

Comparison of preparedness after preadmission telephone screening or clinic assessment in patients undergoing endoscopic surgery by day surgery procedure: a pilot study

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Abstract

Aim: To compare the effectiveness of preadmission telephone screening versus clinic assessment for preparedness of patients undergoing endoscopy during day surgery procedure.

Method: Data was collected from participants by completion of an explicit questionnaire.

Results: Forty-nine patients participated. No differences were observed in preparedness for surgery in patients who are assessed by telephone screening or clinic assessment in the pre-operative period.

Keywords: Day surgery, patient preparedness, patient anxiety.

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Conclusion: In general telephone screening and clinic assessment of patients ensured preparedness for surgery. Future research might demonstrate a difference with a larger study.

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Introduction

Day Surgery is an increasingly popular choice for individuals who are able to recover independently or have support at home. Differences exist in how patients are assessed and informed about day surgery procedures, particularly between private and public facilities. The former is frequently performed by the private surgeon, whilst the latter is often nurse initiated.

Research during the 1990's clearly demonstrates that education is a key component to compliance to treatment [1]. There are numerous nursing frameworks to aid admission and discharge information from a nursing perspective [1, 2].

There is however, no firm evidence regarding the extent and method of relaying information and education to patients. Some studies have found that poor compliance results from inadequate education [3,4,5]. Recent studies suggest that whilst there was less requirement for nurses to provide physical interventions during day surgery assessment and preparation, there was an increased need for emotional support to the patient [6,7,8].

Both types of venues present with two reoccurring themes, one is streamlining information to manage time constraints on admission and the other is the accuracy of patient provided information in questionnaire format which may not be understood or interpreted correctly by the patient. As a result the responsibility falls to the patient concerning the giving of information.

A pilot study was undertaken in a day surgery centre in Melbourne, Victoria, Australia to evaluate which preadmission care intervention was more effective in enhancing the physical and emotional preparedness for patients undergoing day surgery: preadmission telephone screening or preadmission clinic assessment.

Methods

Design

This was an observational study that evaluated two [2] preadmission interventions: preadmission telephone screening or preadmission clinic assessment. Preadmission clinic assessment usually occurred following the patients appointment with the surgeon where the decision was made for surgery. Telephone screening usually occurred several days before the procedure. Data was collected on admission to the operating suite, following the surgery in the recovery room and within 24 hours post-operative and after the surgical procedure.

Setting

The study was conducted at a public day surgery centre in Melbourne, Victoria, Australia. This centre performs some 7,000 procedures annually, comprising mostly eye surgery and endoscopy procedures.

Sample

A purposeful sample was selected of patients undergoing endoscopic surgery as a day surgery procedure during the study period May 2009 to June 2010.

Patients were ineligible if they had previous day surgery within two years, if they had any form of cognitive impairment, were not independent with activities of daily living or did not provide voluntary consent.

Participants were recruited over the 12 month period by a nursing staff member of the day surgery unit. Information was provided to eligible participants regarding the study and their potential involvement in the form of a Participant Information Form. Information was provided by a staff member of the day surgery facility either in person (during clinic assessment) or by telephone (during telephone screening). Written consent was obtained prior to data collection.

The in-balance in the two sample groups (telephone screening, n=12; clinic assessment, n=37) occurred as a result of a change in management practices from when the study commenced with a preference for clinic assessment by a registered nurse, rather than telephone screening.

Data Collection

Data was collected from participants on two occasions:

- 1 On the day of their surgery, and
- 2 During a post-operative telephone interview 24 hours following the surgery. Data was collected by medical record review and the completion of a questionnaire.

The questionnaire was developed specifically for the purpose of this study in collaboration with clinicians who were members of the Day Surgery Special Interest Group (DSSIG). The questionnaire was trialled in a small pilot study involving five patients to assess usability and readability. Minor changes were made to improve the questionnaire in terms of readability after the pilot study.

The nurse administered the questionnaire by reading all questions to the participant and documenting the responses on the hard copy data-form. Information collected comprised demographics such as age, gender, co-morbidities, ethnicity, language spoken, living arrangements and type of pre-admission assessment (preadmission clinic or preadmission telephone assessment). Also collected was the patients' compliance with the appropriate preparation for the day surgery procedure such as fasting, medication administration and plan for transport home after the procedure. Information regarding the patient's pre-operative knowledge of their procedure and post-operative recovery was elicited. For example, participants were asked to explain in their own words the procedure they were having, if they had obtained information on their procedure from other sources and the restrictions on their activities post-discharge. Data on the patient's satisfaction with the information provided pre-operatively as well as their post-operative recovery was collected 24 hours later in a post-operative follow-up telephone interview. Included in this interview was the patient's overall satisfaction with the procedure and follow-up.

Data analysis

Data was analysed using descriptive statistics (mean, range, numbers, proportions and univariate statistics). Fischer's Exact test was used to compare knowledge and preparation for categorical variables for the two pre-operative assessment techniques (clinic assessment and telephone screening) using SPSS.

Results

Forty-nine patients agreed to participate including thirty-two women (65.3%) and seventeen men (34.7%). The median age was 52 years. The majority of participants (83.7%) used English as their first language. Most participants (83.7%) lived with someone else. Approximately half (51.0%) were responsible for dependents.

Most participants (98.0%) had a block anaesthetic agent. One participant (2.0%) had a general anaesthetic agent. Nineteen participants (38.8%) had a colonoscopy and gastroscopy, twenty had a gastroscopy (40.8%) and ten (20.4%) had a colonoscopy. Approximately one third (34.7%) of participants had a relative who had experienced a day surgery procedure in the past and about half (47.1%) of the relatives had experienced a prior gastroscopy or colonoscopy. Table 1 outlines the demographic characteristics of the sample.

Telephone screening was provided to twelve (24.5%) participants, compared with 37 (75.5%) participants who had a clinic assessment.

Participants demonstrated excellent knowledge regarding type of surgery (100%) and location of venue prior to departure from home (85.7%). The majority presented for day surgery in a timely manner (47, 95.9%). All participants (49, 100%) had organised transport home by carers and self-administered their regular medication as requested prior to hospital arrival.

In regards to preparation for the day surgery procedure, all participants (49, 100%) had consent organised prior to arrival and a discharge plan prepared. Only 7 participants (14.3%) reported obtaining information regarding surgery or day procedure from other sources prior to presentation for day surgery procedures. Most (40, 81.6%) reported being questioned about their medication prior to hospital admission.

Knowledge and preparation prior to day surgery procedure were compared for patients who received telephone screening and clinic assessment, as shown in Table 2. There were no statistically significant differences between the two groups. Patients who received telephone screening were more likely to obtain additional information regarding the surgery and day procedure from additional resources prior to hospital presentation, but the difference was not statistically significant (Telephone Screening: 33.3% vs. Clinic assessment: 8.1%; p=0.051).

Recovery after day procedure surgery was compared for patients who received telephone screening and clinic assessment, as shown in Table 3. The majority reported adequate preparation (45, 91.8%) for the day procedure. There were no statistically significant differences between the two groups. Twenty (40.8%) participants reported some pain and/or discomfort in the first 24 hours after surgery. Twenty-nine (59.2%) reported driving within 24 hours after surgery. Some participants did not report full recovery within 24 hours from the procedure (10, 20.4%). Most participants (48, 98.0%) had an uneventful recovery from the surgical procedure and were discharged with their carer as scheduled. One participant had a vasovagal event after the procedure and was admitted overnight for assessment and monitoring. The patient was discharged the following day.

Table 3 Comparison of recovery after surgery for phone call and clinical groups.

Variable	Telephone N (%)	Clinic N (%)	p
Pain in previous 24 hours	6 (50.0)	14 (37.8)	0.512
Driving in previous 24 hours	6 (50.0)	23 (62.2)	0.512

One patient suggested that he should have been informed to not attend work during the period of bowel preparation. Several participants reported that there was a lack of communication, reassurance and feedback throughout their hospital stay. One participant requested entertainment in the waiting area.

Discussion

The primary study objective was to compare two pre-operative interventions for physical and emotional preparedness (adequate preparation for day surgery, level of knowledge/ information provided, and post-operative recovery) for patients undergoing day surgery for endoscopic procedures. Preoperative assessment is

Table I Demographic Characteristics of the Sample.

Variables			
Age	Mean (years)	54.5	
	Range	20 to 82	
		n	%
Gender	Female	32	65.3
	Male	17	34.7
Country of birth	Australia	20	40.8
	Europe	18	36.7
	Asia	3	6.1
	United Kingdom	2	4.1
	Other	6	12.2
Primary Language Spoken	English	41	83.7
	Italian	1	2.0
	Greek	2	4.1
	Other	5	10.2
Living circumstances	Family	29	59.2
	Couple	12	24.5
	Alone	8	16.3
Marital Status	Married/partner	35	71.4
	Single	14	28.6
Education level	Secondary	29	59.2
	Certificate	9	18.4
	Primary	6	12.2
	Bachelor	5	10.2
Employment	Full/Part time	22	44.9
	Retired	15	30.6
	Home	9	18.4
	Unemployed	3	6.1
Dependents	0	>4	49.0
	2 - 3	>4	16.3
	1	>4	12.2
	4	>4	4.1
	8	<4	2.0
Anaesthetic	Block	48	98.0
	General Anaesthetic	1	2.0
Procedure	Gastroscopy & Colonoscopy	19	38.8
	Gastroscopy	20	40.8
	Colonoscopy	10	20.4
Relative had prior day surgery	Yes	17	34.7
Relative had prior gastroscopy or colonoscopy	Yes	8	47.1

Table 2 Comparison of knowledge and preparation.

Variable	Phone N=12 n (%)	Clinic N=37 n (%)	p
Knowledge of surgery	12 (100)	37 (100)	1.000
Consent obtained	12 (100)	37 (100)	1.000
Medication administered as requested	12 (100)	37 (100)	1.000
Fasted for appropriate length of time	12 (100)	36 (97.3)	1.000
Discharge plan prepared	12 (100)	37 (100)	1.000
Carer organised for patient pick-up and timing appropriate	12 (100)	37 (100)	1.000
Transported self today surgery unit	2 (18.2)	9 (24.3)	0.708
Knowledge of location of day surgery procedure prior to departure from home	11 (91.7)	31 (83.8)	0.665
Questioned about medications prior to admission	8 (80.0)	32 (86.5)	0.195
Information about procedure obtained from other sources prior to admission	4 (33.3)	3 (8.1)	0.051
Presented in a timely manner	12 (100.0)	35 (94.6)	1.000
Paperwork prepared prior to presentation	11 (91.7)	38 (100.0)	0.245

particularly important for patients selected for day surgery to ensure the patient is appropriately prepared physically, psychologically and socially. One important aim of preoperative assessment is to reduce the risk of same day cancellations. There were no cancellations of surgery in this study. All patients had fasted for the appropriate length of time and their medication was administered as per the treatment plan.

One point of difference was that patients who were assessed by telephone were more likely to obtain additional information regarding the proposed surgery from other sources prior to admission. However, this study was too small to make inference from the data. A larger, randomised controlled study might investigate this difference in the future.

Whilst this small pilot study failed to show any difference for pre-admission clinic assessment and telephone screening there are some implications for nursing practice and patient care to consider.

The face to face interaction with patients in the pre-assessment clinic allows the nurse to read the patient's body language and to check the patients understanding of preoperative preparation and post operative instructions. Patients are also able to clarify any problems there and then and hence understand the processes required to be correctly prepared for the procedure. A telephone screening process has convenience factors such as time cost and availability.

In conclusion this small pilot study failed to show any difference for pre-admission clinic assessment and telephone screening but confirms

the direction of previous studies that patient education is integral in ensuring compliance and better patient outcomes.

Recommendations

This study did not investigate cultural differences within Australia's large multicultural and multilingual population and further investigation would be warranted. Further investigations to elicit where clients find further information and the impact this may or may not have on their experience. There is also scope for a study of personal and relationship response to the Day surgery experience.

A larger 360 degree investigation incorporating all stakeholders investigating these gaps would give further information on reliability, feasibility and compliance to guidelines and protocols in place to minimise risk and improve patient outcomes.

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