Hospital Topics

Practice of preoperative assessment by anaesthetists

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Abstract

The practice of preoperative assessment in 24 departments of anaesthesia in Great Britain and Ireland was surveyed. Most departments had no rigid policies governing assessment, and many served several hospitals. There was little evidence that admission procedures of patients scheduled for surgery or the organisation of operating lists took account of the problems encountered by anaesthetists undertaking preoperative assessment.

From the participating departments 415 anaesthetists completed a questionnaire of their individual practice. Most (57%) visited at least 80% of their patients preoperatively, but 22% saw less than 50% of patients. The detection of potential anaesthetic problems and the establishment of rapport with patients were highly rated reasons for conducting such visits. Failure to visit was often related to organisational defects within the hospital service, and anaesthetists saw little prospect of improving these defects. The demands created by the needs of preoperative assessment on the one hand, and the need for a rapid turnover of surgical patients and financial stringency on the other, conflict, and this conflict is not easily reconciled.

Introduction

In 1978 the Association of Anaesthetists of Great Britain and Ireland received a grant from the Nuffield Provincial Hospitals Trust, which funded an inquiry into the mortality associated with anaesthesia.¹ Of the patients in that study, 8.8% did not receive a preoperative examination, suggesting that throughout the United Kingdom 300 000 patients were anaesthetised each year without previously meeting their anaesthetist. This attracted considerable publicity.²⁻⁴ At least one book has been published discussing the preparation for anaesthesia,⁵ but few reports describe actual practice. Our study investigated the practice of preoperative assessment by anaesthetists in Great Britain and Ireland.

Method

The study was started in late 1983 and completed during 1984. Members

of the Anaesthetic Travelling Society and three other consultants known personally to us acted as local correspondents. Together they represented 24 departments of anaesthesia throughout Great Britain and Ireland and provided details of personnel, workload, and departmental policies that regulated preoperative assessment. They gave to each anaesthetist in their department a questionnaire about the individual's practice of preoperative assessment of inpatients undergoing elective surgery. This assessment excluded interviews in the theatre immediately before operation. Each anaesthetist was asked for details of health service grade and contract, to indicate in order of frequency of use the methods by which he first gained knowledge of the clinical details of his patients, and to estimate how many of them he visited preoperatively for lists for which he was responsible. A visual analogue scale was used to evaluate suggested reasons for preoperative visiting, those factors which influenced decisions to dispense with such visits, and the improvements in organisation that might facilitate preoperative assessment.

Data were entered to a Sirius-I microcomputer with a 10 megabyte hard disc running database II software. χ^2 tests were used to test for significance.

Results

DEPARTMENTAL SURVEY

Tables I-III show the results of the departmental survey. The participating departments served 14 district general hospitals or groups of hospitals and eight undergraduate and two postgraduate teaching hospitals. Most departments served more than one hospital and four served more than 10. Four served hospitals separated by more than 10 miles, and for three of these the distance was more than 20 miles. During 1982, the last year for which reliable statistics were available, in these departments

TABLE I—Details of anaesthetic departments surveyed

Departmental statistics	
No of departments	24
Patients anaesthetised (all departments)*	410 000
Anaesthetists, total (all departments)	679
Anaesthetists, whole time equivalent (all departments)	602
Departmental policies for POA	
Structured methods:	
Preoperative questionnaires	4
Outpatient clinics	4
Unstructured methods:	
Discretionary (no general policy)	10
Duty anaesthetist visits patients	8
Any anaesthetist for list visits patient	7
House surgeon telephones anaesthetist	7
Senior anaesthetist for list visits patient	2
Junior anaesthetist for list visits patient	1
House surgeon writes details	1
Anaesthetist visits at request only	1

*Includes local anaesthesia and pain clinic consultations.
POA = preoperative assessment.

TABLE II—Number of geographically separated institutions served by departments of anaesthesia

No of institutions served:	1	2	3	4	5	6	11	12
No of departments:	4	2	5	3	2	4	1	3

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410 000 anaesthetics were given by 679 anaesthetists. Preoperative questionnaires and outpatient clinics were rarely used.

Most correspondents stated that their departments accepted more than one method of preoperative assessment. The four most popular were a discretionary approach (that is, no general policy), a visit from the duty anaesthetist, a visit from any anaesthetist allotted to the list, and the house surgeon telephoning the anaesthetist with a clinical summary. Three of these methods did not guarantee preoperative assessment by an anaesthetist who would be present at the patient's operation. For morning lists in most hospitals patients were not generally identified and available to the anaesthetist for preoperative assessment until after normal working hours (table III). For afternoon lists (four hospitals) patients were generally unavailable until the morning of the list. Only three correspondents were satisfied with the overall practice of preoperative assessment in their department, 12 had reservations, and six were dissatisfied. Dissatisfaction was generally with communications between surgeon and anaesthetist.

TABLE III—Usual availability of patients for preoperative assessment. Figures are numbers of correspondents

	Morning/all day list	Afternoon list
Morning before list	2	2
Afternoon before list	8	15
Night before list	14	12
Morning of day of list	0	4
Not stated	0	1

TABLE IV—Details and practices of individual anaesthetists. Figures are numbers of correspondents unless stated otherwise

	Consultants	Senior registrars	Registrars	Senior house officers	Clinical assistants	Not stated	Total
No replying	173	54	84	75	23	6	415
% Of all anaesthetists in Great Britain and Ireland	7.3	11.4	8.0	6.5	3.6	—	7.2
POA interpreted as contractual obligation:							
Yes	115	23	29	21	5	2	195
No	44	26	33	30	17	1	151
Unknown	8	3	15	16	1	1	44
Not stated	6	2	7	8	0	2	25
Proportion of patients receiving POA:							
>80%	79	41	46	56	18	3	243
50-80%	28	6	25	7	1	0	67
20-50%	29	4	9	4	0	0	46
<20%	32	3	4	3	4	1	47
Not stated	5	0	0	5	0	2	12

POA = preoperative assessment.

TABLE V—Methods by which individual anaesthetists gained details of patients. Figures are numbers of correspondents

Method	Order of frequency of use		
	1st	2nd	3rd
Read notes/examine in ward	230	73	17
Telephone call from house surgeon	122	151	44
Read notes/examine in theatre	33	54	72
Typed list	17	4	1
Ward round with house surgeon	2	6	26
Conduct search for patient	2	1	0
Discuss with consultant surgeon	0	5	6
Others	9	6	5
Not stated	0	115	244

INDIVIDUAL QUESTIONNAIRES

Of 679 questionnaires distributed, 415 (61%) were returned, representing 7.2% of all anaesthetists in Great Britain and Ireland (table IV). Of these, 195 (48%) regarded visits for preoperative assessment as a contractual obligation and 151 (36%) did not. Consultants usually interpreted visiting as an obligation whereas clinical assistants did not, but many doctors stated that their contracts (up to 30 years old) bore little relation to current duties. Table IV also shows the anaesthetists' estimates of the number of patients they visited preoperatively arranged in four categories. Two hundred and forty three (57%) visited more than 80% of their patients, 310 (72%) visited more than half, but 93 (22%) visited less than half. If visiting 50% or more patients is chosen as a standard consultants saw fewer patients than other grades ($0.001 < p < 0.01$). There was no evidence to suggest that the type of hospital, its geographical location (in or outside London), or the number of hospitals served by the departments influenced the rate of conducting preoperative assessment.

Table V shows how clinical details of patients were gained by anaesthetists. The most common method, identified by 230 (46%), was by reading the notes or examining patients in the ward, but 122 (24%) correspondents gave telephone consultation with the house surgeon as their usual method. Thirty three correspondents read the notes or examined the patient in theatre, which presumably meant that no other visit or discussion took place. There was little evidence of communication with surgeons at senior level.

Tables VI-VIII show data that are related to matters of judgment rather than factual report. The mean visual analogue score is shown for each factor

TABLE VI—Value of aspects of preoperative assessment

Aspect	Visual analogue score*	
	Mean	Coefficient of variation (%)
Detect potential anaesthetic problems	8.8	18
Establish rapport with patient	7.9	24
Allay parent's anxiety	7.4	31
Plan anaesthesia	7.2	35
Prescribe premedication	7.1	34
Explain anaesthesia	6.9	36
Review or order investigations	6.4	41
Detect missed pathology	6.0	46
Job satisfaction	5.7	52
Medicolegal considerations	4.6	68
Explain surgery	3.4	76

*10 = utmost importance, 0 = irrelevant.

on which judgment was requested. The score of individual anaesthetists varied about these means, and the standard deviations showed a slight but distinct tendency to increase as the scores decreased. A similar standard deviation around a high score implies, however, a greater degree of agreement than the numerically similar, but proportionally greater, standard deviation about a low score. We expressed this by giving the coefficients of variation (the standard deviation as a percentage of the mean). Table VI shows the value of preoperative assessment, a score of 10 representing "utmost importance," one of 0 "irrelevance." The most highly rated aspects were the detection of anaesthetic problems and the establishment of rapport with the patient. Job satisfaction and medicolegal considerations were among reasons that received low scores. Table VII shows the reasons that influenced a decision not to make a preoperative visit. Insufficient time within clinical duties, late notification of operating schedule, and the fact that another anaesthetist had seen the patient were the only reasons of importance. There was no difference between reasons advanced by consultants and other grades that explained why consultants

TABLE VII—Reasons for not making preoperative assessment

Reason	Visual analogue score*	
	Mean	Coefficient of variation (%)
Insufficient time with clinical duties	6.7	51
Late notification of lists	6.6	49
Seen by another anaesthetist	6.4	52
Other professional duties	4.4	85
Last minute changes in list	4.1	87
Travelling involved	3.8	92
Practicability of assessment by surgeons	3.8	78
Practicability of assessment in theatre suite	3.6	83
General attitude to the value of the visit	3.4	98
Intrusion into leisure time	3.0	99

*10 = utmost importance, 0 = irrelevant.

visited fewer patients. Table VIII shows how preoperative assessment might be made easier. Earlier notification of lists and availability of relevant investigations and more cooperation from surgeons were scored relatively highly, but other suggested changes of organisation were not.

TABLE VIII—Value of suggested methods of facilitating preoperative assessment

Method	Visual analogue score*	
	Mean	Coefficient of variation (%)
Earlier notice of surgical list	7.3	38
Earlier availability of clinical investigations	6.7	41
More cooperation from surgeons	6.4	44
Outpatient assessment clinic	5.9	49
Questionnaire completed by patient's parent	5.1	60
Questionnaire completed by patient	4.9	62
Longer admission to surgery interval	4.9	62
More anaesthetic staff	4.7	70
Decreased surgical workload	4.3	74
More cooperation from nurses	3.5	85

*10=utmost help, 0=no help at all.

Additional comments included criticism of the design of the study (12), adverse comments on the use of the visual analogue score (12), and the view that the value of preoperative assessment is overrated (8). Five anaesthetists suggested that deficiencies in preoperative assessment exemplified poor standards in the health service.

Discussion

The selection of departments in this study was not random, but from them 7.2% of all anaesthetists in Great Britain and Ireland participated, representing a return rate of individual questionnaires of 61%, which is similar to that achieved by Lunn and Mushin, to whose study this is a response in clinical review.¹ Because the design of the study made no provision for pressing individuals for replies we regarded this return rate as acceptable.

The geographical separation of hospitals served by some departments was remarkable. Serving up to 12 hospitals or hospitals far apart must make journeys costly in time, energy, and money, though this had no discernible adverse effect on the undertaking of preoperative assessment. Little support for outpatient assessment clinics or preoperative questionnaires was expressed by correspondents, who said that neither method ensured that the patient and the anaesthetist would meet and that both methods were only maintained by "enthusiasts." But policies that did regulate preoperative assessment did not guarantee such a meeting, as shown by the popularity of visits conducted by the duty anaesthetist and the use of a discretionary approach. The time at which the patient is available for preoperative assessment is invariably close to the time of the operation, usually after normal working hours, and sometimes so late that the assessment could be achieved only by omitting other duties. Other service departments in hospitals simply would not tolerate such conditions. It is hardly surprising that only three out of 24 departmental correspondents were satisfied with the overall situation.

This study confirms the conclusion of Lunn and Mushin of "insufficient consultation between surgeon and anaesthetist."⁶ The unaided perusal of notes or examination of patients in the ward or in the theatre must be a time consuming and inefficient method of gaining knowledge, much of which is already known to the surgical team. Because discussion with senior surgeons is exceptional the practice of the house surgeon telephoning the anaesthetist should perhaps remain as part of an integrated approach to preoperative assessment.

That only 48% of anaesthetists regarded formal preoperative assessment as a contractual obligation is surprising; most consultants took the view that it was, but trainees were less likely so to interpret their contracts, and only 22% of clinical assistants felt similarly. Despite this most anaesthetists did conduct formal preoperative assessment; most doctors saw more than 80% of their patients.

Views of the value of aspects of preoperative assessment show a pragmatic approach, with greater scores allocated to the functional aspects of anaesthesia and communication with patients than to concepts such as job satisfaction and medicolegal considerations. When anaesthetists did not make a visit for preoperative assessment organisational problems within the hospital rather than factors describing anaesthetists' attitudes to the value of visiting predominantly influenced this decision.

There have been public expressions in the press of disquiet regarding the lack of preoperative assessment; patients may understandably prefer to meet their anaesthetist, though this study did not seek to explore this. Besides the press, society as a whole expresses its will through the courts. The defence organisations have settled claims on behalf of surgeons when failure to conduct preoperative assessment has been implicated,⁷ and the same logic could be applied to anaesthetists. There is, however, an obvious conflict between the desire for a rapid turnover of cases, with a short interval between admission and surgery, and the desire for effective preoperative assessment. Patients not previously seen can be assessed in the theatre suite, imperfect though this may be, but if the solution sought is that every patient should be visited preoperatively by an anaesthetist this may be costly and pose organisational problems. If the solution sought is that every patient should be seen by his own anaesthetist this will cause considerable difficulties; the need will have to be demonstrated very clearly and changes made in hospital routine. Patients will have to be admitted to hospital earlier, operating lists definitively published at longer intervals before their scheduled time, and communication between anaesthetists and surgeons improved. This survey suggests that anaesthetists are not optimistic about the possibility of allocating more resources to achieve such changes, no matter how commendable they may be. We consider that anaesthetists have judged the situation well, and we do not consider that any solution that costs more is justified, particularly in a climate that demands ever increasing value for money in the health service. We cannot have the best of both worlds. Limited resources mean limited services, and, although we hold differing views about preoperative assessment, we are united in the view that society as well as the profession must decide what solutions, if any, should be imposed.

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