

Surgical Questionnaire

CONFIDENTIAL

Hospital number of patient:

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Case Control

What is this study about?

NCEPOD will be reviewing organisational issues in the delivery of care to patients who undergo first time coronary artery bypass grafting, (CABG). Data will be collected over a three-year period from all sites across England, Wales, Northern Ireland, Scotland, Guernsey, and the Isle of Man, from both the independent and public sector. Both emergency and elective procedures will be included in data collection.

The work is supported by the Society of Cardiothoracic Surgeons of Great Britain and Ireland, and the Association of Cardiothoracic Anaesthetists.

Inclusion criteria for the study

All adults aged 16 or over who:

- Die in hospital during or following first time CABG, between 1st April 2004 – 31st March 2007
- Had a CABG and survived, and have been identified as a control subject by NCEPOD.

Questions or help

If you have any queries about the study or this questionnaire, please contact NCEPOD:

cardiothoracic@ncepod.org.uk
or **Tel: 020 7920 0999.**

Who should complete this questionnaire?

If you have received this questionnaire it is because we believe that you were the consultant surgeon who performed the CABG procedure.

A questionnaire has also been sent to the consultant anaesthetist involved in the case.

Please return the completed questionnaire in the pre paid envelope provided.

Incomplete questionnaires may be followed up.

How to complete this questionnaire

This form will be electronically scanned. Please use a black or blue pen. Please complete all sections with either block capitals or a bold cross inside the boxes provided.

Yes No Unknown

If you make a mistake, please 'black-out' the box and re-enter the correct information, e.g.

Yes No Unknown

Definitions: Where ^(def) is indicated, a definition is provided on the back of the questionnaire.

CPD accreditation for completing NCEPOD Questionnaires

Consultants who complete NCEPOD questionnaires make a valuable contribution to the investigation of patient care. Completion of questionnaires also provides an opportunity for consultants to review their clinical management and undertake a period of personal reflection. These activities have a continuing medical and professional development value for individual consultants. Consequently, NCEPOD recommends that consultants who complete NCEPOD questionnaires keep a record of this activity which can be included as evidence of internal / self directed Continuous Professional Development in their appraisal portfolio.

A THE PATIENT

1. Month and year of birth

m m
y y y y

2. Gender

 Male Female

B RISK FACTORS

3. a. Please state the patient's additive EuroSCORE
(as calculated at the time nearest to surgery)

b. Date when calculated

d d m m y y y y

No evidence of EuroSCORE being calculated

4. Please complete the EuroSCORE matrix ^(def)

a. Age – 1 point per 5 year (or part thereof) over 60

b. Female

c. Chronic pulmonary disease

d. Extracardiac arteriopathy

e. Neurological dysfunction

f. Previous cardiac surgery

g. Serum creatinine >200 µmol/L preoperatively

h. Active endocarditis

i. Critical preoperative state

j. Unstable angina

k. LV function

l. Recent myocardial infarct (<90 days)

m. Pulmonary hypertension (systolic PA pressure >60mmHg)

n. Emergency

o. Other than isolated CABG

p. Surgery on thoracic aorta

q. Post infarct septal rupture

C REFERRAL AND ADMISSION PROCESS

5. a. Was the referral made according to a standardised written protocol?

 Yes No Unknown

b. If yes, was this

(Answers may be multiple)

 From GP to surgeon/unit From within your hospital to the cardiothoracic surgical unit From District General Hospital to the cardiothoracic surgical unit Other (please Specify)

6. What was the speciality of the referring practitioner?

Cardiology

Other (please Specify)

7. What was the grade (or nearest equivalent) of the referring practitioner?

Consultant

GP

SpR

If SpR, state year if known

Staff Grade

Associate Specialist

Unknown

8. How was the referral made?
(answers may be multiple)

Letter

Telephone

Fax

Email

Conversation

Multidisciplinary team (MDT) meeting

9. To whom was the referral for cardiothoracic surgery addressed?

Named cardiothoracic surgeon

Business manager/PA/Unit administrator

Cardiothoracic unit

Central appointments bureau

On-call surgeon

Nurse case manager/surgical co-ordinator

Other (please specify)

10. a. Considering the patient's clinical condition, was there an unnecessary delay between the initial referral, (whether elective or urgent), to the unit and being seen by a cardiothoracic consultant?

Yes

No

Unknown

b. If yes, what was the reason for this?
(please specify)

11. Date decision made to operate

d d

m m

y y

D SCHEDULING OF OPERATIONS

12. a. Has this operation been scheduled in the past but cancelled? Yes No Unknown
- b. If yes, on how many occasions?

13. Was this case done on a routine scheduled operating list? Yes No Unknown

E MULTIDISCIPLINARY CASE PLANNING

14. Was this patient discussed at a multidisciplinary team (MDT) meeting prior to surgery? Yes No Unknown

15. If this patient had a non surgical coronary intervention on this admission, was the decision for treatment (e.g. PCI) made jointly between cardiology and cardiothoracic surgery? (If applicable) Yes No Unknown
 Non applicable

F PATIENT INVESTIGATIONS

16. Was a written protocol for investigations followed for this patient? Yes No Unknown

17. What investigations did this patient undergo pre-operatively?

- Coronary angiogram Yes No Unknown
 If yes please state date (dd mm yyyy)
 Date unknown
- Echo/LV angiogram/Isotope scan Yes No Unknown
- Electrocardiogram Yes No Unknown
- Carotid ultrasound Yes No Unknown
- MRSA screen Yes No Unknown
- Liver function tests Yes No Unknown
- Clotting screen Yes No Unknown
- Chest X-ray within the last month Yes No Unknown
 If yes, please state date (dd mm yyyy)
 Date unknown
- Full blood count Yes No Unknown
- Urea and electrolytes Yes No Unknown
- Lung function tests Yes No Unknown
- Blood gases Yes No Unknown

G COMORBIDITIES

18. Did the patient have any of the following comorbidities, and were they reasonably managed pre-operatively?

		Reasonably managed?
Diabetes management	<input type="checkbox"/> 0 (<i>Not diabetic</i>) <input type="checkbox"/> 1 (<i>Diet controlled diabetes</i>) <input type="checkbox"/> 2 (<i>Oral therapy controlled diabetes</i>) <input type="checkbox"/> 3 (<i>Insulin controlled diabetes</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Hypertension	<input type="checkbox"/> 0 (<i>No hypertension</i>) <input type="checkbox"/> 1 (<i>Treated or BP >140/90 mmHg on >1 occasion prior to admission</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Renal disease	<input type="checkbox"/> 0 (<i>No renal disease</i>) <input type="checkbox"/> 1 (<i>Functioning transplant</i>) <input type="checkbox"/> 2 (<i>Creatinine >200µmol/l</i>) <input type="checkbox"/> 3 (<i>Dialysis: Acute renal failure; onset within 6 weeks of cardiac surgery</i>) <input type="checkbox"/> 4 (<i>Dialysis: Chronic renal failure; more than 6 weeks prior to cardiac surgery</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
State creatinine closest to surgery	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> µmol l ⁻¹	
State urea closest to surgery	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> • <input type="text"/> mmol l ⁻¹	
Ejection fraction value	<input type="checkbox"/> 1 (<i>Good – LVEF>50%</i>) <input type="checkbox"/> 2 (<i>Fair – LVEF 30-50%</i>) <input type="checkbox"/> 3 (<i>Poor – LVEF <30%</i>)	
Respiratory disease <i>(If yes, please complete the following questions)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Was the patient regularly taking bronchodilators?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Was the patient regularly taking oral steroids	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Please state Forced Vital Capacity	<input type="text"/> <input type="text"/> <input type="text"/> Litres	
Please state Forced Expiratory Volume (FEV1) closest to surgery	<input type="text"/> <input type="text"/> <input type="text"/> Litres	
Current smoker?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	

Q18 continues overleaf

Please state other comorbidities		
Other <input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Other <input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Other <input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

H PERI-OPERATIVE MANAGEMENT

19. What was the category of operation?^(def)

- Salvage
 Emergency
 Urgent
 Elective

20. a. Did any critical incidents^(def) occur during the per- and postoperative periods?

- Yes No Unknown

b. If yes, please describe

c. If yes, were these reported?

- Yes No Unknown

21. a. Did the patient develop any postoperative complications?

- Yes No Unknown

b. If yes, please tick all that apply

- | | | |
|---|--|---|
| <input type="checkbox"/> Stroke | <input type="checkbox"/> Myocardial infarction | <input type="checkbox"/> Chest infection |
| <input type="checkbox"/> Renal impairment | <input type="checkbox"/> Tamponade | <input type="checkbox"/> Generalised sepsis |
| <input type="checkbox"/> Wound infection | <input type="checkbox"/> Mediastinitis | <input type="checkbox"/> Pulmonary embolus |
| <input type="checkbox"/> Multi-organ failure | <input type="checkbox"/> Hepatic failure | <input type="checkbox"/> Other <i>(please specify)</i> |
| <input type="checkbox"/> Ventricular arrhythmia requiring treatment | <input type="checkbox"/> Pericardial effusion requiring intervention | <input type="checkbox"/> Haemorrhage requiring re-operation |

c. If yes, was there a delay in detecting any of these complications?

- Yes No Unknown

d. If yes, please give details for all complications

e. If yes, in your opinion was the management of any per- and postoperative complications adequate? Yes No Unknown

I POSTOPERATIVE CARE

22. a. Immediately following surgery, what level of care did the patient receive?^(def) 0 1 2 3

b. What was the level of care required? 0 1 2 3

c. If level of care was not as required, please state why

23 a. Was the patient transferred to a lower level of care earlier than they should have been due to reasons other than clinical need? Yes No Unknown

b. If yes, please state why

J APPROPRIATENESS OF SURGERY

24 a. Was a clear written operative treatment plan recorded prior to surgery? Yes No Unknown

b. If yes, was this followed? Yes No Unknown

i. If no, what variations occurred? *(please specify)*

ii. Why did these variations occur? *(please specify)*

c. If no operative plan was available, why not? (please specify)

25 a. Did operative findings correlate with pre-operative assessment?

Yes No Unknown

b. What were those differences?

c. If no, were any differences potentially significant in terms of outcome?

Yes No Unknown

26. What was the grade (or nearest equivalent) of the surgeon starting the operation?

Number of years grade held?

- Consultant
- SpR
- Staff Grade/Associate Specialist
- SHO
- PRHO
- Unknown

27. a. What was the grade (or nearest equivalent) of the surgeon performing the operation.

Number of years grade held?

- Consultant
- SpR
- Staff Grade/Associate Specialist
- Unknown

b. If not performing the operation, please state the consultant's involvement

28. What was the grade (or nearest equivalent) of the surgeon closing the chest?

Number of years grade held?

- Consultant
- SpR
- Staff Grade/Associate Specialist
- SHO
- Unknown

29. Is the surgeon who performed the operation a member of the Society of Cardiothoracic Surgeons?

- Yes No Unknown

K COMMUNICATION AND CONTINUITY OF CARE

30. What was the final operation performed?

31. a. Did you feel there was 'stability' within the theatre team for this case?

- Yes No Unknown

b. Did you feel 'at ease' within the theatre team in this case?

- Yes No Unknown

d. If no, please give details

L MULTIDISCIPLINARY REVIEW AND AUDIT

32. a. Was this patient specifically reviewed at an audit meeting following surgery?

- Yes No Unknown

b. If no, will they be reviewed in the future?

- Yes No Unknown

33. If the outcome was death:

a. Was the patient referred to HM Coroner/Procurator Fiscal?

- Yes No Unknown

b. If yes, was there a coronial/procurator fiscal autopsy?

- Yes No Unknown

c. If no, was a hospital autopsy performed?

- Yes No Unknown

d. Did the surgeon review the autopsy report?

- Yes No Unknown

M PATIENT OUTCOME

34. What was the cause of death (as given on the Medical Certificate of the Cause of Death or as given by HM Coroner's/Procurator Fiscal's pathologist)? *(If applicable)*

1a

1b

1c

2

No report available

STRUCTURED COMMENTARY

On these next two pages we would ask that you provide any additional comments you wish to report about the management of this patient. We have tried to aid this by highlighting some of the areas that you might want to consider. If you find these areas not to be relevant please complete the not applicable box.

The advisors find a summary of the salient features from the perspective of the clinician involved of immense assistance in assessing the case.

Please consider the following areas, with respect to patient outcome, when you fill in this section.

Delays in the admission process.

Not applicable

Deterioration of the patient during hospital transfer.

Not applicable

Delays, absence of, or unclear investigations; if so please give examples.

Not applicable

STRUCTURED COMMENTARY (CONTINUED)

Placing the patient in an inappropriate area.

Not applicable

Cancelled from the operation list.

Not applicable

Did the surgeon have sufficient rest prior to undertaking the surgery?

Not applicable

The management of comorbidities.

Not applicable

The occurrence and management of critical incidents during the per- and postoperative period.

Not applicable

STRUCTURED COMMENTARY (CONTINUED)

The appropriateness of the management of any postoperative complications.

Not applicable

Any hindrance of full monitoring of the patient throughout the procedure.

Not applicable

Inappropriateness of the location of the patient immediately after surgery.

Not applicable

With the benefit of hindsight, was anything you would have done differently during the operation?

Not applicable

Poor continuity of care during inpatient stay.

Not applicable

STRUCTURED COMMENTARY (CONTINUED)

If an autopsy was performed, were any problems with management identified and what was the level of clinicopathological correlation?

Not applicable

Involvement with the multidisciplinary team.

Not applicable

Any additional comments:

EuroSCORE

	Definition	Score
Patient-related factors		
Age	Per 5 years or part thereof over 60 years	1
Sex	Female	1
Chronic pulmonary disease	Long term use of bronchodilators or steroids for lung disease	1
Extracardiac arteriopathy	Any one or more of the following: claudication, carotid occlusion or >50% stenosis, previous or planned intervention on the abdominal aorta, limb arteries or carotids	2
Neurological dysfunction	Disease severely affecting ambulation or day-to-day functioning	2
Previous cardiac surgery	Requiring opening of the pericardium	3
Serum creatinine	>200µmol/L pre-operatively	2
Active endocarditis	Patient still under antibiotic treatment for endocarditis at the time of surgery	3
Critical pre-operative state	Any one or more of the following: ventricular tachycardia or fibrillation or aborted sudden death, pre-operative cardiac massage, pre-operative ventilation before arrival in the anaesthetic room, pre-operative inotropic support, intra-aortic balloon counterpulsation or pre-operative acute renal failure (anuria or oliguria <10ml/h	3

Cardiac related factors		
Unstable angina	Rest angina requiring i.v. nitrates until arrival in the anaesthetic room	2
LV dysfunction	Moderate or LVEF 30-50%	1
	Poor or LVEF <30%	3
Recent myocardial infarct	(<90 days)	2
Pulmonary hypertension	Systolic PA pressure >60 mmHg	2

Operation related factors		
Emergency	Carried out on referral before the beginning of the next working day	2
Other than isolated CABG	Major cardiac procedure other than or in addition to CABG	2
Surgery on thoracic aorta	For disorder of ascending, arch or descending aorta	3
Post infarct septal rupture		4

Nashef Sam, Roques F, Michel P, Gauducheau E, Lemeshow S, Salamon R , European System for Cardiac Operative Rest Evaluation (EuroSCORE), European Journal of Cardiothoracic Surgery 1999, 16:9-13.

DEFINITIONS

<p>Category of operation</p>	<p>Salvage: Patients requiring CPR en-route to the operating theatre or prior to anaesthetic induction. CPR following anaesthetic induction should not be included.</p> <p>Emergency: Unscheduled patients with ongoing refractory cardiac compromise. There should be no delay in surgical intervention irrespective of time or day.</p> <p>Urgent: Patients who have not been scheduled for routine admission from the waiting list but who require surgery on the current admission for medical reasons. They cannot be sent home without surgery.</p> <p>Elective: Routine admission from the waiting list. The procedure can be deferred without risk.</p> <p><i>(Society of Cardiothoracic Surgeons, 2003)</i></p>
<p>Critical incident</p>	<p>Any incident or event which has caused or could have caused an adverse outcome for the patient.</p> <p><i>(CRIME-base Brighton, 2000. www.eee.bham.ac.uk/crime)</i></p>
<p>Levels of care</p>	<p>Level 0: Patients whose needs can be met through normal ward care in an acute hospital.</p> <p>Level 1: Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care whose needs can be met on an acute ward with additional advice and support from the critical care team.</p> <p>Level 2: Patients requiring more detailed observation or intervention including support for a single failing organ system or postoperative care, and those stepping down from higher levels of care.</p> <p>Level 3: Patients requiring advanced respiratory support alone or basic respiratory support together with support of at least two organs. This level includes all complex patients requiring support for multi-organ failure.</p> <p><i>(Department of Health, 2000)</i></p>
<p>Multidisciplinary team</p>	<p>All health care professionals involved in the care of the patient.</p>



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