General Anesthesia

What do outpatients value most in their anesthesia care?

Donald Fung MD FRCPC MSC,*†
Marsha Cohen MD FRCPC*‡

Purpose: To determine what outpatients ranked highest in their anesthesia care and whether anesthesiologists could predict that ranking.

Methods: A 36 item mail-back questionnaire was administered post-operatively to 45 surgical outpatients and to 15 expert anesthesiologists. Respondents were asked to rank the three highest items from each of four lists of nine items representing pre-operative, intra-operative, pre-discharge and post-discharge outpatient anesthesia care.

Results: Complete responses were obtained from 30 outpatients and all anesthesiologists.

In each phase of their care (pre-operative, intra-operative, pre-discharge and post-discharge), outpatients ranked highest those elements representing information and communication. Physical conditions of care tend to be least valued. Although anesthesiologists were able to predict what patients valued in the pre and post-discharge phases of their anesthesia care ($r = 0.85$ and 0.91), they undervalued the importance to patients of communication and information in pre-operative and intra-operative care ($r = -0.09$ and $.65$).

Conclusions: Our results reinforce the value that patients place in adequate communication and provision of information in all phases of outpatient anesthesia care, a value that may be underappreciated by anesthesiologists.

Objectif : Déterminer ce que les patients ambulatoires placent au premier rang des soins anesthésiques et vérifier si les anesthésiologistes peuvent prédire ce choix.

Méthode : Un questionnaire, en 36 points, à retourner par la poste, a été présenté après l'opération à 45 patients ambulatoires et à 15 anesthésiologistes experts. Ils devaient choisir les trois éléments les plus importants de chacune des quatre listes de neuf éléments représentant les soins anesthésiques préopératoires, peropératoires, pré-congé et post-congé.

Résultats : Des réponses complètes ont été obtenues de 30 patients ambulatoires et de tous les anesthésiologistes. Pour chaque étape de leurs soins, les patients ont choisi les éléments qui représentent les informations données et la communication. Les conditions physiques des soins ont reçu des valeurs moindres en général. Même si les anesthésiologistes pouvaient prédire ce que les patients valorisaient dans les soins reçus avant et après le départ de l'hôpital ($r = 0,85$ et $0,91$), ils ont sous-évalué l'importance de la communication et des informations des étapes préopératoire et peropératoire ($r = -0,09$ et $0,65$).

Conclusion : Nos résultats renforcent la valeur que les patients placent dans une communication et des informations suffisantes à toutes les étapes des soins anesthésiques ambulatoires, une valeur qui a pu être sous-estimée par les anesthésiologistes.

From the Department of Health Administration,* Faculty of Medicine, University of Toronto, Toronto, Ontario, Department of Anesthesia,† North Bay General Hospital, North Bay, Ontario, and the Centre for Research in Women's Health and the Department of Anesthesia,‡ University of Toronto, Canada.

Address correspondence to: Dr. Donald Fung, Department of Anesthesia, North Bay General Hospital, 750 Scollard St., North Bay, Ontario, P1B 5A4 Canada. E-mail: dfung@efni.com

Accepted for publication September 22, 2000.

OBTAINING patient feedback can provide valuable insight into the quality of clinical practice and hospital programs.¹ Until recently, most large patient surveys designed to evaluate anesthesia programs or practices have utilized multi-item questionnaires developed without the direct input of patients. The survey questionnaires constructed by anesthesiologists tended to ask patients to report on what they perceived or felt but may not necessarily have reflected on what patients themselves wanted in their anesthesia experience.² A more valid approach would be to discover first what patients value or prefer in their care and to then formulate a multi-item questionnaire to assess whether these preferences had been met.^{3,4}

In an earlier investigation, as part of a master's thesis in health administration (available on request), we conducted in-depth interviews with same day surgery patients and carried out a Delphi process (a series of mail-back questionnaires) with a panel of anesthesiologists in order to obtain a comprehensive list of those features of outpatient anesthesia care that mattered most to patients. An analysis of the detailed descriptions patients gave of their anesthesia experience yielded items of patient satisfaction which could then be used to create a patient satisfaction questionnaire. Patients' responses to the interviews yielded items which fell naturally into the four phases of peri-operative care (i.e. pre-operative, intra-operative, pre-discharge and post-discharge phases). In each phase, there were between 10 and 20 items that were then grouped into four or five dimensions namely, physical structure, technical content, interpersonal relationship, efficiency of care, and outcomes of care.

In the present study, we asked a new group of surgical outpatients to rank items drawn from this list (nominal rankings⁵) as a means of identifying those elements and dimensions of anesthesia care of greatest priority to patients. At the same time, we asked members of an expert panel of anesthesiologists to predict the rankings that patients placed on different elements of their anesthesia care.

Methods

Approval was obtained from the institutional ethics committee (SHCS) and the hospital board (NBGH).

A 36 item questionnaire was constructed from a comprehensive list of determinants of patient satisfaction that had emerged derived directly from detailed post-operative telephone interviews of surgical outpatients (Master's thesis, University of Toronto, 1997, available on request). The questionnaire contained four sets of nine items corresponding to the four tem-

poral phases of outpatient anesthesia care (pre-operative, intra-operative, pre-discharge, and post discharge care) (Table II). Each item in the questionnaire described an element of anesthesia care using, as far as possible, the wording found in verbatim transcripts of patient interviews.

The overall number of elements (n=9) probing each temporal phase was chosen as a compromise between the desire to evaluate as many elements of care in each temporal phase as possible against the fact that patients would be unable to evaluate all items equally if too many items were included. That is, a list containing more than nine items would have resulted in later items remaining unread or incompletely considered and would have promoted a bias towards items presented earlier in the list. All dimensions of anesthesia care (physical structure, technical content, interpersonal relationship, efficiency, and outcomes of care) that had emerged from patient interviews were represented by the nine items.

Pre-testing of the questionnaire in lay subjects (n=5), and in anesthesiologists (n=5) established its feasibility and comprehensibility. All pre-test questionnaires were easily completed with no missing or incomplete responses. The pre-test further evaluated two possible response formats: asking patients to rank the top three items (from 1 to 3) in each list or rating each individual item on a scale of 'not important' to 'very important'. Based on pretest results, ranking the top three items on each list required respondents to consider carefully all items, demanded that respondents "commit themselves" to certain items, and was more likely to uncover which of the elements listed was most preferred in each respondent's care. Ratings of items produced scores with extreme positive skew and placed virtually all items in the very important category (data not shown).

The final version of the ranking questionnaire was administered in a single written mail-back form to 45 surgical outpatients. Patients were recruited from both a large tertiary metropolitan hospital (n=10) and a smaller community hospital (n=35). All respondents were adult outpatients 16 yr-of-age and older who had experienced a general anesthetic irrespective of surgical procedure. Recruitment of patients occurred immediately after admission to the outpatient ward. The questionnaire was taken home by the patient who was asked to complete it on or after the third day following surgery. A follow-up phone call between the 4th to the 7th day was made to all patients in order to optimize the questionnaire response rate.

The same questionnaire was also mailed to 15 anesthesiologists who were asked to choose the three items

on each page that patients would rank highest. These anesthesiologists included noted researchers in anesthesia outcomes and outpatient anesthesia research, and representatives of academic and community practice. Eleven practiced in Canada, three in the US, and one in the United Kingdom.

Analysis of responses

Each returned ranking questionnaire (anesthesiologist or surgical outpatients) was analyzed as follows: The top three ranked items of each temporal phase were assigned numerical weights; rank 1 received a score of 3, rank 2 a score of 2 and rank 3 a score of 1. The items of each list were then summed over all completed responses ($n=30$ for patients, $n=15$ for anesthesiologists), yielding a ranked order of all nine items based on the pooled scores of each item.

The extent of concordance of the overall ranked order of the nine items of each temporal phase (based on pooled rankings) between patients and anesthesiologists was estimated using a Spearman correlation coefficient ($P < 0.05$ being considered statistically significant).

Results

From the 45 surgical outpatients who received questionnaires, 32 completed questionnaires were returned (response rate = 71%). Comparisons of respondents and non-respondents failed to identify any consistent differences in age, sex, or procedures although the numbers of patients in all subsets were small (Table I). Among respondents, gynecological surgical procedures (53%) and women (84%) predominated. The next most frequent category of procedure was orthopedic (25%). The age of respondents ranged from 16-75 yr (median = 31; mean 34). Two questionnaires were not ranked as per instructions (6.25% rate of spoiled questionnaires). Thus data from 30 completed questionnaires were used to generate pooled rankings of items in the questionnaire.

Rank ordering of determinants by patients

All nine items in each temporal phase were ranked from 1 to 9 according to the summed score given to each item by 30 patients (Table II). The overall rank order for each temporal phase of care consistently placed items representing the technical content of care higher in priority than all other dimensions. The highest ranked items in all phases of care described aspects of care related to the provision of adequate information and effective communication (Table II). On the other hand, items describing the physical conditions or environment of care ranked last or next to last even though the item representing physical conditions had

TABLE I Characteristics of same day surgery patients (responders and non-responders)

<i>Characteristic</i>	<i>Responders (n=32)</i>	<i>Non-responders (n=13)</i>
Female:male ratio	27:5	8:5
Age: mean/median/range	34.4/31/16-75	33.7/25/16-64
Gynecological operations	17	5
Orthopedic surgery	8	3
Otolaryngology	3	3
Plastic surgery	2	0
General surgery	2	0
Other surgery	0	2

been presented first in all lists. The importance of other dimensions of care such as interpersonal dimension, efficiency of care, and outcomes of care depended on the temporal phase. Interpersonal care (confidence and trust in the anesthesiologist) was ranked second in the intra-operative phase; efficiency and outcome dimensions were highly ranked in the post-operative phase of care.

Prediction of patients' ranked ordering by anesthesiologists
Anesthesiologists were unable to predict what outpatients most preferred in their pre-operative phase of care ($r = -0.09$, Table II). Although both patients and anesthesiologists ranked as their top item "identifying and addressing adequately patient concerns and a desire for information", subsequent ranked items diverged between patients and anesthesiologists; outpatients want more detailed information about side effects and discussion about their care, anesthesiologists emphasized the importance of friendly and efficient care.

In the intra-operative phase of care, the correlations between the rank order of items obtained from anesthesiologists remained less than optimal ($r = 0.65$, $P > 0.09$, Table II). Anesthesiologists were unable to predict the item of greatest value to patients in this phase of care: being spoken to during the preparation for and induction of the anesthetic.

In the pre-discharge and post-discharge phases of care (Table II), the overall ranked order of items in each temporal phase obtained from anesthesiologists correlated well with the corresponding overall ranked order obtained from patients. Spearman correlations between patients and anesthesiologists were 0.85 ($P = 0.01$) in the pre-discharge phase of care; 0.91 ($P = 0.001$) in the post-discharge phase of care.

The relative importance of all items

The rankings for each temporal phase of care exhibited a wide variability. Variability in rankings reflects a

TABLE II Importance of items in four temporal phases of care as ranked by patients and anesthesiologists

1. Items representing pre-operative phase of care ($r = -0.09$; $P > 0.25$)		
<i>Item</i>	<i>Patient Rank</i>	<i>Anesthesiologist Rank</i>
The anesthesiologist identifies all my concerns, encourages me to communicate those concerns, and then answers all my questions.	1	1
The anesthesiologist or nurses tells me about the possible minor side effects of anesthesia.	2	8.5
The anesthesiologist discusses the anesthetic care with me and involves me in the decision of what particular anesthetic is best for me.	3	5
My fears and anxieties about the surgery are handled appropriately beforehand.	4	6
The nurses and doctors are friendly, helpful and compassionate.	5	2
My family or support member was allowed to be with me before the surgery.	6.5	3.5
There are little to no delays and everything proceeded like clockwork in an orderly, predictable and smooth manner.	6.5	3.5
I am informed about the rare serious risks and dangers about anesthesia.	8	8.5
All the hospital areas that I visit to get me ready for surgery are easy to find, convenient to get around, and comfortable to be in.	9	3.5
(r = Spearman correlation; P = P value for $r > 0$)		
2. Items ranking operating room phase of care ($r = 0.63$, $P = 0.09$)		
<i>Item</i>	<i>Patient Rank</i>	<i>Anesthesiologist Rank</i>
The anesthesiologist or nurse talks to me as they ready me for the anesthetic.	1	6
I feel confidence and trust in the anesthesiologist and nurses looking after me.	2.5	1
The anesthesiologist is always present to assure my safety while I am asleep.	2.5	3
The anesthesiologist is efficient and unhurried in his or her manner.	4	5
I go to sleep pleasantly, quickly and smoothly.	5	2
The anesthesiologist respects my needs and requests.	6	4
I feel calm and relaxed.	7	8
The anesthesiologist is kind, friendly and gentle.	8.5	7
The operating room is not so cold, impersonal and intimidating.	8.5	9
3. Items representing pre-discharge phase of care ($r = 0.85$, $P = 0.01$)		
<i>Item</i>	<i>Patient Rank</i>	<i>Anesthesiologist Rank</i>
Before I leave, I am told how the surgery and anesthetic went and am given explanations about any unexpected complications.	1	1
I feel safe throughout my recovery from the anesthetic.	2	3.5
The nurses are able to respond to my needs or requests quickly.	3	3.5
I experience little or no immediate side effects like nausea, vomiting, pain, dizziness or sore throat.	4	2
The nurses are caring, helpful, and do not rush me home.	5	5
My family or support person is allowed to be with me as soon as I am awake.	6	8
I am thinking normally and clearly as soon as I wake up from the anesthetic.	7	8
I am able to leave the hospital in a matter of hours.	8.5	8
The room(s) I awaken in is (are) comfortable.	8.5	8
4. Items representing post-discharge phase of care ($r = 0.91$, $P = 0.001$)		
<i>Item</i>	<i>Patient Rank</i>	<i>Anesthesiologist Rank</i>
I have received clear and adequate instructions about how to manage my own care at home.	1	1
I am told about the minor or major discomforts and inconveniences that I might feel after the operation.	2	3.5
I have no or few side effects.	3	3.5
I have a phone number or someone to contact if there is something I become worried about.	4	2
I have enough help at home.	5	4
I am able to easily tolerate the side effects that I do experience.	6	6.5
I am able to obtain explanations about unexpected side effects and complications.	7	6.5
I am able to resume normal activities right away.	8	8.5
The hospital phones me in the first 72 hr to see how I'm doing.	9	8.5

TABLE III Distribution of scores used to determine the ranked order of items based on three weightings of items.

A. Preoperative care			
<i>Item</i>	<i>Summed total ranks from all patients (rank order)</i>	<i>Number of times in top three (rank order)</i>	<i>Number of times as top item (rank order)</i>
All concerns are identified and communicated	33 (1)	15 (2)	6 (2.5)
Told about possible minor side effects	30 (2)	16 (1)	3 (5)
Involvement in decision re anesthetic	29 (3)	14 (3)	8 (1)
Fears and anxieties handled before surgery	28 (4)	13 (4.5)	6 (2.5)
Nurses and doctors are friendly helpful and compassionate	23 (5)	13 (4.5)	4 (4)
Support person was allowed to be with me	7	4	0
No delays, predictable and smooth	11	6	1
Informed about serious risks of anesthesia	13	4	2
Hospital is convenient, comfortable	6	5	0
B. Intra-operative care			
<i>Item</i>	<i>Summed total ranks from all patients (rank order)</i>	<i>Number of times in top three (rank order)</i>	<i>Number of times as top item (rank order)</i>
Spoken to in operating room.	38 (1)	17 (2)	6 (2.5)
Feels confidence and trust in anesthesiologist and nurses.	35 (2.5)	17 (2)	6 (2.5)
Anesthesiologist always present to assure safety.	35 (2.5)	17 (2)	8 (1)
Efficient and unhurried manner.	20 (4)	9 (5)	3 (4)
Goes to sleep pleasantly, quickly and smoothly.	18 (5)	11 (4)	2 (6)
Respects patient's needs and requests.	11	6	2 (6)
Feels calm and relaxed.	9	5	1
Anesthesiologist is kind, friendly and gentle.	7	5	0
Operating room is not cold, impersonal and intimidating.	7	3	2 (6)
C. Pre-discharge care			
<i>Item</i>	<i>Summed total ranks from all patients (rank order)</i>	<i>Number of times in top three (rank order)</i>	<i>Number of times as top item (rank order)</i>
Receives explanations of surgery, anesthetic and unexpected complications.	41 (1)	20 (1)	8 (2)
Felt safe throughout recovery process.	38 (2)	15 (3)	9 (1)
Nurses responds to needs and requests quickly.	31 (3)	13 (5)	6 (3)
Experiences little to no immediate side effects.	29 (4)	15 (3)	4 (4)
Nurses are caring, helpful and not rushed home.	19 (5)	15 (3)	0
Family/support person present as soon as awake.	10	5	2
Thinking clearly as soon as awake.	8	5	0
Able to leave hospital quickly.	2	1	0
Comfortable room.	2	1	0
D. Post-discharge care			
<i>Item</i>	<i>Summed total ranks from all patients (rank order)</i>	<i>Number of times in top three (rank order)</i>	<i>Number of times as top item (rank order)</i>
Received clear discharge instructions.	47 (1)	20 (2)	13 (1)
Told of minor or major inconveniences to expect.	45 (2)	23 (1)	4 (2.5)
Few or no side effects.	22 (3)	9 (4)	4 (2.5)
Phone number or contact if worried.	21 (4)	12 (3)	3 (4)
Enough help at home.	18 (5)	8 (5.5)	2 (5)
Able to easily tolerate side effects.	12	8 (5.5)	1
Can obtain explanations about unexpected events.	11	7	1
Able to resume normal activities.	4	3	0
Hospital phones in first 72 hr.	0	0	0

lack of complete agreement amongst respondents on which items were most important and is indicative of the relative importance of all items to patients. The inability of patients to agree consistently on the importance of any one item is more apparent when the actual score based on summed ranks is listed along with the number of times each item appeared as one of the top three and the number of times it was chosen as the most important item (Table III).

In all temporal phases, the five highest items based on total summed scores were also those items that were selected most often as one of the top three items and the highest item (Table III). However, in all phases of care, the five topmost items possessed raw scores that often differed from their closest neighbour by no more than three units. The precise rank order of all topmost items depends on the response of a single patient.

In addition, virtually all items were ranked highly by at least one or two patients. All items except one were considered important enough to make the top three of at least one respondent (column 2, Table III). (The only item of the 36 that failed to make the top three of any respondent was item 5 in post-discharge care, "the hospital phones me in the first 72 hr to see how I'm doing".) Furthermore, in each temporal phases, at least five out of the nine items were considered a top item by at least one respondent (column 3, Table III).

Discussion

Direct assessments of patient preferences are increasing in anesthesia research. Lehman *et al.*⁶ used a rating scale and a standard gamble technique to ascertain that patients undergoing laparoscopic cholecystectomy "preferred" mild nausea to mild pain but thought that both symptoms when severe were equivalent. Macario and colleagues⁷ asked patients to rate 10 post-operative scenarios (nine described an unpleasant event such as nausea, vomiting, gagging on the ETT, severe pain, etc., and a tenth described an uneventful recovery) from 1 (least desirable) to 10 (most desirable).

While both investigative groups provide important new evidence suggesting that patient preferences of post-operative adverse outcomes such as nausea and pain can be measured and should be factored into their care, they focused on only a select few post-operative outcomes chosen by the investigators and not patients themselves. No study in anesthesia has asked patients to prioritize what they most prefer in their care from a list of processes and outcomes that were also chosen first by patients themselves.

In this study, we asked patients and anesthesiologists to rank a list of elements of anesthesia care drawn

from a comprehensive bank of items that were culled directly from detailed interviews with surgical outpatients. All items ranked were known to have been features or aspects of the anesthesia experience that were associated with positive or negative connotations in patients' accounts of their anesthesia experience. We administered a simple nominal ranking questionnaire comprised of 36 items representing all four temporal phases of anesthesia care to 30 surgical outpatients and an expert panel of 15 anesthesiologists. Although our sample size of patients and anesthesiologist sample was small, the results of nominal rankings of these items offer a number of preliminary insights into what patients value most in each temporal phase of their anesthesia care and the ability of anesthesiologists to predict it.

We found that, in agreement with numerous studies in peri-operative and medical care^{1,8-13} patients undergoing anesthesia care value highly those elements of care that pertain directly to communication and information. In pre-operative care, patients placed the most weight on whether their concerns were identified and addressed. In the operative phase of care, patients prefer being spoken and attended to; and in both post-operative phases of care, they valued most being adequately provided with information about complications of surgery and anesthesia (if any) and post-discharge care. In all phases of anesthesia care conducted in hospital, patients placed the least weight on the physical environment of their care.

Anesthesiologists were unable to predict the priority that patients placed on different aspects of their pre-operative and intra-operative care primarily because they underestimated the value placed on information and communication by patients. In pre-operative care, patients and anesthesiologists both agreed on the importance of identifying and responding to concerns and questions. Patients, however, preferred greater interaction with the anesthesiologist (discussion of possible minor side effects and involvement in decisions about the anesthesia care itself) over the smooth and efficient pre-operative course that anesthesiologists predicted patients would value more. In intra-operative care, anesthesiologists were unable to anticipate the greater value to the patient of "the anesthesiologists or nurse talk(ing) to me as they ready me for the anesthetic" (patients rank 1; anesthesiologists rank 6) over "going to sleep quickly and smoothly" (patients rank 5; anesthesiologists rank 1). It is noteworthy that, in both phases of care, anesthesiologists over-estimated the value that patients placed on care that was smooth and trouble free.

Anesthesiologists demonstrated an excellent ability to predict the rank order of the items in the pre-dis-

charge and post-discharge phases of care. The fact that both patients and anesthesiologists agree on the importance of minimizing and explaining outcomes or consequences of their care (relief of pain, prevention of nausea, smooth trouble-free discharge) supports the ongoing emphasis of outpatient anesthesia research on minimizing the frequency and severity of post-operative adverse events.¹⁴ Interestingly, however, the preparation, explanation and support given to post-operative outcomes appears as vital to patients as their frequency and severity.

Myles *et al.*¹⁵ reported similar findings when they examined in detail what patients valued in their post-anesthetic care during the psychometric development of a nine item post-anesthetic "quality of recovery" questionnaire. To guide item construction, these investigators asked patients, their relatives, doctors and nurses to rate in terms of importance a list of 61 potential items (developed by the investigators from a review of the literature). Doctors tended to underestimate the importance of all items to patients. For patients, virtually all items (57/61) had median scores of important or very important compared with less than half (30/61) for doctors. However, doctors and patients agreed on the three highest rated items (able to breathe easily, no severe pain, and able to understand). As in our study, post-operative aspects of care that scored highest in importance to patients were those pertaining to communication and support as well as the minimizing of adverse events such as pain and nausea.

The variability exhibited by the raw scores of nominal rankings indicates that the rank order must be interpreted with caution. The differences in the scores of topmost items were small and, in all temporal phases of care, actual topmost rank hinged on the response of a single patient. Furthermore, five of the nine items in any temporal phase were considered to be the most important by at least one patient and eight of nine were ranked in the top three by at least one patient. Eliminating even the lower ranked items in any specific temporal phase may discard items that represent issues of considerable importance to a significant number of patients. Therefore, using the ranked order of items does not allow us to decide which of the top ranked items are most reflective of quality or patient satisfaction with their anesthesia care. The relative priority of all items may be best confirmed through the use of psychometric techniques during pilot testing of a multi-item questionnaire.²

This study contains other important limitations. We surveyed a small convenience sample of Canadian outpatients from a community hospital and a tertiary care institution and compared it to the consensus opinion

of a more diverse international panel of expert anesthesiologists. Further investigations will be necessary to determine whether similar rankings would be found in larger or different groups of patients or how patient rankings to a set of items would compare with the rankings made by their own anesthesiologists.

In conclusion, nominal rankings of items representing each of four temporal phases of anesthesia care suggest that patients value a number of elements of care in all four phases (rather than only one or two) and they tend to rank highest those elements representing information and communication. Physical conditions of care tend to be least valued. Anesthesiologists were better able to predict what patients valued in the post-operative phases of their care but undervalued the importance to patients of communication and information in pre-operative and intra-operative phases of care. While this small study cannot provide definitive answers, it suggests where improvements can be made that will lead to high quality of anesthesia care from the perspective of patients.

Acknowledgements

The authors wish to acknowledge the participation of the members of the Delphi panel:

Dr. D. Bevan, Dr. M. Bogetz, Dr. F. Chung, Dr. D. Craig, Dr. A. Davies, Dr. J. Davies, Dr. P. Duncan, Dr. C. Eagle, Dr. F. King, Dr., J. Lunn, Dr. F. Orkin, Dr. D.K. Rose, Dr. M. Sullivan, Dr. R. Twersky, and Dr. D. Yee.

References

- 1 Allshouse KD. Treating patients as individuals. In: Gerteis M, Edgman-Levitan S, Daley J, Debanco T (Eds.). *Through the Patient's Eyes*, 2nd ed. San Francisco: Jossey-Bass Publishers, 1993: 19-43.
- 2 Fung D, Cohen MM. Measuring patient satisfaction with anesthesia care: a review of current methodology. *Anesth Analg* 1998; 87: 1089-98.
- 3 Ware JE, Snyder MK, Wright WR, Davies AR. Defining and measuring patient satisfaction with medical care. *Evaluation and Program Planning* 1983; 6: 247-63.
- 4 Meterko M, Rubin H, Ware J, Hays R, Berwick D. Patient judgements of hospital quality questionnaire. *Medical Care* 1990; 28: S1-44.
- 5 Fink A, Koseoff J, Chassin M, Brook RH. Consensus methods: characteristics and guidelines for use. *Am J Public Health* 1984; 74: 979-83.
- 6 Lehmann HP, Fleisher LA, Lam J, Frink BA, Bass EB. Patient preferences for early discharge after laparoscopic cholecystectomy. *Anesth Analg* 1999; 88: 1280-5.
- 7 Macario A, Weinger M, Carney S, Kim A. Which clinical anesthesia outcomes are important to avoid? The perspective of patients. *Anesth Analg* 1999; 89: 652-8.

- 8 *Whitty PM, Shaw IH, Goodwin DR.* Patient satisfaction with general anaesthesia. Too difficult to measure? *Anaesthesia* 1996; 51: 327–32.
- 9 *Wisniak UV, Kröllli W, List W.* Communication during the pre-operative visit. *Eur J Anaesthesiol* 1991; 8: 65–8.
- 10 *Avis M.* Choice cuts: an exploratory study of patients' views about participation in decision-making in a day surgery unit. *Int J Nurs Stud* 1994; 31: 289–98.
- 11 *Meredith P.* Patient satisfaction with communication in general surgery: problems of measurement and improvement. *Soc Sci Med* 1993; 5: 591–602.
- 12 *Greenhow D, Howitt AJ, Kinnersley P.* Patient satisfaction with referral to hospital: relationship to expectations, involvement, information-giving in the consultation. *Br J Gen Pract* 1998; 48: 911–2.
- 13 *Sixma HJ, Spreeuwenberg PMM, van der Pasch MMA.* Patient satisfaction with the general practitioner. A two-level analysis. *Medical Care* 1998; 36: 212–29.
- 14 *Marshall SI, Chung F.* Discharge criteria and complications after ambulatory surgery. *Anesth Analg* 1999; 88: 508–17.
- 15 *Myles PS, Hunt JO, Nightingale CE, et al.* Development and psychometric testing of a quality of recovery score after general anesthesia and surgery in adults. *Anesth Analg* 1999; 88: 83–90.