

NATIONAL CONFIDENTIAL ENQUIRY INTO PERIOPERATIVE DEATHS

DATA SUPPLEMENT TO THE 2002 REPORT *FUNCTIONING AS A TEAM?*

(1 April 2000 to 31 March 2001)

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Please read this supplement in conjunction with the full report

This data supplement should be read in conjunction with the 2002 NCEPOD Report, "Functioning as a Team?"*

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.

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* Callum K G, Carr N J, Gray A J G, Hargraves C M K, Hoile R W, Ingram G S, Martin I C, Sherry K M.
Functioning as a team?: The Report of the National Confidential Enquiry into Perioperative Deaths.
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DATA FROM 2000/2001 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	22
College tutor	73
Duty Consultant	341
Other Consultant	141
Trainee	10
NCCG	3
Not answered	1321
Total	1911

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

0 to 9	31
10 to 19	18
20 to 29	23
30 to 39	26
40 to 49	57
50 to 59	125
60 to 69	279
70 to 79	633
80 to 89	536
90 to 99	180
100+	3
Total	1911

3. Day of admission:

Monday	316
Tuesday	282
Wednesday	301
Thursday	249
Friday	264
Saturday	230
Sunday	250
Not answered	19
Total	1911

Number of days from admission to operation:

Same day	404
Next day	556
2 days	208
3 days	103
4 days	75
5 days to 9 days	217
10 days to 19 days	194
20 days to 29 days	63
30 days or more	72
Not answered	19
Total	1911

5. Were there any co-existing medical symptoms, signs or diagnoses at the time of the final operation? 1911 cases, answers may be multiple

None	64
Not answered	19
Not known	2

Respiratory

COPD	288
Asthma	128
Active chest infection	198
Shortness of breath	491
Respiratory failure	220
Smoker	237
Lung cancer	56
Hypoxia	239
Crepitations	266
Pleural effusion	82
Other respiratory	101

Cardiac

Previous MI/Ischaemic heart disease	594
Angina	372
Pacemaker	35
Bundle branch block	173
Atrial fibrillation	342
Multiple ectopics	73
Other arrhythmias	112
CCF at the time of the operation	177
CCF in the past	280
Valvular heart disease	170
Pulmonary oedema	95
Hypertension	604
Cardiogenic shock	71
Peripheral vascular disease	237
Other cardiovascular	220
Sepsis	377

Neurological

Dementia	156
Acute confusion	160
CVA	195
Transient ischaemic attacks (TIAs)	83
Parkinson's disease	43
Blindness	44
Deafness	59
Depression	62
Epilepsy	38
Other neurological	147

Endocrine

Diabetes mellitus	228
Hypothyroidism	93
Other endocrine	22

Gastrointestinal	485
Renal	400
Hepatic	112
Musculoskeletal	240
Haematological	213
Other	210

7. ASA status:

ASA 1	30
ASA 2	209
ASA 3	551
ASA 4	724
ASA 5	383
Not answered	13
Not known	1
Total	1911

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

Yes	678
No	1210
Not answered	22
Not known	1
Total	1911

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

Yes	1868
No	33
Not answered	10
Total	1911

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

Yes	527
No	1361
Not answered	22
Not known	1
Total	1911

10a. If yes, please indicate which system(s) needed attention *527 cases answers may be multiple*

Cardiac	295
Respiratory	161
Metabolic	218
Haematalogical	138
Other	22

11. Was the operation delayed for other reasons?

Yes	275
No	1504
Not answered	125
Not known	7
Total	1911

12. Was the patient receiving long-term drug treatment at the time of the operation?

Yes	1620
No	269
Not answered	11
Not known	11
Total	1911

12a. If yes, what drug group(s) and were they given on the day of the operation?

Group	Given on day of operation	
Gastrointestinal		
Acid, peptic & motility	510	271
Colorectal	138	44
Cardiovascular		
Anticardiac failure	362	253
Diuretics	686	397
Antianginal	393	252
Antiarrhythmics	326	221
Antihypertensive	660	374
Anticoagulant/Anitplatelet	558	230
Lipid lowering	128	46
Central Nervous System		
Antidepressant	166	66
Antipsychotic	51	22
Anticonvulsant	50	34
NSAIDs	198	65
Other analgesia	319	215
Hypnotics/sedatives	148	68
Endocrine		
Thyroid/antithyroid	121	64
Hypoglycaemic	157	81
Respiratory		
Bronchodilators	261	202
Steroids	180	127
Other	132	55

13. Was drug treatment started to optimise the patient before this operation? (please omit drugs used for premedication)

Yes	667
No	1145
Not answered	99
Total	1911

14. Were prophylactic antibiotics administered to cover the surgical procedure preoperatively, on induction or during the operation?

Yes	1255
No	235
Not answered	418
Not known	3
Total	1911

16. During the 24 hours before operation was the patient clinically dehydrated?

Yes	599
No	1158
Not answered	126
Not known	28
Total	1911

16a. If yes, was the dehydration clinically:

Mild	197
Moderate	211
Severe	172
Not answered	16
Not known	3
Total	599

17. Was CVP used preoperatively to guide fluid replacement?

Yes	478
No	1361
Not answered	70
Not known	2
Total	1911

18. Before the operation did the patient enter an HDU/ICU or specialised nursing area specifically for resuscitation?

Yes	263
No	1458
Not applicable, patient already in HDU/ICU	153
Not answered	36
Not known	1
Total	1911

19. Which of the following investigations were done in your hospital, or the referring hospital, before the anaesthetic, with the results available at the time of operation?

None		23
Haemoglobin		1835
White cell count		1782
Platelets		1753
Coagulation screen		997
Plasma electrolytes	Na	1779
	K	1769
	HCO ₃	746
Serum urea		1703
Creatinine		1731
Bilirubin (total)		885
Glucose		982
Serum albumin		927
Amylase		370
Blood gas analysis	Inspired oxygen	521
	PH	591
	PCO ₂	589
	PO ₂	578
Chest X-ray		1183
ECG		1540
Respiratory function tests		69
Special cardiac investigations (e.g. ECHO, angiography)		273
CAT scan/ultrasound/MRI/NMR		310
Others relevant to anaesthesia		52

20. Day of operation:

Monday	274
Tuesday	290
Wednesday	301
Thursday	306
Friday	315
Saturday	225
Sunday	200
Total	1911

21. Classification of the final operation:

Emergency	435
Urgent	1024
Scheduled	289
Elective	151
Not answered	12
Total	1911

24. Was an anaesthetist involved in the decision to operate?

Yes	1305
No	571
Not answered	21
Not known	14
Total	1911

25. Did this anaesthetist think the decision to operate was appropriate?

Yes	1250
No	37
Not answered	14
Not known	4
Total	1305

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

Yes	1848
No	54
Not answered	2
Not known	7
Total	1911

26b. If yes, where?

Ward	1356
Outpatient department	12
Accident and Emergency department	139
ICU/HDU	308
CCU	7
Theatre suite	15
Not known	5
Not answered	6
Total	1848

26c. If yes, was this anaesthetist present at the start of the final operation?

Yes	1737
No	80
Not answered	31
Total	1848

27. Which anaesthetists were in theatre at the start of the anaesthetic? 1911 cases, answers may be multiple

Consultant	1168
Associate specialist	64
Staff grade	200
SpR – Post-CCST	96
SpR – 3/4/5	465
SpR – 1/2	236
SHO – more than 2 years	248
SHO – 2	250
SHO – 1	327
Other (trainee)	8
Other grade	34

30. Which higher diploma(s) in anaesthesia were held at the time of the operation? 1911 cases, answers may be multiple

None	110
Fellowship (Royal College, College or Faculty)	1488
DA (or "old" Part 1 FRCA)	312
"Old" part 2 FRCA	82
"New" Part 1 FRCA	91
Other	86

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

Came to the theatre before the end of the anaesthetic	73
In the operating suite but not directly involved	227
In the hospital, but was not present in the operating suite	145
By telephone	270
On holiday	1
Not answered	24
Not known	3
Total	743

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

Yes	447
No	1251
Not answered	195
Not known	18
Total	1911

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

Consultant	363
Associate specialist	4
Staff grade	2
SpR - 3/4/5	12
SpR - 1/2	1
SpR - year not stated	13
SHO - >2	1
SHO - year not stated	5
Not answered	46
Total	447

32b. When was this advice sought? 447 cases, answers may be multiple

Before the anaesthetic	320
During the anaesthetic	82
After the anaesthetic	101

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

Yes	1845
No	41
Not answered	25
Total	1911

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

Yes	1827
No	61
Not known	19
Not answered	4
Total	1911

37c. If yes, please indicate which:

Blood products

Red cells	636
Platelets	127
Fresh frozen plasma	303
Other components	17

39. What monitoring devices were used during the management of this anaesthetic? 1911 cases, answers may be multiple

ECG	1894
Pulse oximeter	1897
Indirect BP	1468
Direct BP	929
Expired CO ₂ analyser	1702
O ₂ analyser	1714
Inspired anaesthetic vapour analyser	1566
Airway pressure gauge	1573
Ventilation volume	1433
Ventilation disconnect device	1504
Peripheral nerve stimulator	324
Temperature	653
Urine output	1135
CVP	922
Pulmonary arterial pressure	97
Cardiac output	56
Other	34

40. Did anything hinder full monitoring?

Yes	98
No	1769
Not answered	42
Not known	2
Total	1911

41. Was there a lack of monitoring equipment?

Yes	18
No	1857
Not answered	34
Not known	2
Total	1911

42. What measures were taken to maintain body temperature? 1911 cases, answers may be multiple

None	331
IV fluid warmer	1022
Warm air system	930
Heated blanket under patient	582
Blankets/foil wraps	313
Other	5

43. What type of anaesthesia was used?

General alone	1259
General and regional	352
Regional alone	89
Regional and sedation	120
General and local infiltration	56
Sedation and local infiltration	13
Sedation alone	7
Local infiltration alone	8
Not answered	6
Not known	1
Total	1911

44. If general anaesthesia was used, were there any problems with airway maintenance or ventilation?

Yes	96
No	1552
Not answered	16
Not known	3
Total	1667

45. Was rapid sequence induction used?

Yes	697
No	900
Not answered	67
Not known	3
Total	1667

46. If the anaesthesia included a regional technique, which method was used? 561 cases, answers may be multiple

Epidural	- thoracic	130
	- lumbar	68
	- caudal	3
Spinal (subarachnoid)		213
Combined spinal/epidural		11
Intravenous regional		2
Cranial or peripheral nerve blocks		34
Plexus block		108
Surface (e.g. for bronchoscopy)		1

47. If epidural anaesthesia was used, when:

During the operation and for postoperative pain relief	158
Only during the operation	16
Only for postoperative pain relief	33
Not answered	5
Total	212

48. Which agent(s) was used?

Local alone	59
Narcotic alone	2
Combined local and narcotic	144
Not answered	7
Total	212

51. If spinal anaesthesia was used, which agent?

Local alone	156
Narcotic alone	47
Combined local and narcotic	2
Not answered	19
Total	224

54. Was a vasoconstrictor(s)/inotrope(s) used during the operation?

Yes	910
No	467
Not answered	532
Not known	2
Total	1911

54a. If yes, which: 910 cases, answers may be multiple

Ephedrine	426
Methoxamine	144
Metaraminol	128
Phenyephine	48
Adrenaline	336
Other	235

55. Were there any problems managing hypotension?

Yes	358
No	786
Not answered	766
Not known	1
Total	1911

56. Was a recovery area used after the operation?

Yes	1023
No	886
Not answered	2
Total	1911

56a. If no, where did this patient go immediately after leaving the operating room?

High dependency unit	38
Intensive care unit	609
Coronary care unit	2
Ward	20
Died in theatre	208*
CT scan	4
Not answered	5
Total	886

* There is a difference between the number of patients who died in theatre indicated here and those who died in theatre indicated in question 70. These are four patients who left theatre to another location and were later returned to theatre where they died before a further relevant procedure was carried out.

57. Were you unable at any time to transfer the patient into an ICU, HDU or other specialised nursing area, when clinically indicated?

Yes	114
No	1434
Not answered	361
Not known	2
Total	1911

59. Where did the patient go on leaving the recovery room?

Ward	775
High dependency unit	93
Intensive care unit	70
Coronary care unit	3
Another hospital	2
Died in recovery area	74
Other	6
Total	1023

60. Was controlled ventilation used postoperatively?

Yes	709
No	959
Died in theatre	208
Not answered	35
Total	1911

61. If yes, why? 709 cases, answers may be multiple

Routine management	127
Respiratory inadequacy	286
Cardiac inadequacy	222
Control of intracranial pressure or other neurosurgical indications	65
Part of the management of pain	29
Poor general condition of patient	439
To allow recovery of body temperature	76
Other reasons	24
Not answered	8

61. Did any critical incident(s) occur during anaesthesia or in the immediate recovery period (i.e. during the first few hours after operation)?

Yes	812
No	967
Not answered	130
Not known	2
Total	1911

If yes, please specify: 812 cases, answers may be multiple

Airway obstruction	13
Arrhythmia	90
Bradycardia	74
Bronchospasm	14
Cardiac arrest (unanticipated)	135
Hypertension	52
Hypotension	555
Hypoxia (SpO ₂ less than 90%)	182
Pulmonary aspiration	12
Pulmonary oedema	54
Respiratory depression	40
Tachycardia	110
Unintended delayed recovery of consciousness	32
Other	24

63. Which system(s) failure was implicated in postoperative complications or the cause of death? 1911 cases, answers may be multiple

Cardiac	1133
Respiratory	664
Renal	418
Septicaemia	403
Hepatic	63
Haematological (including coagulopathy/excessive blood loss)	226
Central nervous system	158
Gastrointestinal tract	212
Progress of surgical condition	173
Metabolic	189
Other	6

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

Yes	1503
No	165
Not answered	243
Total	1911

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

Yes	634
No	873
Not answered	391
Not known	13
Total	1911

66. Were drugs given in the first 48 hours after operation for pain relief?

Yes	1337
No	264
Not known	98
Not answered	4
Total	1703

66a. If yes, which method/route? 1337 cases, answers may be multiple

Intramuscular injection	276
Oral	237
Rectal	43
Continuous intravenous infusion	537
Continuous subcutaneous infusion	42
PCA (patient-controlled analgesia)	173
Continuous epidural	157
PCEA (patient-controlled epidural analgesia)	18
IV bolus	156
Other	9

67. Were there any complications as a result of postoperative analgesia?

Yes	44
No	1244
Not answered	49
Total	1337

68. Number of days between operation and death:

Same day	473
Next day	622
2 days	471
3 days	345
Total	1911

70. Place of death:

Theatre	212
Recovery room	74
Intensive care unit	723
High dependency unit	112
Coronary care unit	18
Ward	743
Home	5
Another hospital	4
X-ray	1
Not answered	19
Total	1911

72. Do you have local audit meetings?

Yes	1877
No	13
Not answered	21
Total	1911

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

Yes	1772
No	118
Not answered	21
Total	1911

73a. If yes, will this case, or has it been, discussed at your departmental meeting?

Yes	690
No	970
Not answered	96
Not known	16
Total	1772

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

Yes	580
No	1279
Not answered	52
Total	1911

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

Yes	876
No	57
Not applicable (completed by consultant)	920
Not answered	58
Total	1911

DATA FROM 2000/2001 SURGICAL QUESTIONNAIRES

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

0 to 9	38
10 to 19	18
20 to 29	22
30 to 39	35
40 to 49	62
50 to 59	136
60 to 69	320
70 to 79	683
80 to 89	602
90 to 99	193
100+	5
Total	2114

3. Sex:

Male	1069
Female	1045
Total	2114

6. Number of days from admission to operation:

Same day	477
Next day	610
2 days	210
3 days	134
4 days	75
5 days to 9 days	241
10 days to 19 days	198
20 days to 29 days	68
30 days or more	86
Not answered	15
Total	2114

7a. 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)	15
Other elective (at a time agreed between patient and surgical service)	341
Urgent (within 48 hours of referral/consultation)	183
Emergency (immediately following referral/consultation)	1557
Not answered	18
Total	2114

8a. What was the pathway for this admission?

Transfer as an inpatient from another hospital	295
Transfer from a nursing home	70
Referral from a general medical or dental practitioner	554
Self-referral by patient	36
Tertiary (own specialty)	25
Tertiary (other specialty)	42
Admission following a previous outpatient consultation	286
Planned re-admission/routine follow-up procedure	31
Unplanned inpatient stay after planned day case or outpatient procedure	3
Unplanned re-admission following discharge after day case or outpatient procedure	1
Admission via A&E	757
Born in hospital	1
Not answered	12
Not known	1
Total	2114

9a. Type of referring hospital:

District General (or equivalent)	200
University Teaching	35
Limited Surgical Specialties	14
Community	32
Defence Secondary Care Agency	0
Independent	5
Psychiatric	2
Overseas	4
Not answered	3
Total	295

9b. Where was the referring hospital?

From same district/trust	105
From same region	147
From different region	34
From overseas	4
Not answered	5
Total	295

9d. Did the patient's condition deteriorate during transfer?

Yes	29
No	259
Not answered	5
Not known	2
Total	295

10a. Was the patient's transfer to another hospital ever considered?

Yes	45
No	1628
Not answered	441
Total	2114

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

Yes	1406
No	660
Not answered	48
Total	2114

11a. If no, what was the source of referral?

Medical specialty	402
Another surgical specialty	118
Same surgical specialty	123
ITU	10
Psychiatry	1
Not answered	6
Total	660

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

Yes	25
No	1913
Not answered	175
Not known	1
Total	2114

17. In your opinion did time on the waiting list affect the outcome?

Yes	36
No	1220
Not answered	858
Total	2114

18. Was this patient assessed in a pre-admission/pre-anaesthetic assessment clinic?

Yes	234
No	1743
Not answered	137
Total	2114

19. Which staff run this clinic? 234 cases, answers may be multiple

Nurse	77
Nurse practitioner	52
Pre-registration HO	77
Surgical SHO	72
Anaesthetic SHO	6
Medical SHO	4
Surgical NCCG	5
Anaesthetic NCCG	5
Medical NCCG	3
Anaesthetic consultant	31
Surgical consultant	9
Medical consultant	1

20. Were there any discrepancies, omissions or errors identified on admission compared with this clinic's assessment?

Yes	8
No	210
Not answered	16
Total	234

21. Were any preoperative therapeutic manoeuvres initiated as a result of this clinic attendance?

Yes	34
No	179
Not answered	21
Total	234

22a. 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	491
Surgical specialty ward	722
Gynaecology/Obstetric ward	25
Medical ward	218
Elderly medicine ward	43
Admission ward	99
A&E ward	223
Day unit	20
HDU	32
ICU	88
Coronary care unit (CCU)	33
Direct to theatre	85
Private bed	8
Recovery	2
Not answered	25
Total	2114

22b. Was the initial place of admission the most appropriate for this patient?

Yes	1968
No	91
Not answered	54
Not known	1
Total	2114

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

General	453
Sub-specialised	445
Accident and Emergency	2
Cardiac/Thoracic/Cardiothoracic	133
Gynaecology	38
Neurosurgery	86
Ophthalmology	16
Oral & Maxillofacial	11
Orthopaedic	545
Otorhinolaryngology	45
Paediatric	23
Plastic	21
Transplantation	4
Urology	113
Vascular	172
Not answered	6
Not known	1
Total	2114

24. Was care undertaken on a formal shared basis?

Yes	449
No	1584
Not answered	81
Total	2114

24a. If yes, please indicate other specialty(ies) involved: 449 cases, answers may be multiple

Care of the elderly	84
Paediatric	21
General medicine	146
Medical specialty	107
Other surgical	102
Other	21

25. What was the grade of the most senior surgeon consulted before this operation?
(For academic surgeons please give honorary NHS grade)

Consultant	1958
Associate Specialist	22
Staff Grade	21
Clinical Assistant/Hospital Practitioner	2
Specialist Registrar (SpR) with CCST	16
Sub-specialty Fellow	4
SpR year 4 or greater	29
SpR year 3	15
SpR year 2	8
SpR year 1	7
Visiting SpR	2
Locum Appointment Training	1
Locum Appointment Service	16
Premier Senior House Officer (SHO) (or SHO for >2 years)	4
SHO year 2	2
Pre-registration House Officer	2
Other	
Not answered	5
Total	2114

26b. What was the grade of the most senior surgeon making the working diagnosis?

Consultant	1805
Associate Specialist	26
Staff Grade	45
Clinical Assistant/Hospital Practitioner	3
Specialist Registrar (SpR) with CCST	30
Sub-specialty Fellow	7
SpR year 4 or greater	77
SpR year 3	25
SpR year 2	28
SpR year 1	10
Visiting SpR (or year not stated)	5
Locum Appointment Training	6
Locum Appointment Service	22
Premier Senior House Officer (SHO) (or SHO for >2 years)	13
SHO year 2	1
SHO (year not stated)	2
Not answered	8
Not known	1
Total	2114

27b. What was the grade of the most senior surgeon making that decision?

Consultant	1847
Associate Specialist	27
Staff Grade	32
Clinical Assistant/Hospital Practitioner	2
Specialist Registrar (SpR) with CCST	22
Sub-specialty Fellow	6
SpR year 4 or greater	71
SpR year 3	20
SpR year 2	15
SpR year 1	7
Visiting SpR (or year not stated)	5
Locum Appointment Training	5
Locum Appointment Service	20
Premier Senior House Officer (SHO) (or SHO for >2 years)	5
SHO year 2	2
SHO (year not stated)	1
Not answered	26
Not known	1
Total	2114

28a. What was the grade if the most senior surgeon taking consent of the patient?

Consultant	769
Associate Specialist	37
Staff Grade	77
Clinical Assistant/Hospital Practitioner	6
Specialist Registrar (SpR) with CCST	101
Sub-specialty Fellow	17
SpR year 4 or greater	191
SpR year 3	86
SpR year 2	72
SpR year 1	35
Visiting SpR (or year not stated)	13
Locum Appointment Training	21
Locum Appointment Service	29
Premier Senior House Officer (SHO) (or SHO for >2 years)	162
SHO year 2	215
SHO year 1	49
Pre-registration house officer	112
No consent taken	76
Nurse	4
Not answered	30
Not known	12
Total	2114

28b. Was the surgeon who took consent present at the operation?

Yes	1426
No	545
No consent taken	76
Not answered	54
Not known	13
Total	2114

30. ASA status:

ASA 1	48
ASA 2	251
ASA 3	623
ASA 4	846
ASA 5	301
Not answered	42
Not known	3
Total	2114

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

Yes	1803
No	273
Not answered	31
Not known	7
Total	2114

31a. If yes: 1803 cases, answers may be multiple

Malignancy	291
Respiratory	666
Cardiovascular	1138
Peripheral vascular	228
Renal	363
Haematological	178
Gastrointestinal	213
Sepsis	268
Neurological	239
Diabetes	220
Other endocrine	71
Musculoskeletal	177
Psychiatric	100
Alcohol related	63
Drug addiction	3
Other	40

32a. What precautions or therapeutic manoeuvres were undertaken preoperatively (excluding anaesthetic room management) to improve the patient's preoperative condition? 2114 cases, answers may be multiple

None	255
Cardiac support drugs or anti-arrhythmic agents	449
Gastric aspiration	554
Intravenous fluids	1453
Correction of hypovolaemia	896
CVP line	557
Urinary catheterisation	1050
Blood transfusion	346
Diuretics	225
Anticoagulants	273
Antibiotics	769
Vitamin K	77
Bowel preparation	55
Chest physiotherapy	220
Oxygen therapy	868
Optimisation of respiratory function	331
Airway protection (e.g. unconscious patient)	172
Tracheal intubation	325
Mechanical ventilation	303
Stabilisation of fractured C-spine	13
Nutritional support	128
Diabetic control	137
Discussion with relevant counsellor (e.g. hospice/amputation/stoma)	40
Preoperative radiotherapy	21
Preoperative chemotherapy	5
Other	67

32b. Did these improve the patient's physical status?

Yes	1003
No	635
No precautions or therapeutic manoeuvres	255
Not answered	200
Not known	21
Total	2114

33a. Was there any evidence of malnutrition prior to surgery?

Yes	380
No	1615
Not answered	108
Not known	11
Total	2114

33c. Was nutritional support given preoperatively?

Yes	238
No	1735
Not answered	137
Not known	4
Total	2114

33d. If yes, this was: 238 cases, answers may be multiple

Oral supplementation	111
Enteric feeding	60
Parenteral feeding	81

34. Were any perioperative precautions taken to prevent venous thrombosis?

Yes	1454
No	580
Not answered	72
Not known	8
Total	2114

34a. If yes, please specify the method(s) used: 1454 cases, answers may be multiple

Heparin	950
TED stockings	846
Calf compression	323
Warfarin	29
Aspirin	60
Other	2

35. Were prophylactic antibiotics administered to cover the surgical procedure preoperatively, on induction or during the operation?

Yes	1751
No	296
Not answered	65
Not known	2
Total	2114

36. Was any precaution taken in the perioperative period to prevent gastrointestinal haemorrhage?

Yes	396
No	1573
Not answered	134
Not known	11
Total	2114

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

Yes	173
No	1861
Not answered	76
Not known	4
Total	2114

39a. What was the anticipated risk of death related to the proposed final operation?

Not expected	249
Small but significant risk	353
Definite risk	1150
Expected	312
Not answered	50
Total	2114

43. Were there any unanticipated intraoperative problems?

Yes	411
No	1664
Not answered	39
Total	2114

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

Yes	163
No	1916
Not answered	32
Not known	3
Total	2114

45. Classification of operation:

Emergency	498
Urgent	1084
Scheduled	344
Elective	172
Not answered	16
Total	2114

47. Most senior surgeon present in operating room:

Consultant	1359
Associate Specialist	82
Staff Grade	117
Clinical Assistant/Hospital Practitioner	5
Specialist Registrar (SpR) with CCST	66
Sub-specialty Fellow	14
SpR year 4 or greater	202
SpR year 3	92
SpR year 2	62
SpR year 1	27
Visiting SpR (or year not stated)	7
Locum Appointment Training	15
Locum Appointment Service	32*
Premier Senior House Officer (SHO) (or SHO for >2 years)	19
SHO year 2	2
SHO year 1	1
Pre-registration house officer	2
Not answered	9
Not known	1
Total	2114

* Includes 13 Locum (Service) Consultants

48. Most senior operating surgeon:

Consultant	1152
Associate Specialist	79
Staff Grade	141
Clinical Assistant/Hospital Practitioner	7
Specialist Registrar (SpR) with CCST	66
Sub-specialty Fellow	18
SpR year 4 or greater	263
SpR year 3	125
SpR year 2	83
SpR year 1	45
Visiting SpR (or year not stated)	11
Locum Appointment Training	21
Locum Appointment Service	41
Premier Senior House Officer (SHO) (or SHO for >2 years)	36
SHO year 2	7
SHO year 1	4
Pre-registration House Officer	3
Not answered	11
Not known	1
Total	2114

* Includes 12 Locum (Service) Consultants

Overall consultant involvement:

Operating	1164
Present in theatre	208
Not in theatre, but immediately available	397
Consulted before operation	301
No consultant involvement	44
Total	2114

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

Associate Specialist	7
Staff Grade	4
Clinical Assistant/Hospital Practitioner	1
Specialist Registrar (SpR) with CCST	6
Sub-specialty Fellow	2
SpR year 4 or greater	9
SpR year 3	4
SpR year 2	1
SpR year 1	2
Visiting SpR (or year not stated)	2
Locum Appointment Training	1
Locum Appointment Service	2
Premier Senior House Officer (SHO) (or SHO for >2 years)	2
Not answered	1
Total	44

51. Which higher diploma(s) in surgery were held at the time of operation: 2114 cases, answers may be multiple

None	25
Part 1 Fellowship	201
Part 2 or Membership	174
Fellowship	1597
Part 3 Intercollegiate Assessment	506
MS/MD	712
Other	99

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

Yes	873
No	41
Not answered	35
Not known	2
Total	951

If yes, specify grade:

Consultant	575
Associate Specialist	2
Staff Grade	5
Specialist Registrar (SpR) with CCST	2
SpR year 4 or greater	5
SpR (year not stated)	4
Not answered	279
Not known	1
Total	873

54b. If yes, specify location:

In the operating room	155
In the operating suite	144
In the hospital	263
Available by telephone	289
Not answered	21
Not known	1
Total	873

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

Yes	123
No	1827
Not answered	163
Not known	1
Total	2114

55b. If yes, which of the following were recorded during the procedure? 123 cases, answers may be multiple

Blood pressure	60
Pulse	73
ECG	49
Pulse oximetry	77
CVP	1
Temperature	1
Arterial blood gases	1
None	26

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

Yes	111
No	3
Not answered	9
Total	123

57a. Where was the patient admitted immediately after leaving the theatre suite?

HDU	169
ICU	701
CCU	11
Other specialised unit	3
Appropriate surgical specialty ward	549
General surgical ward	286
General medical ward	35
Died in theatre	243
Other	1
Recovery	83
Not answered	31
Not known	2
Total	2114

57b. If admitted to a general ward, was a "special" nurse employed to care solely for this patient?

Yes	13
No	286
Not answered	20
Not known	2
Total	321

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

Yes	41
No	259
Not answered	20
Not known	1
Total	321

58a. If yes, please specify:

ICU	25
HDU	7
CCU	8
Not answered	1
Total	41

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

Elective transfer to ward	70
Pressure on beds	4
Death	692
Not answered	154
Not known	1
Total	921

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

Yes	17
No	87
Not answered	125
Total	229

61. 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	75
No	1253
Not answered	785
Not known	1
Total	2114

62a. What were the postoperative complications? 2114 cases, answers may be multiple

Post-operative haemorrhage requiring transfusion	168
Bleeding at another site (e.g. GI)	46
Airway obstruction	15
Respiratory	580
Generalised sepsis	351
Wound infection/dehiscence/fistula	14
Anastomotic failure	10
Cardiac arrest	548
Cardiac failure (IHD/arrhythmia)	619
Hepatic failure	57
Renal failure	392
Endocrine failure	7
Stroke or other neurological problems	101
Persistent coma	62
Other organ failure	56
Problems with analgesia	7
Thromboembolic	78
Fat embolus	3
Prosthetic complication	2
Pressure sores	3
Peripheral ischaemia	28
Urinary tract infection	6
Ureteric injury	2
Nutritional problems	31
Other	72
Not answered	194
None	198

62b. In your opinion, could any preoperative therapeutic manoeuvres have been undertaken to prevent these complications?

Yes	90
No	1558
No complications	392
Not answered	72
Not known	2
Total	2114

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

Yes	26
No	1989
Not answered	98
Not known	1
Total	2114

If yes, which? 26 cases, answers may be multiple

Consultant surgeons	4
Trainee surgeons	4
Consultant anaesthetists	6
Trainee anaesthetists	2
Skilled assistants	1
Nurses	10
ODPs	3
Porters	2

66. Place of death:

Theatre	214
Recovery room	81
ICU	794
HDU	105
CCU	26
Ward	858
Home	4
Another hospital	1
A&E	1
X-ray	2
Corridor	1
Not answered	24
Not known	3
Total	2114

69. Was the death reported to the Coroner?

Yes	1724
No	270
Not answered	88
Not known	32
Total	2114

69a. If yes, was a Coroner's postmortem examination ordered and performed?

Yes	766
No	849
Not answered	87
Not known	22
Total	1724

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

Yes	91
No	1034
Not answered	198
Not known	25
Total	1348

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

Yes	234
No	557
Not answered	47
Not known	19
Total	857

71a. If yes, which member(s) of the surgical team attended the postmortem examination? 234 cases, answers may be multiple

None	117
Consultant	41
Associate specialist	4
Staff Grade	7
Specialist registrar (SpR) with CCST	4
Sub-specialty Fellow	1
SpR year 4 or greater	5
SpR year 3	3
SpR year 2	5
SpR year 1	5
Visiting SpR	3
Locum Appointment Training	1
Premier Senior House Officer (SHO) (or SHO for >2 years)	10
SHO year 2	8
Pre-registration House Officer	12
Other	1

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

Yes	610
No	207
Not answered	39
Not known	1
Total	857

75. Did the postmortem findings confirm the clinical impression?

Yes	633
No	97
Not answered	125
Not known	2
Total	857

75b. If yes, were there any additional unexpected findings?

Yes	82
No	471
Not answered	80
Total	633

76. Do you have local audit meetings?

Yes	2020
No	44
Not answered	50
Total	2114

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

Yes	1629
No	401
Not answered	79
Not known	5
Total	2114

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

Yes	376
No	1655
Not answered	74
Not known	9
Total	2114

79. Were all the notes available?

Yes	1574
No	378
Not answered	160
Not known	2
Total	2114

79a. If no, which part(s) were inadequate/unavailable? 378 cases, answers may be multiple

Preoperative notes	34
Operative notes	37
Postoperative notes	21
Death certificate book	188
Nursing notes	45
Anaesthetic notes	53
Postmortem report	166
Histology	4
Discharge notes	4
Previous medical history	12
X-rays	2
A&E notes	2
Drug charts	6
All notes unavailable	2
Quality poor	3

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

Yes	344
No	56
Not applicable (completed by consultant)	1633
Not answered	81
Total	2114