, in and out, no real thinking about you as a person if you are worried, concerned (Australia-born, 26 years, multiple procedures).

Nobody asked how I felt ... feeling that you're just a body, your bodily needs will be taken care of (Australia-born, 61 years, multiple procedures).

It's very unsupportive. It feels like you're a number and have to be on the next stage of the process (Greece-born, 51 years, laparoscopy).

Other perceived disadvantages included hospital policy of not permitting the presence of a support person from admission to discharge, walking to the operating theatre, lack of face-to-face contact in recovery with the surgeon who performed the operation, lack of medical supervision at home, and women's domestic responsibilities at home or their role as carers.

Discussion

A government goal is to ensure appropriate time for interaction between day surgery patients and health professionals (CDHAC 1999), which should result in quality health care. Ultimately, however, day surgery allows for much less time for communication and exchange of information between patients and hospital staff than would be the case with surgery associated with multi-day stay. It is therefore crucial to use effectively the available time (Sally 1995) and prepare patients for all phases of pre-operative and post-operative processes prior to admission for surgery (Moran and Kent 1995). This is particularly important given that responsibility of post-operative care falls on the patient, her family and sometimes primary health care providers.

The experiences of women undergoing gynaecological day surgery in Australia are similar to those reported internationally. For example, in light of routinisation of health care (Strong 1979, Zerubavel 1979, Fox 1993), nurses in a day surgery setting reported that they had to keep moving the patients as if they were on a production line (Fox 1999). In our study, women used this same metaphor to define their experience, and other comments on disadvantages of day surgery are also indicative of routinisation of health care. Study results indicate that both public and private patients generally favour the “in and out” experience of day surgery, although they have some reservations, and that the government may continue with promoting day surgery without much opposition from the public. Overall, an appropriate protocol was followed, which suggests that patients should receive information prior to hospital admission to ensure patient satisfaction with day surgery (Otte 1996, Mitchell 1997). However, private patients fared worse in a number of ways: they were less likely to have access to multiple sources of information as well as to information which they found easy to understand. Therefore, while private patients in the public hospital, including those without private insurance, may have the surgeon of their choice (e.g. gender, expertise, familiarity) and be able to expedite the procedure by avoiding waiting lists for public patients (AIHW 2001), their quality of care is not necessarily better by comparison to the care provided to public patients.

The findings from this study have several public health implications. Firstly, government and hospital policies need to ensure that both private and public patients have access to adequate information prior to admission. The time that patients will spend in hospital and recovery, and the rationale for this, should also be included in information provision. Second, the involvement of informal carers and the loss of working hours and pay need to be included when calculating the cost-effectiveness of day surgery. Third, patients’ experience also suggests that alternative means of supporting women recovering from day surgery may be needed, perhaps by involving Home and Community Care (HACC) and other services funded by local government and the Victorian Department of Human Services. Fourth, the findings from this study may be used to inform discussion to set objective standards to evaluate the health system in the field of day surgery, rather than rely on patient satisfaction as a subjective evaluation of hospital care (McCallum 2001). The latter measure is inappropriate because, as McCallum (2001) suggests, if the media emphasise often that the Australian health system is in crisis, people may be less critical and accept poor quality care.

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