

NATIONAL CONFIDENTIAL ENQUIRY INTO PERIOPERATIVE DEATHS

DATA SUPPLEMENT TO THE 2001 REPORT *CHANGING THE WAY WE OPERATE*

(1 April 1999 to 31 March 2000)

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Please read this supplement in conjunction with the full report

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NATIONAL **CEPOD**

This data supplement should be read in conjunction with the 2001 NCEPOD Report, “Changing the way we operate”*.

The question numbers in the supplement correspond to those in the anaesthetic or surgical questionnaire from which the data was derived; copies of the questionnaires are attached.

Where a question is omitted from the supplement it is because the data was not statistically analysed; in most instances these were free text questions which were reviewed by the Advisors but could not be analysed on our database.

Further information is available from the Chief Executive

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* Callum K G, Gray A J G, Hargraves C M K, Hoile R W, Ingram G S, Martin I C, Sherry K M. Changing the way we operate: The 2001 Report of the National Confidential Enquiry into Perioperative Deaths. London 2001.

DATA FROM 1999/2000 ANAESTHETIC QUESTIONNAIRES

1. If you were not involved in any way with this anaesthetic and have filled out this questionnaire on behalf of someone else, please indicate your position:

Chairman of Division	39	
College tutor	65	
Duty Consultant	282	
Other Consultant	121	
Other	0	
Trainee	14	(Not in AQ added by CH)
Not answered	946	
Total	1467	

2a. Which special care areas exist in the hospital in which the operation took place? 1467 cases, answers may be multiple

Recovery area or room equipped and staffed for this purpose	1413
High Dependency Unit	986
Intensive Care Unit	1421
Coronary Care Unit	1255
Other	0
None of the above	3
Not answered	12

2b. Is the recovery area available and staffed 24hours a day, 7 days a week?

Yes	1142
No	313
Not answered	12
Total	1467

3. Does the hospital have scheduled daytime "emergency" lists most of the time?

Yes	1143
No	317
Not known	1
Not answered	6
Total	1467

If yes, who provides the anaesthetic cover for these lists most of the time?

Consultant	605
Other grades	410
Consultant and other grades equally	93
Non-consultant and other grades equally	21
Not known	1
Not answered	13
Total	1143

4. Does the hospital have daytime “emergency” lists for urgent trauma or orthopaedic cases?

Yes	1280
No	173
Not answered	14
Total	1467

If yes, who provides the anaesthetic cover for these lists most of the time?

Consultant	819
Other grades	320
Consultant and other grades equally	112
Non-consultant and other grades equally	17
Not known	1
Not answered	11
Total	1280

5. Age of patient (years) at time of final operation:

0 to 9	16
10 to 19	8
20 to 29	15
30 to 39	19
40 to 49	47
50 to 59	84
60 to 69	255
70 to 79	513
80 to 89	399
90 to 99	108
100+	3
Total	1467

6. Day of admission: 21 cases did not answer

Monday	254
Tuesday	245
Wednesday	224
Thursday	197
Friday	215
Saturday	153
Sunday	158
Not answered	21
Total	1467

Number of days from admission to operation:

Same day	260
Next day	368
2 days	155
3 days	108
4 days	53
5 days to 9 days	179
10 days to 19 days	170
20 days to 29 days	66
30 days to more	87
Not answered	21
Total	1467

7. Were there any co-existing medical symptoms, signs or diagnoses at the time of the final operation? 1467 cases, answers may be multiple

None	55
Not known	1
Not answered	13

Respiratory

COPD	276
Asthma	104
Chest infection	175
Shortness of breath	365
Hypoxia	178
Crepitations	191
Pleural effusion	74
Other respiratory: 204 cases	
Preoperative ventilation	50
Carcinoma of the lung	30
Mechanical impediments to spontaneous ventilation e.g. chest wall deformities or distended abdomen	23
Smoker or ex-smoker	20
Previous or recent pulmonary embolus	15
Pulmonary fibrosis	11
Pulmonary aspiration	6
Stridor or carcinoma of the larynx	6
Previous lung surgery	4

Cardiac

Previous MI/Ischaemic heart disease	876
Angina	258
Pacemaker	36
Bundle branch block	93
Atrial fibrillation	246
Multiple ectopics	55
CCF	274
Vulvular heart disease	107
Pulmonary o edema	66
Hypertension	432
Peripheral vascular disease	219
Other cardiac: <i>162 cases</i>	
Hypotension or inotropic support	51
Supraventricular tachycardia	20

Neurological

Dementia	114
Confusion	202
CVA	152
Transient ischaem ic attacks	61
Parkinson's disease	15
Blindness	34
Deafness	54
Other neurological: <i>178 cases</i>	
Epilepsy	37
Trauma, intracranial bleed or space occupying lesion	33
Psychosis or neurosis	24
Peripheral or spinal nerve damage	22
Sedation	17
Learning difficulties	6

Endocrine

Diabetes	176
Hypothyroidism	77
Other endocrine	49

Sepsis	261
Alimentary	333
Renal	228
Hepatic	72
Musculoskeletal	144
Haematological	146
Other	216

8. ASA status:

ASA 1	17
ASA 2	217
ASA 3	523
ASA 4	516
ASA 5	182
Not answered	12
Total	1467

9. Was a record of the patient's weight available?

Yes	579
No	863
Not known	4
Not answered	21
Total	1467

10. Was a record of the patient's preoperative blood pressure available?

Yes	1412
No	34
Not known	1
Not answered	20
Total	1467

12. Was it necessary to delay the anaesthetic to improve the patient's state before operation?

Yes	329
No	1128
Not known	1
Not answered	9
Total	1467

If yes, please indicate which system(s) needed attention 329 cases answers may be multiple

Cardiac	167
Respiratory	90
Metabolic	126
Haematological	82
Other: 27 cases	
Delayed for improvement of renal function	13
Not answered	11

13. Was surgery delayed for other reasons?

Yes	187
No	1167
Not known	4
Not answered	109
Total	1467

14. Which of the following investigations were done before the anaesthetic?(Including tests carried out in a referral hospital and for which the results were available before the final operation)

None		12
Haemoglobin		1437
White cell count		1403
Platelets		1386
Coagulation screen		751
Plasma electrolytes	Na	1422
	K	1414
	Cl	368
	HCO ₃	540
Blood urea		1364
Creatinine		1360
Serum albumin		842
Glucose		780
Amylase		261
Blood gas analysis	Inspired oxygen	341
	PH	372
	PCO ₂	370
	PO ₂	374
Chest X-ray		1015
ECG		1290
Respiratory function tests		109
Special cardiac investigations (e.g. echocardiography)		181
CAT scan/ultrasound/MRI/NMR		293
Others relevant to anaesthesia		0
Not known		2
Not answered		2

15. Day of operation:

Monday	232
Tuesday	232
Wednesday	271
Thursday	233
Friday	238
Saturday	142
Sunday	119
Total	1467

16. Classification of the final operation:

Emergency	242
Urgent	753
Scheduled	351
Elective	110
Not answered	11
Total	1467

19. Did an anaesthetist visit the patient before the final operation?

Yes	1409
No	46
Not known	9
Not answered	3
Total	1467

If yes, where?

Ward	1132
Outpatient department	6
Accident and Emergency department	62
ICU/HDU	204
Other	0
Not known	2
Not answered	3
Total	1409

20. Which anaesthetist were in theatre at the start of the anaesthetic? 1467 cases, answers may be multiple

Consultant	860	
Associate specialist	43	
Staff grade	151	
SpR – Post-CCST	76	
SpR – 3/4/5	307	
SpR – 1/2	201	
SHO – >2 years	184	
SHO – 2	206	
SHO – 1	262	
Other (trainee)	0	
Overseas trainee	2	(Not in AQ added by CH)
Other (non -trainee)	14	
Clinical Assistant	13	
SpR (year not stated)	1	

21. Was the most senior anaesthetist a locum appointment?

Yes	63
No	1373
Not answered	31
Total	1467

25. Which higher diploma(s) in anaesthesia were held at the time of the operation?

None	92
Fellowship (Royal College, College of Faculty)	1097
DA (or “old” Part 1 FRCA)	259
“Old” part 2 FRCA (physiology/pharmacology)	112
“New” Part 1 FRCA	87
Other	122
Not known	5
Not answered	46

26. If the most senior anaesthetist at the start of the anaesthetic was not a consultant, where was consultant help available?

A consultant came to the theatre before the end of the anaesthetic	40
A consultant was available in the operating suite but not directly involved	210
A consultant was available in the hospital, but was not present in the operating suite	107
A consultant was available by telephone	234
Other	0
Not known	3
Not answered	13
Total	607

27. Was advice sought, at any time, from another anaesthetist who was not present during the anaesthetic?

Yes	268
No	1036
Not known	29
Not answered	134
Total	1467

If yes, from which grade of anaesthetist was the advice sought?

Consultant	216
Associate specialist	1
Clinical assistant	0
SpR – Post-CCST	2
SpR – 3/4/5	10
SpR – 1/2	2
SHO – >2	0
SHO – 2	0
SHO – 1	0
Staff grade	5
SpR – year not stated	16
Not known	1
Not answered	15
Total	268

When was this advice sought? 268 cases, answers may be multiple

Before the anaesthetic	209
During the anaesthetic	55
After the anaesthetic	40
Not known	1

31. Is there a preoperative assessment and anaesthetic record for this operation in the patient's notes

Yes	1396
No	53
Not known	1
Not answered	17
Total	1467

32. Did the patient receive intravenous fluids during the operation?

Yes	1399
No	52
Not known	6
Not answered	10
Total	1467

If yes, please indicate which: *1399 cases, answers may be multiple*

Crystalloid

Dextrose 5%	31
Dextrose 4% saline 0.18%	58
Dextrose 10%	10
Saline 0.9%	499
Hartmann's (compound sodium lactate)	891
NaHCO ₃	32
Other: <i>30 cases</i>	
Prime for cardiopulmonary bypass	13
Insulin or glu cose insulin dextrose infusions	4
Total parenteral nutrition	4

Colloid (and others)

Modified gelatin (Gelofusine, Haemaccel)	708
Human albumin solution	14
Starch (HES)	178
Dextran	3
Mannitol	51
Other	2

Blood

Red cells	421
Platelets	89
Fresh frozen plasma	164
Other component: <i>33 cases</i>	
Cryoprecipitate	18
Autologous or salvaged blood	16

34. What monitoring devices were used during the management of this anaesthetic? 1467 cases, answers may be multiple

None	1
ECG	1442
Pulse oximeter	1457
Indirect BP	1176
Expired CO2 analyser	1314
O2 analyser	1315
Inspired anaesthetic vapour analyser	1191
Airway pressure gauge	1192
Ventilation volume	1093
Ventilation disconnect device	1142
Peripheral nerve stimulator	288
Temperature	445
Urine output	781
CVP	642
Direct arterial BP (invasive)	618
Pulmonary arterial pressure	66
Cardiac output	55
Other: 20 cases	
Transoesophageal echocardiography	9
Left atrial pressure	6
Oesophageal doppler	2
Gastrotonometry	1
Mixed venous oxygen saturation	1
Oesophageal stethoscope	1
Intramuscular carbon dioxide	1
Not known	2
Not answered	6

35. Was there a lack of monitoring equipment?

Yes	13
No	1409
Not known	1
Not answered	44
Total	1467

36. What measures were taken to maintain body temperature? 1467 cases, answers may be multiple

None	299
IV fluid warmer	665
Heated mattress	539
Warm air system	597
Other: 74 cases	
Specialised or non specialised topical covering	70
Increasing ambient temperature	6
Not known	37
Not answered	59

37. What type of anaesthesia was used?

General alone	914
Local infiltration	7
Regional alone	74
General and regional	301
General and local infiltration	75
Sedation alone	4
Sedation and local infiltration	5
Sedation and regional	81
Not known	1
Not answered	5
Total	1467

GENERAL ANAESTHESIA (total number of case = 1290)

38. How was the airway established during anaesthesia? 1290 cases, answers may be multiple

Face mask (with or without oral airway)	14
Laryngeal mask	173
Tracheal intubation	984
Double lumen tube	22
Tracheostomy	15
Patient already intubated before arrival in the theatre suite	109
Other	3
Not answered	1

39. Was the patient ventilated mechanically during anaesthesia?

Yes	1113
No	141
Not answered	36
Total	1290

REGIONAL ANAESTHESIA (total number cases = 456)

40. If the anaesthetic included a regional technique, which method was used? 456 cases, answers may be multiple

Epidural	- caudal	6
	- lumbar	88
	- thoracic	119
Intrapleural		2
Intravenous regional		0
Cranial peripheral nerve blocks		61
Plexus block		27
Subarachnoid (spinal)		160
Surface (e.g. for bronchoscopy)		5
Not answered		4

41. Which agent was used? 456 cases, answers may be multiple

Local anaesthetic	442
Narcotic analgesic	165
Other	2
Not known	2
Not answered	8

42. Where did this patient go on leaving the operating room?

Recovery area or room equipped and staffed for this purpose	860
High dependency unit	48
Intensive care unit	467
Coronary care unit	0
Specialised nursing area	1
Ward	18
Other	0
Died in theatre	72
Not answered	1
Total	1467

43. Were you unable at any time to transfer the patient into an ICU, HDU etc?

Yes	89
No	1210
Not known	12
Not answered	156
Total	1467

45. Where did the patient go next (i.e. after the recovery room)?

Ward	707	
High dependency unit	77	
Intensive care unit	37	
Coronary care unit	1	
Specialised nursing area	0	
Home	2	
Another	1	
Died in recovery area	23	
Other	0	
Theatre	1	(Not in AQ added by CH)
Not answered	11	
Total	860	

46. Was controlled ventilation used postoperatively?

Yes	498
No	863
Not answered	39
Died in theatre	67
Total	1467

If yes, why? 498 cases, answers may be multiple

Routine management	101
Respiratory inadequacy	190
Cardiac inadequacy	135
Control of intracranial pressure or other neurosurgical indications	41
Part of the management of pain	18
Poor general condition of patient	305
To allow recovery of body temperature	65
Other reasons	28
Not answered	1

47. Did any critical incident(s) occur during anaesthesia or in the recovery room?

Yes	346
No	1059
Not known	2
Not answered	60
Total	1467

If yes, please specify: 346 cases, answers may be multiple

Air embolus	0
Airway obstruction	3
Anaphylaxis	1
Arrhythmia	45
Bradycardia	19
Bronchospasm	11
Cardiac arrest (unintended)	53
Convulsions	0
Disconnection of breathing system	0
Hyperpyrexia (greater than 40 C or very rapid increase in temperature)	1
Hypertension (increase of more than 50% resting systolic)	18
Hypotension (decrease of more than 50% resting systolic)	163
Hypoxaemia less than 90%	65
Misplaced tracheal tube	2
Pneumothorax	1
Pulmonary aspiration	6
Pulmonary oedema	15
Respiratory arrest	9
Tachycardia (increase of more than 50% of resting)	35
Unintentional delayed recovery of consciousness	9
Ventilatory inadequacy	22
Excessive spread of regional anaesthesia (e.g. total spinal, overextensive epidural)	1
Wrong dose or overdose of drug	0
Other	37
Not answered	8

48. What were the complications or events after this operation? 1395 cases, answers may be multiple

Ventilatory problems (e.g. pneumonia, pulmonary oedema)	591
Cardiac problems (e.g. acute LVF, intractable arrhythmias, post cardiac arrest)	618
Hepatic failure	58
Septicaemia	314
Renal failure	389
Central venous system failure (e.g. failure to recover consciousness, CVA etc.)	189
Progress of surgical condition	232
Electrolyte imbalance	156
Haematological disorder/coagulopathy/excessive blood loss	197
Other	125
None	71
Not answered	156

50. Does the hospital in which the operation took place have an acute pain service?

Yes	1278
No	165
Not answered	24
Total	1467

If yes, who is on the pain team? 1278 cases, answers may be multiple

Anaesthetic consultant(s)	1117	
Anaesthetic trainee(s)	653	
Specialised pain nurse(s)	1144	
Pharmacist(s)	234	
Other	1	
Physiotherapist	17	(Not in AQ added by CH)
Not answered	22	

When is the service available?

24 hours a day, seven days a week	625
Limited times	610
Not known	1
Not answered	42
Total	1278

51a. How many ward nursing staff are specially trained in epidural analgesia?

None	187
Some	1094
All	87
Not known	8
Not answered	91
Total	1467

51b. How many ward nursing staff are specially trained in patient-controlled analgesia?

None	22
Some	987
All	363
Not known	8
Not answered	87
Total	1467

52. Did this patient have a ward pain assessment chart?

Yes	518
No	806
Not known	4
Not answered	139
Total	1467

53. Were drugs given in the first 48 hours after operation for pain? 1395 cases

Yes	1226
No	113
Not known	7
Not answered	49
Total	1395

If yes, which drug type? 1226 cases, answers may be multiple

Opiate / opioid	1125
Local analgesic	203
Non-steroidal analgesic	87
Paracetamol	245
Other	63
Not known	1
Not answered	2

Which method/route? 1226 cases, answers may be multiple

Intramuscular injection	311
Oral	324
Rectal	39
Continuous intravenous infusion	392
Continuous subcutaneous infusion	20
PCA (patient-controlled analgesia)	186
Continuous epidural	168
PCEA (patient-controlled epidural analgesia)	11
IV bolus	120
Other	32
Not answered	16

54. Were there any complications from postoperative analgesia?

Yes	69
No	1125
Not known	4
Not answered	28
Total	1226

55. Number of days between operation and death:

Same day	148
Next day	177
2	110
3	104
4	93
5	72
6	82
7	65
8	63
9	48
10	41
11-15	201
16-20	102
21-25	92
26-30	69
Total	1467

57. Place of death:

Theatre	73*
Recovery room	26
Intensive care unit	477
High dependency unit	59
Coronary care unit	8
Specialised nursing area	2
Ward	756
Home	19
Another hospital	23
Other	3
Not known	3
Not answered	18
Total	1467

* There is a difference in the figures between q57 (Place of death: "theatre") and q42 (Where did patient go on leaving operating room: "died in theatre") by 1 case. This is because in 1 case the patient went from Theatre -> Recovery -> Theatre where they died.

58. Do you have morbidity/mortality review meetings in your department?

Yes	1378
No	77
Not answered	12
Total	1467

If yes, will this case be, or has it been discussed at your departmental meeting? *1378 cases, answers may be multiple*

Yes	378
No	956
Not known	11
Not answered	33
Total	1378

59. Has a consultant anaesthetist seen and agreed this questionnaire?

Yes	792
No	37
Not applicable (completed by consultant)	594
Not answered	44
Total	1467

DATA FROM 1999/2000 SURGICAL QUESTIONNAIRES

1. In which type of hospital did the final operation take place?

District General (or equivalent)	1169
University Teaching	373
Limited Surgical Specialties	39
Community	2
Defence Secondary Care Agency	1
Independent	16
Not answered	6
Total	1606

2a. Which special care areas exist in the hospital in which the operation took place? 1606 cases, answers may be multiple

Recovery area or room equipped and staffed for this purpose	1564
High Dependency Unit	1111
Intensive Care Unit	1563
Coronary Care Unit	1322
Other	10

2b. Is the recovery area available and staffed 24 hours a day, 7 days a week?

Yes	1302
No	243
Not answered	18
Not known	1
Total	1564

2c. Is the HDU available and staffed 24 hours a day, 7 days a week?

Yes	1054
No	39
Not answered	18
Total	1111

2d. Is the ICU available and staffed 24 hours a day, 7 days a week?

Yes	1543
No	11
Not answered	9
Total	1563

3. Age of patient (years) at time of final operation:

0 to 9	19
10 to 19	9
20 to 29	15
30 to 39	19
40 to 49	48
50 to 59	98
60 to 69	273
70 to 79	544
80 to 89	452
90 to 99	126
100+	3
Total	1606

4. Day of final operation:

Monday	241
Tuesday	264
Wednesday	285
Thursday	252
Friday	274
Saturday	160
Sunday	130
Total	1606

5. Sex:

Male	831
Female	775
Total	1606

7. Day of admission:

Monday	280
Tuesday	285
Wednesday	249
Thursday	235
Friday	230
Saturday	156
Sunday	162
Not answered	9
Total	1606

Number of days from admission to operation:

Same day	302
Next day	391
2 days	169
3 days	101
4 days	73
5 days to 9 days	196
10 days to 19 days	196
20 days to 29 days	79
30 days or more	89
Not answered	9
Total	1605*

*In one case the patient had an OGD as an outpatient, was admitted four days later and died without further surgical intervention.

8a. Admission category:

Elective day case (a patient who is admitted for investigation or operation on a planned non -resident basis i.e. no overnight stay)	23
Other elective (at a time agreed between patient and surgical service)	318
Urgent (within 48 hours of referral/consultation)	152
Emergency (immediately following referral/consultation)	1105
Not answered	8
Total	1606

9a. What was the pathway for this admission?

Transfer as an inpatient from another hospital	213
Referral from a General Medical or Dental Practitioner	493
Self-referral by patient	30
Tertiary (own specialty)	24
Tertiary (other specialty)	59
Admission following a previous outpatient consultation	233
Planned re -admission/routine follow-up procedure	42
Unplanned re -admission following day case or outpatient procedure	19
Admission via A&E	477
Not answered	15
Not known	1
Total	1606

10a. Type of referring hospital:

District General (or equivalent)	132
University Teaching	31
Limited Surgical Specialties	7
Community	13
Defence Secondary Care Agency	1
Independent	11
Nursing Home	12
Not answered	6

Total 213

10b. Where was the referring hospital?

From same district/trust	85
From same region	96
From different region	25
From overseas	4
Not answered	3
Total	213

10d. Did the patient's condition deteriorate during transfer?

Yes	18
No	189
Not answered	6
Total	213

11a. Was the patient's transfer to another hospital ever considered?

Yes	38
No	1339
Not answered	226
Not known	3
Total	1606

12. Was the patient originally admitted to "your" hospital under the care of the surgeon whose team undertook the final operation?

Yes	1060
No	490
Not answered	56
Total	1606

17. Did any undesirable delays occur between the decision to operate and the actual date and time of surgery?

Yes	226
No	1336
Not answered	44
Total	1606

18. Had this patient's admission been cancelled by the surgical service on a previous occasion, for any reason other than a clinical one?

Yes	17
No	1535
Not answered	54
Total	1606

19. In your opinion did any of these delays affect the outcome?

Yes	47
No	174

Not answered	10
Not known	2
Total	233

20a. To what type of area was the patient first admitted in "your" hospital (i.e. in which the final operation took place)?

General surgical ward	537
Surgical specialty ward	532
Gynaecology/Obstetric ward	25
Medical ward	183
Elderly medicine ward	23
Admission ward	60
A&E ward	88
Day unit	14
HDU	21
ICU	81
Coronary care unit (CCU)	8
Direct to theatre	31
Not answered	2
Not known	1
Total	1606

20b. Was the initial place of admission the most appropriate for this patient?

Yes	1526
No	57
Not answered	23
Total	1606

21. What was the specialty of the Consultant Surgeon in charge at the time of the final operation?

General	324
Sub-specialised	471
Accident and Emergency	2
Cardiac/Thoracic/Cardiothoracic	80
Gynaecology	19
Neurosurgery	75
Ophthalmology	7
Oral & Maxillofacial	10
Orthopaedic	347
Otorhinolaryngology	20
Paediatric	9
Plastic	11
Transplantation	5
Urology	79
Vascular	146
Not answered	1
Total	1606

22. Was care undertaken on a formal shared basis?

Yes	502
No	1061
Not answered	43

Total **1606**

22a. If yes, please indicate other specialty(ies) involved: 502 cases, answers may be multiple

Care of the elderly	115
Paediatric	9
General medicine	95
Other surgical:	
General surgery	25
Vascular surgery	15
Orthopaedic	14
Urology	11
Gastrointestinal surgery	6
Gynaecology	5
Colorectal surgery	5
Cardiothoracic surgery	3
Plastic surgery	3
Neurosurgery	2
Other surgery	4
Other medical and allied professions:	
ICU Intensivist	82
Anaesthetics	51
Cardiology	40
Renal medicine	24
Oncology	21
Haematology	20
Respiratory medicine	16
Palliative care medicine	13
Endocrinology/Diabetology	7
Interventional Radiology	6
Hepatology	5
Psychiatry	4
Neurology	3
Rheumatology	3
Microbiology	3
Nutrition team	2
Other medical	5

23. What was the grade of the most senior surgeon consulted before this operation?

Consultant	1485
Associate Specialist	14
Staff Grade	9
Clinical Assistant/Hospital Practitioner	4
Specialist Registrar (SpR) with CCST	15
Sub-specialty Fellow	2
SpR year 4 or greater	30
SpR year 3	13
SpR year 2	8
SpR year 1	4
Visiting SpR	5
Locum Appointment Training	1
Locum Appointment Service	5
Premier Senior House Officer (SHO) (or SHO for >2 years)	2
SHO year 2	1
Pre-registration House Officer	1
Other	1
Nil consulted	3
Not answered	1
Not known	2
Total	1606

24b. What was the grade of the most senior surgeon making the working diagnosis?

Consultant	1372
Associate Specialist	13
Staff Grade	30
Clinical Assistant/Hospital Practitioner	2
Specialist Registrar (SpR) with CCST	8
Sub-specialty Fellow	1
SpR year 4 or greater	40
SpR year 3	9
SpR year 2	12
SpR year 1	7
Visiting SpR (or year not stated)	80
Locum Appointment Training	1
Locum Appointment Service	3
Premier Senior House Officer (SHO) (or SHO for >2 years)	3
SHO year 2	2
SHO (year not stated)	5
Other	1
Diagnosis by non -surgeon	6
Not answered	8
Not known	3
Total	1606

26a. What was the grade if the most senior surgeon taking consent of the patient?

Consultant	571
Associate Specialist	21
Staff Grade	48
Clinical Assistant/Hospital Practitioner	2
Specialist Registrar (SpR) with CCST	51
Sub-specialty Fellow	4
SpR year 4 or greater	129
SpR year 3	58
SpR year 2	51
SpR year 1	27
Visiting SpR (or year not stated)	88
Locum Appointment Training	5
Locum Appointment Service	4
Premier Senior House Officer (SHO) (or SHO for >2 years)	60
SHO year 2	71
SHO year 1	24
SHO (year not stated)	195
Pre-Registration House Officer	108
Other	1
Consent taken by non -surgeon	3
No consent taken	43
Not answered	31
Not known	11
Total	1606

26b. Was the surgeon who took consent present at the operation?

Yes	1049
No	457
No consent taken	43
Not answered	33
Not known	24
Total	1606

28. ASA status:

ASA 1	43
ASA 2	240
ASA 3	605
ASA 4	547
ASA 5	128
Not answered	36
Not known	7
Total	1606

29. Were there any coexisting problems (other than the main diagnosis) at the time of this operation?

Yes	1342
No	227
Not answered	34
Not known	3

Total **1606**
29a. If yes: 1342 cases, answers may be multiple

Malignancy	268
Respiratory	483
Cardiac	738
Renal	258
Haematological	142
Gastrointestinal	201
Vascular	186
Sepsis	169
Neurological	213
Diabetes	159
Other endocrine	63
Musculoskeletal	125
Psychiatric	123
Alcohol related	41
Drug addiction	5
Other	41

30. What precautions or therapeutic manoeuvres were undertaken preoperatively (excluding anaesthetic room management) to improve the patient's preoperative condition? 1606 cases, answers may be multiple

None	194
Cardiac support drugs or anti -arrhythmic agents	284
Gastric aspiration	415
Intravenous fluids	1076
Correction of hypovolaemia	598
CVP line	365
Urinary catheterisation	780
Blood transfusion	241
Diuretics	171
Anticoagulants	245
Antibiotics	587
Vitamin K	41
Bowel preparation	83
Chest physiotherapy	232
Oxygen therapy	548
Optimisation of respiratory function	213
Airway protection (e.g. unconscious patient)	116
Tracheal intubation	204
Mechanical ventilation	187
Stabilisation of fractured C -spine	11
Nutritional support	107
Diabetic control	106
Discussion with relevant counsellor (e.g. hospice/amputation/stoma)	63
Preoperative radiotherapy	17
Preoperative chemotherapy	4
Other	30

31. Do you think the patient's medication (excluding premedication) was relevant to the outcome?

Yes	142
No	1384
Not answered	80
Total	1606

33. What was the anticipated risk of death related to the proposed final operation?

Not expected	238
Small but significant risk	356
Definite risk	864
Expected	129
Not answered	19
Total	1606

37. Were there any unanticipated intraoperative problems?

Yes	257
No	1334
Not answered	14
Not known	1
Total	1606

38. Were there any delays (between admission and surgery) due to factors other than clinical?

Yes	100
No	1483
Not answered	23
Total	1606

39. Classification of operation:

Emergency	255
Urgent	794
Scheduled	406
Elective	136
Not answered	15
Total	1606

41. Most senior surgeon present in operating room:

Consultant	1016
Associate Specialist	44
Staff Grade	93
Clinical Assistant/Hospital Practitioner	7
Specialist Registrar (SpR) with CCST	41
Sub-specialty Fellow	14
SpR year 4 or greater	170
SpR year 3	72
SpR year 2	46
SpR year 1	30
Visiting SpR (or year not stated)	14
Locum Appointment Training	11
Locum Appointment Service	21*
Premier Senior House Officer (SHO) (or SHO for >2 years)	12
SHO year 2	6
SHO year 1	2
Other	1
Not answered	3
Not known	3
Total	1606

* Includes 4 Locum(Service) Consultants

Overall consultant involvement:

Operating	867
Present in theatre	153
Not in theatre, but immediately available	220
Consulted before operation	297
No consultant involvement	69
Total	1606

42. Most senior operating surgeon:

Consultant	863
Associate Specialist	47
Staff Grade	90
Clinical Assistant/Hospital Practitioner	8
Specialist Registrar (SpR) with CCST	54
Sub-specialty Fellow	18
SpR year 4 or greater	216
SpR year 3	90
SpR year 2	66
SpR year 1	41
Visiting SpR (or year not stated)	19
Locum Appointment Training	13
Locum Appointment Service	21*
Premier Senior House Officer (SHO) (or SHO for >2 years)	30
SHO year 2	14
SHO year 1	4
Pre-registration House Officer	2
Other	1
Not answered	6
Not known	3
Total	1606

* Includes 4 Locum (Service) Consultants

Most senior surgeon involved in any way (including pre-op consultation) where no consultant involvement was detailed:

Associate Specialist	9
Staff Grade	7
Clinical Assistant/Hospital Practitioner	1
Specialist Registrar (SpR) with CCST	9
Sub-specialty Fellow	3
SpR year 4 or greater	20
SpR year 3	5
SpR year 2	4
SpR year 1	2
Visiting SpR (or year not stated)	3
Locum Appointment Service	1
Premier Senior House Officer (SHO) (or SHO for >2 years)	2
SHO year 2	1
Other	1
Not answered	1
Total	69

45. Which higher diploma(s) in surgery were held at the time of operation: 1606 cases,
answers may be multiple

None	36
Part 1 Fellowship	166
Part 2 or Membership Fellowship	111
Part 3 Intercollegiate Assessment	1262
MS/MD	302
Other	576
	63

48. If the most senior operator was not a consultant, was a more senior surgeon immediately available?

Yes	522
No	189
Not answered	24
Not known	4
Total	739

If yes, specify grade:

Consultant	332
Associate Specialist	2
Staff Grade	3
SpR year 4 or greater	3
SpR year 3	2
SpR year 1	1
SpR (year not stated)	7
Not answered	172
Total	522

48b. If yes, specify location:

In the operating room	135
In the operating suite	103
In the hospital	258
Other	6
Not answered	20
Total	522

49. Was the procedure performed solely under local anaesthetic and/or sedation administered by the surgeon?

Yes	109
No	1401
Not answered	96
Total	1606

49b. If yes, which of the following were recorded during or immediately after the procedure? 109 cases, answers may be multiple

Blood pressure	68
Pulse	84
ECG	30
Pulse oximetry	74
None	16

50. If the procedure was performed under LA and/or sedation, were facilities for resuscitation, including airway management, immediately available?

Yes	102
No	1
Not answered	6
Total	109

51a. Where was the patient admitted immediately after leaving the recovery suite?

ICU	521
HDU	130
CCU	1
Specialist ward	424
General surgical ward	368
General medical ward	53
Died in theatre	63
Died in recovery	24
Not answered	22
Total	1606

51b. If admitted to a general ward, was a "special" nurse employed to care solely for this patient?

Yes	24
No	357
Not answered	40
Total	421

52. If admitted to a general ward initially, was transfer required at any stage during the postoperative period?

Yes	41
No	355
Not answered	25
Total	421

52a. If yes, please specify:

ITU	25
HDU	8
CCU	7
Not answered	1
Total	41

53. Discharge from ICU/HDU/CCU was due to:

Elective transfer to ward	182
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Pressure on beds	13
Death	395
Not answered	100
Not known	2
Total	692

54. Was the patient subsequently readmitted to an ICU/HDU/CCU etc?

Yes	63
No	137
Not answered	97
Total	297

55. If the patient's condition warranted an admission to ICU/HDU/CCU etc., were you at any time unable to transfer the patient into an ICU/HDU/CCU within the hospital in which surgery took place?

Yes	70
No	910
Not answered	625
Not known	1
Total	1606

56. What were the postoperative complications? 1606 cases, answers may be multiple

Post-operative haemorrhage requiring transfusion	108	
Bleeding at another site	59	Airway obstruction
	12	
Respiratory	575	
Generalised sepsis	284	
Wound infection/dehiscence/fistula	77	
Anastomotic failure	23	
Cardiac arrest	284	
Cardiac failure (IHD/arrhythmia)	449	
Hepatic failure	54	
Renal failure	339	
Endocrine failure	17	
Stroke or other neurological problems	132	
Persistent coma	53	Other
organ failure	37	Problems with
analgesia	10	Thromboembolic
	83	
Fat embolus	1	
Prosthetic complication	1	
Pressure sores	16	
Peripheral ischaemia	35	
Urinary tract infection	28	
Nutritional problems	85	
Other	11	

57. Was there a shortage of personnel in this case?

Yes	24
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No	1548
Not answered	34
Total	1606

If yes, which? 24 cases, answers may be multiple

Consultant surgeons	5
Trainee surgeons	4
Consultant anaesthetists	6
Trainee anaesthetists	2
Skilled assistants	2
Nurses	13
ODPs	1
Porters	1

60. Place of death:

Theatre	63
Recovery area	24
ICU	500
HDU	64
CCU	14
Specialised nursing area	1
Ward	864
Home	27
Another hospital	28
Not answered	18
Not known	3
Total	1606

61. Was cardiopulmonary resuscitation attempted?

Yes	285
No	1190
Not answered	119
Not known	12
Total	1606

64. Was the death reported to the Coroner?

Yes	993
No	467
Not answered	106
Not known	40
Total	1606

64a. If yes, was a Coroner's postmortem examination ordered and performed?

Yes	425
-----	-----

No	518
Not answered	39
Not known	11
Total	993

65. If a Coroner's postmortem was not performed, was a hospital examination undertaken?

Yes	78
No	930
Not answered	152
Not known	21
Total	1181

66. Was the surgical team informed of the date of the postmortem?

Yes	141
No	318
Not answered	30
Not known	14
Total	503

66a. If yes, which member(s) of the surgical team attended the postmortem examination? 141
cases, answers may be multiple

None	62
Consultant	23
Associate specialist	1
Staff Grade	2
Clinical Assistant/Hospital Practitioner	1
Sub-specialty Fellow	1
SpR year 4 or greater	9
SpR year 3	1
SpR year 2	3
SpR year 1	3
Visiting SpR	3
Locum Appointment Service	1
Premier Senior House Officer (SHO) (or SHO for >2 years)	5
SHO year 2	12
SHO year 1	2
Pre-registration House Officer	10

68. Did the surgical team receive a copy of the postmortem report?

Yes	352
No	131
Not answered	16
Not known	4
Total	503

70. Did the postmortem findings confirm the clinical impression?

Yes	383
No	43

Not answered	73
Not known	4
Total	503

70a. If yes, were there any additional unexpected findings?

Yes	61
No	265
Not answered	57
Total	383

71. Has this case been considered, or will it be considered, at a local audit/quality assurance meeting?

Yes	1202
No	321
Not answered	76
Not known	7
Total	1606

72. Did you have problems in obtaining the patient's notes? (i.e. more than 1 week)

Yes	270
No	1247
Not answered	87
Not known	2
Total	1606

73. Were all the notes available?

Yes	1205
No	290
Not answered	110
Not known	1
Total	1606

73a. If no, which part(s) were inadequate/unavailable? 290 cases, answers may be multiple

Preoperative notes	31
Operative notes	26
Postoperative notes	15
Death certificate book	128
Nursing notes	29
Anaesthetic notes	55
Postmortem report	105
Lab reports	5
Majority unavailable	1

75. Has the consultant surgeon seen and agreed this questionnaire?

Yes	1325
No	70
Not answered	211

Total

1606

DATA FROM 1999/2000 ONCOLOGY QUESTIONNAIRES

O3. What staging system was used? 512 cases, answers may be multiple

TNM	178
Dukes	127
FIGO	21
Other system	6
Not recorded	117
None	1

O4. Was the final surgical procedure, or any other procedure carried out during this admission, performed either directly or indirectly in relation to this cancer?

Yes	395
No	61
Not answered	56
Total	512

O5. Had this patient been seen in a multidisciplinary oncology clinic?

Yes	141
No	313
Not answered	56
Not known	2
Total	512

O6. Who were the members of the multidisciplinary team? 141 cases, answers may be multiple

Surgeons:	
General	29
Breast	7
Upper GI	25
Gynaecology	8
Gynaecological oncology	13
Colorectal	38
Vascular	1
Urology	18
Thoracic	4
Otorhinolaryngology	11
Neurosurgery	3
Oral and Maxillofacial	7
Orthopaedic	6
Paediatric	2
Plastic	7
Physicians:	
General	24
Dermatology	2
Health care of the elderly	1
Clinical oncology (Radiotherapy)	85

Medical oncology (Chemotherapy)	72
Haematology	9
Palliative care	23
Others	8
Paramedicals:	
Specialist oncology nurse	61
Macmillan nurse	46
Dietician	20
Stoma therapist	31
Speech therapist	9
Clinical psychologist	1
Occupational therapist	2
Counsellor	2
Others	5

O8. Are joint oncology/radiology conferences held?

Yes	259
No	66
Not answered	178
Not known	9
Total	512

O9. Are oncology/clinicopathological conferences held?

Yes	282
No	47
Not answered	175
Not known	8
Total	512

O10. Is a sub-specialised pathology service available?

Yes	253
No	133
Not answered	121
Not known	5
Total	512

O11. Which of the following best describes your hospital?

Cancer Centre	146
Cancer Unit	209
Associate Cancer Centre	18
District General Hospital	25
University Teaching	3
Regional Unit	4
Independent	3
Other	1
Not answered	101
Not known	2
Total	512

O18. Does this team provide referral guidelines for General Practitioners?

Yes	160
No	147
Not answered	201
Not known	4
Total	512

O19. Was this cancer detected by a screening programme?

Yes	5
No	367
Not answered	137
Not known	3
Total	512

O20. Was the patient aware of the diagnosis?

Yes	335
No	51
Not answered	126
Total	512

O21a. What was the aim of treatment? 512 cases, answers may be multiple

Palliation	196
Curative intent	171
Diagnosis	55
Not sure	7
Not answered	110

O21c. If treatment was palliative (option A above), was adequate support available from the palliative care team?

Yes	168
No	14
Not answered	14
Total	196

O22. Was transfer to a hospice considered?

Yes	69
No	302
Not answered	140
Not known	1
Total	512

O22a. If yes, was a hospice bed available?

Yes	38
No	14
Not answered	15
Not known	2
Total	69

O23. Was home care with palliative support considered?

Yes	89
No	266
Not answered	155
Not known	2
Total	512

O23a. If yes, was adequate support available?

Yes	50
No	8
Not answered	29
Not known	2
Total	89

O24. Is this team involved in clinical trials for this group of cancer patients?

Yes	209
No	150
Not answered	145
Not known	8
Total	512

O24a. If yes, are these trials conducted: 209 cases, answers may be multiple

Locally	67
Nationally	174
Internationally	44
Not answered	6

O25. Does this team take part in audit for this group of cancer patients?

Yes	305
No	53
Not answered	147
Not known	7
Total	512

O25a. If yes, is audit conducted: 305 cases, answers may be multiple

Locally	233
Regionally	146
Nationally	52
Not answered	14

O26. Is chemotherapy administered on the surgical ward?

Yes	35
No	347
Not answered	126
Not known	4
Total	512

O26a. If yes, are medical and nursing staff appropriately trained to administer chemotherapy on the surgical ward?

Yes	34
Not answered	1
Total	35

O28. Is the consultant who was in charge of this case a member of a specialist oncology association (e.g. BASO)?

Yes	231
No	119
Not answered	158
Not known	4
Total	512

If yes, specify: 231 cases, answers may be multiple

Association of Coloproctology of Great Britain & Ireland	64
Association of Upper Gastrointestinal Surgeons	37
British Association of Surgical Oncologists	78
British Association of Urological Surgeons (Oncology section)	31
British Gynaecological Cancer Society	14
British Association of Head & Neck Oncologists	7
Society of British Neurological Surgeons (Glioma group)	2
Specialist nursing groups	4
British Orthopaedic Association (Oncology section)	1
Royal Society of Medicine (sections of oncology and coloproctology)	2
Other international societies	7
Pancreatic society	4
British Society of Haematology	2