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Information needs of general day surgery patients

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Abstract

Information for patients on what to expect in the post-operative period is widely regarded as being important particularly in day-surgery patients when they have limited time to discuss their concerns with clinicians. A literature search was unsuccessful in identifying a systematic attempt to develop post-operative literature and it seems that it is often drawn up with little thought for what patients want to know and is supplemented with anecdotal evidence about what happens to patients during rehabilitation. To compensate for this weakness we designed a two-part study to (i) identify key areas of patient concern and (ii) develop consensus responses for these key concerns. We used Delphi techniques to explore the area further. In the first part we devised, validated, tested and piloted a questionnaire, which was then used to identify key areas of concern for patients in the rehabilitation period following six common general surgical procedures. The key areas were: postoperative pain, wound problems, bathing, stretching and heavy exercise, return to work, driving and sex. These areas of concern were common to all patients regardless of their operation. We then used a similar technique to approach all the consultant general surgeons in the former Northern region to ask what advice they would give in each of the key areas for an idealised 'normal' patient. Whilst many surgeons fell within a broad area of agreement, there were some who differed markedly from the others even after the views of peers were taken into account. Examples of this are a range of 7–90 days before patients could undertake vigorous exercise after a hernia repair and 1–60 days for driving after a varicose vein operation.

Keywords: Information needs; Post-operative period; Delphi techniques

1. Introduction

In May 1990 CB was consulted by a patient following a day-case inguinal hernia repair. The patient asked when he could return to driving. As CB didn't know the answer, he sought the advice of the patient's surgeon. The answer that 'he could drive once the wound was comfortable when stressed, which would probably be 2–4 weeks seemed entirely reasonable. Later that week CB saw another patient who had a similar procedure carried out in a different hospital. Because he now knew what to reply CB asked him if he needed any advice on driving. 'No, they've given me very precise details on that. On no account must I drive for three months'.

A recent report from the parliamentary commissioner for health administration has emphasised the need to provide patients and families with the necessary information about the care of the patient after discharge [1]. As short-stay or day-case surgery becomes more common, patients have less time to ask advice about rehabilitation from their surgeons. Whilst the average length of stay for an inguinal hernia repair was 4.9 days in 1985 [2] in many units it is now less than 24 h. This change has led to primary care teams accepting an increasing responsibility for providing post-operative advice. There are some doubts, however, as to whether

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primary care services can provide this information with considerable variation in the advice recommended for patients having laparoscopic cholecystectomy [3] and other general surgical procedures [4,5].

The important question of whether primary care workers have the detailed knowledge of postoperative rehabilitation required to fulfil this role is unknown. A pilot study of primary care nurses in the northern region suggested that this was not the case with a wide range of advice given by different professionals to the same situation (C. Bradshaw unpublished data). Whether this is solely due to lack of knowledge on the part of primary care professionals or whether it is partly due to confusion fuelled by contradictory advice from surgeons is also not known.

It is equally important that health care professionals are aware of those areas about which patients feel they need advice to facilitate their rehabilitation. These may not necessarily be the same as those areas identified as important by professionals.

Whilst there is general agreement that each patient is different, a combination of common sense and clinical experience enables most people to understand that an obese 65-year-old is likely to take longer to recover from an operation than a slim fit, 30-year-old. Thus information about one type of patient can be adapted for another. Unfortunately, there is no agreement as to how long a fit 30-year-old is likely to take [5]. Without this, providing meaningful, individualised information is impossible. Primary care requires a core of evidence-based, postoperative information about those areas important to patients, agreed upon by most, if not all surgeons, which can then be varied for individual patients. This is not currently available but it is likely that both patients and primary care staff would welcome such information rather than a diversity of views from different surgeons.

We report the methodologies and results of two interlocking studies which identified the key areas of information needed from a patient perspective and then sought to achieve consensus on the advice to be given in each area. We finally discuss a systematic approach for the development of objective advice.

2. Method

The project included a variety of stages, which will be described in the methodology. These include the search strategy for previously published literature, the development and validation of the questionnaires, the administration of two rounds of Delphi questionnaires to patients and finally the administration of two rounds of Delphi questionnaires to surgeons.

2.1. Previously published literature

A literature search was conducted on Medline using keywords patient education, information leaflets, postoperative care and operative procedures and this identified some articles. The references quoted in these articles provided a further series of sources to check. We found further articles on information booklets for patients following discharge from medical wards and information provided to patients having a hysterectomy.

In addition we examined a sample of postoperative leaflets from more than twenty hospitals from five different health regions.

2.2. Patient questionnaire development

The project received local ethical approval. Following this a modified Delphi method was used as a suitable method for identifying patient opinions [6]. Six common procedures were chosen, representing the range of common operations performed by general surgeons [2] many of which are or could be performed as day-cases. These were inguinal hernia repair, ligation $+/-$ stripping of varicose veins, appendectomy, open cholecystectomy, uncomplicated laparotomy and mastectomy.

Two patients from each of the categories were identified from computerised records and received an unstructured interview at 3 months post-operation, to identify problems or areas of concern. From the results a semi-structured interview schedule was constructed and administered to a further six patients. The results were collated and a structured questionnaire was drawn up which was checked for 'readability' using the FOG test [7]. This was piloted on five patients to check that the questions were easy to understand and answer. Face validity was ensured by the rigorous questionnaire design.

2.3. Assessing patients opinion

2.3.1. 1 st round Delphi of patients

The final version of the questionnaire was sent to ten patients in each of the six operation categories 3 months after their operation. A letter explaining the reason for the study accompanied it. The letter was written with short sentences, no jargon and few words of more than three syllables. Patients were identified from hospital records, had all been operated on by one surgeon 3 months previously and were aged-ranged, 18–65. The questionnaire asked respondents to score twenty-one specific areas on a four point scale as to whether they had any problems or concerns in each area. As a check for internal reliability, the respondents were then asked to list those areas that had caused the

Table 1
Problems identified with hospital post-operative information leaflets

Lack of precision	An information leaflet for patients following a vasectomy said that the 3 month postoperative semen sample should be……'Collected and delivered by hand'
Jargon	A leaflet on colposcopy had one page devoted to an explanation of CIN grades. Another said that constipation following a hernia repair could be eased by a suppository which should be….'digitally inserted into the rectum'
Difficult to read	'For those who have had some difficulty understanding this leaflet, the algorithm appended below may illuminate the points previously made'

major concerns or problems. Results were collated, scoring moderate and severe problems as a positive response and slight or no problem as a negative response, checked for internal reliability and a list of key areas of concern were drawn up from those areas with the highest scores.

2.3.2. 2nd round Delphi of patients

A second questionnaire, which focused on the key areas identified by the responses to the 1st round Delphi, was developed and sent to the same patients. These key areas were explored further asking patients to differentiate between those things that caused a physical problem and those that caused worries but no actual problem. We asked if they had received information in the various areas and whether they felt that more information would have made any difference to these concerns and problems. This questionnaire was sent to the original respondents and the results collated. In the second round the respondents were asked to answer yes or no to the questions. Thus the scoring and collation of results was much simpler.

2.4. Developing a consensus of postoperative advice

2.4.1. Questionnaire development

We, once again, used a Delphi technique in an attempt to achieve a consensus amongst surgeons in the northern region about postoperative advice. A questionnaire was drawn up using an 'ideal patient'—middle aged, fit, with no problems over the peri-operative period and no problem with wound healing—who had had one of the six common operations. The surgeons were asked to give an opinion on the length of time before a patient was: pain-free, able to stretch freely, able to have a bath, able to start a normal sex life, able to start heavy exercise or hard work, able to drive. These were the key areas identified from the patient questionnaire. This was piloted on several surgical colleagues from outside the Northern region and amended in light of their comments. Consultants were identified from sources at both the old Northern Regional Health Authority and Newcastle Health Authority (which held details on all consultants working in the teaching hospitals).

2.4.2. 1st round Delphi of consultants

The questionnaire was then sent to all consultant general surgeons in the Northern region with a covering letter explaining the reason for the study. The letter was 'reader-friendly' in that we used short sentences and avoided jargon. We asked each surgeon to consider an ideal patient going through each of the six common procedures and to provide details of how long they would advise a patient that they may have problems for each of six key areas identified from the patient survey. We also asked whether they routinely gave any advice on wound infections. Several responses indicated that some surgeons were answering with respect to laparoscopic procedures. Each surgeon was subsequently contacted by phone to check whether their responses were for laparoscopic or open procedures.

2.4.3. 2nd round Delphi of consultants

Following the first round of the Delphi study the results were collated. Because of the skewed distribution, a median and range was derived for each key area and each procedure. The range of procedures was extended to cover both laparoscopic and open inguinal hernia repair, appendectomy and cholecystectomy. We then fed back this information along with their own advice in each area, and asked if they wanted to alter their advice in light of the response from their peers.

3. Results

3.1. Literature search

The Medline search produced only 24 references from 1986–95 of which only five were of any relevance for this study. Examination of the references of these articles produced another two useful background articles.

Only one of these articles set out a method by which patient concerns were systematically collected [8]. Most described only the information provided by nine professionals although one did suggest responses to patient concerns [9]. Few of the articles provided any information on how to make information leaflets

'user-friendly' although an article on general practice information leaflets goes into this in considerable detail [6].

In addition we examined a sample of postoperative leaflets from more than twenty hospitals from five different health regions. The majority were imprecise, difficult to read or filled with jargon. Examples of all three faults are described in Table 1.

3.1.1. Results of first round Delphi for patients

The response rate for the first and second rounds of the Delphi was 86%. The procedure did not seem to make a difference to patients' concerns during rehabilitation—they were the same no matter what the operation was. There were 12 key areas at the end of the first round, which were ranked and shown in Table 2

3.1.2. Results of second round Delphi for patients

The responses to the second round indicated that although there was a considerable degree of overlap between those things causing concern and those causing a problem, there were several areas which were only identified as a priority in one. Because of this the key areas for postoperative information were identified as being those causing either concern or a problem where more information would have made a difference to rehabilitation. After the second round those key areas were ranked and shown in Table 2.

Patients (75%) were given no information on sex—the majority that did get information were the mastectomy patients. About 60% did not remember receiving information on what pain to expect following discharge.

Table 2
Ranked results of 1st and 2nd round Delphi questionnaires for patients

First round
Postoperative pain
Bathing
Wound infections
Sex
Heavy work
Heavy exercise
Climbing stairs
Driving
Stretching
Standing for periods of time
Vacuum cleaning 'Hoovering'
Second round
Postoperative pain
Stretching/exercise
Wound infections
Bathing
Sex
Work and housework
Driving

Areas causing concem or problems in the 1st round and causing concern or problems and where more information would have made a difference in the 2nd round.

3.1.3. Results of first round Delphi consultants

The results of the first round Delphi are shown in Table 3. The response rate after one reminder was 62%. There is a considerable range of opinion as to when patients could undertake certain activities. For example following a varicose vein operation, the range of opinion as to when a normal sex life could be started varied from day 0 to day 38. Following an open inguinal hernia repair the range of advice a patient would receive about when to start heavy exercise again ranged from day 7 to day 90.

3.1.4. Results of second round Delphi of consultants

The response rate to the second round was 81%. There was little change in the second round results. Those where this may have some clinical significance are shown in Table 3. Some retracting of range occurred suggesting a move towards consensus but there was also some extension of range, which seems difficult to explain.

4. Discussion

It is widely assumed that it is important to give consistent information to patients especially in day-case surgery, yet the lack of consensus amongst surgeons would seem to make this diffcult. This is a problem both for nurses working on a busy day-unit with several consultants and for primary care workers who may see patients from different hospitals. It is a problem deciding how best to achieve this as, on the evidence presented here, it seems peer pressure has little influence on surgical opinion.

The design of the questionnaire was rigorous enough to suggest that we have identified the genuine concerns of this group of patients and the consistency of the themes identified would be unlikely if we were merely rehashing anecdotal evidence. We were surprised to find that the type of operation performed had little bearing on this. It would be interesting to know whether this would also apply to patients of other surgical specialities. It was less of a surprise to find that the information needs of patients were not being adequately dealt with, for example, 75% of patients given no information on sex (the majority that did get this information were, not surprisingly, mastectomy patients) and 60% who did not remember receiving information on what pain to expect following discharge. Where printed leaflets were issued there was no evidence that they addressed the concerns of the patients. As well as providing only the advice that professionals thought was important they were often badly written with lack of clarity and copious medical jargon. The advice to 'refrain from intercourse' may be grammatically correct but most South Shields patients

Table 3
The results of 1st and 2nd round Delphi questionnaires for surgeons

Type of operation	Be free of pain		Stretch		Have a bath		Have sex		Undertake hard exercise		Drive	
	Delphi 1	Delphi 2	Delph 1	Deiphi 2	Delphi 1	Delphi 2	Delphi 1	Delphi 2	Delphi 1	Delphi 2	Delphi 1	Delphi 2
Open inguinal hernia	7		10 (1–40)	(1–21)	3 (0–14)		14 (0–40)		35 (7–90)		14 (4–60)	
Laparoscopic inguinal hernia	2 (1–7)	1–14	3 (1–10)		2 (0–3)		7 (2–14)	(5–28)	17.5 7–42		7 (2–21)	(5–14)
Ligation of varicose veins	4.5 (0–21)		4.5 (0–21)		3 (0–10)		8 (0–37)		14 (1–60)		10 (1–60)	
Laparoscopic appendicectomy	2 (1–4)		4 (2–7)	(1–14)	2 (0–4)		7 (6–21)	(1–14)	11 (7–21)		7 (3–15)	
Open appendicectomy	5 (0–21)		7 (1–24)		3 (0–12)		12 (2–30)		21 (7–42)	10 (3–42)	10 (3–42)	
Laparoscopic cholecystectomy	2 (1–12)		5 (2–14)		2 (0–7)	(1–5)	7 (2–21)		16 (7–42)	(7–30)	8 (1–21)	(3–14)
Open cholecystectomy	7 (0–30)		14 (6–40)	(6–30)	4 (1–14)		14.5 (2–30)		42 (6–90)		14 (7–60)	
Mastectomy	5 (0–21)		10.5 (1–40)		4 (0–14)	(1–21)	14 (2–40)		28 (7–70)	(2–60)	14 (5–60)	
Mid-line laparotomy	8.5 (0–56)	(2–30)	14 (4–60)	(4–30)	4 (0–20)	(1–40)	21 (2–42)		35 (7–90)	(20–90)	17.5 (7–60)	

Given a normal slim healthy middle-aged patient with an uncomplicated operation, how soon (median and range in days) could the patient expect to be able to be free of pain and do the above mentioned activities.
Results for Delphi 2 questionnaire only displayed when they differ markedly from those of Delphi 1.

have sex, not intercourse and they certainly don't refrain from it—although they might not do it for a while. Often the wording seemed designed not to offend the sensibilities of the professionals as in 'digitally inserted into the rectum'.

Our decision to concentrate on information that would make a difference to rehabilitation is a pragmatic choice. The desire for information must be balanced not only against time involved for professionals but also the knowledge that most people are only able to retain limited amounts of information even when supplied with written information sheets [10]. Concentrating on those areas that affect rehabilitation seems sensible and has been shown to be satisfactory to both patients, GPs and hospital nurses in the South Tyneside FASTRAK project [11,12].

We were unable to achieve consensus about the specific advice to be given in the key areas. Perhaps consensus is not the best way of gathering this information. There is a logic to taking a similar approach to that used when identifying patients' concerns. Why rely on professional opinions when we could identify what really happens following an operation and just how quickly people do recover? We are currently undertaking a project which will identify the details of rehabilitation from a large number of patients by providing recovery diaries and regular follow-up phone contacts. Once this is finished we will be able to provide evidence which can be used to develop appropriate patient infommation in a variety of forms (e.g. leaflets, tapes, minority languages etc.) which should support and empower the patient, rather than disadvantage and confuse, during rehabilitation.

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