



**BACTS 2012 Cardiac
Surgery Registry
Version 1.3**

Hospital Code

Unique Patient Identifier

Date of Birth

Gender : male / female

Date of admission :

Date of operation

Date of discharge/death

SURGEON

Surgeon 1 : - - 140

Surgeon 2 : - - 140

CARDIAC HISTORY (before surgery)

Angina Status (CCS class) : CCS 0 CCS 1 CCS 2 CCS 3 CCS 4
Dyspnoe (NYHA grade) : NYHA 1 (Asymptomatic) NYHA 2 NYHA 3 NYHA 4
Most recent myocardial infarction (before operation) :
 No MI < 6 hours 6-24 hrs 1-7 days 8-21 days 22-90 days > 90 days
Number of previous myocardial infarctions : None One Two or more Unknown
Congestive Heart failure: No Yes

PREVIOUS INTERVENTION (before surgery)

Previous PCI : No PCI PCI < 24 hrs PCI > 24 hrs, same admission PCI > 24 hrs, previous admission
Date of last PCI
Previous cardiac, vascular or thoracic surgery: None Valve CABG Other
Date of last cardiac surgery

RISK FACTORS FOR CORONARY DISEASE AND COMORBIDITY

Height: cm Weight: kg
Smoking history : Never smoked Ex-smoker (≥ 1 month) Current smoker
Diabetes : None Diet Oral alone Insulin (with or without oral)
Hypertension : No hypertension Hypertension Not known
Hypercholesterolemia : No Yes
Renal : None Functioning transplant Creat. > 200 $\mu\text{mol/l}$ or 2.27 mg/dl
 Dialysis – acute renal failure Dialysis – chronic renal failure
Last pre-operative creatinine: $\mu\text{mol/l}$ or mg/dl
Chronic lung disease : No COPD / Emphysema Asthma
Extra-cardiac arteriopathy No Peripheral vascular disease Cerebro-vascular disease
Cerebrovascular disease type : Not applicable Coma CVA RIND
 TIA Non-invasive >75 % stenosis on Doppler Previous carotid surgery
Poor mobility / Neurological dysfunction : No Yes
Carotid bruits : No Yes
Pre-operative heart rhythm : Sinus VT/VF Atrial fibril/flutter Complete heart block/pacing Other

PRE-OPERATIVE HAEMODYNAMICS AND CATHETERISATION

Left- or right-heart catheterisation : Never This admission Previous admission
Date of last catheterisation :
Number of diseased coronary vessels (> 50 % diameter stenosis) :
 No vessel One Vessel Two vessels Three vessels Not investigated
Left main stem disease: No LMS disease/LMS disease $\leq 50\%$ LMS disease > 50 % Not investigated
Ejection fraction category : Good ($\geq 50\%$) Moderate (30-49 %) Poor (21-29 %)
 Very Poor (<20%) Not measured
Ejection fraction value (%) :
PA systolic (value if known) :
Pulmonary Hypertension No (< 30 mmHg) Moderate (30-55 mmHg) Severe (> 55 mmHg)
AV peak gradient (value if known) : AV mean gradient (value if known) :
LVEDP (value if known) :
Mean PAWP / LA (value if know) :

PRE-OPERATIVE STATUS AND SUPPORT

IV nitrates: No Yes
 Heparin of any kind : No Yes
 IV inotropes : No Yes
 Ventilated : No Yes

Cardiogenic shock : No Yes
 Critical preop state: No Yes
 Active Endocarditis: No Yes

OPERATION

Operative urgency : Elective Urgent Emergency Salvage
 Main Reason Urgency Anatomy Acute evolving MI Cardiogenic Shock Aortic Dissection
 unstable or worsening angina/ongoing ischaemia Pulm. Oedema
 Valve Dysfunction Transplantation Respiratory failure
 Number of previous heart operations None One Two Three Four Five
 Procedure group : CABG Valve CABG+valve Cabg+other Valve+other CABG+valve+other Other
 Other cardiac procedures : No Yes
 Other non-cardiac procedures No Yes
 Weight of intervention (EuroSCORE): single CABG Single non-CABG two procedures three procedures

CORONARY SURGERY

Distal Coronary Anastomosis – arterial conduits
 Distal Coronary Anastomosis – venous conduits
 Artery / Arteries used as grafts : No arteries used Left IMA Right IMA
 Left radial Right radial Right GEPA Other

VALVE SURGERY

	Aortic Valve	Mitral Valve	Tricuspid Valve	Pulmonary Valve
Stenosis : no/yes				
Insufficiency: 0-4				
Explant type: 0-5				
Native valve pathology: 0-19				
Reason repeat valve surgery: 0-9				
Valve procedure: 1-2				
Implant type: 0-5				
Implant Code:				
Valve/ring size: mm				

Insufficiency : (0=No 1= Trivial 2=Mild 3=Moderate 4=Severe)
 Explant Valve Type : (0= Native Valve; 1= Mechanical; 2= Biological; 3= Homograft; 4= Autograft; 5= Ring)
 Native valve pathology : (0=Native valve not present; 1= Congenital; 2= Degenerative; 3= Active infective endocarditis; 4= Previous infective endocarditis; 5= Rheumatic; 6= Annuloaortic ectasia; 7= Calcific degeneration; 8= Ischaemic; 9= Functional regurgitation; 10= Trauma, 19= other native valve pathology)
 Reason for repeat valve surgery : (0=Not applicable 1=Thrombosis 2=Dehiscence 3=Embolism 4=Infection 5=Intrinsic failure 6=Haemolysis 9=Other reason)
 Valve procedure : (1=Replacement 2=Repair)
 Implant code: see separate list
 Implant Valve type : (0=none 1=Mechanical 2=Biological 3=Homograft 4=Autograft 5=Ring)

OTHER PROCEDURES

Other cardiac procedures detail : None LV aneurysm repair VSD repair ASD repair Batista
 SVR Congenital Transmyocard. Laser revasc. Cardiac trauma Cardiac transplant
 Permanent pacemaker AICD Epicardial lead AF Ablation Surgery
 Surgical Maze Septal Myectomy Cardiac Tumor Acute pulmonary embolectomy
 Pulmonary endarterectomy Pulmonary transplant Ventricular septal rupture
 Free wall rupture BIVAD LVAD RVAD ECMO ECLS Pericardectomy Other

Other non-cardiac procedures detail : None Aorta Other thoracic Carotid endart. Other vascular

Segments of the aorta : Root Ascending Arch Descending Abdominal

Aortic procedure : Interposition tube graft Tube graft and separate AVR / AVP
 Root replacement with composite valve graft and coronary reimplantation
 Root replacement with preservation of native valve and coronary reimplantation
 Homograft root replacement Ross procedure for aortic root pathology (not isolated AVR)
 Aortic patch graft Sinus of valsalva repair
 Reduction aortoplasty EVAR

DATA DEFINITIONS

See also BACTS 2012 Registry Data Specifications document

Hypertension: Treated or BP >140/90 on > 1 occasion prior to admission

Elective: Routine admission from the waiting list; procedure can be deferred without risk

Urgent: Not scheduled for routine admission from the waiting list; requiring surgery on the current admission; cannot be sent home without surgery

Emergent: Unscheduled patients with ongoing refractory compromise; there should be no delay in surgical intervention irrespective of the time of day

Salvage: Patients requiring CPR en route to the operating theatre or prior to anaesthetic induction. This does not include cardiopulmonary resuscitation following induction of anaesthesia.

Extra-cardiac arteriopathy

Peripheral vascular disease as indicated by claudication either with exertion or rest; amputation for arterial insufficiency; aorto-iliac occlusive disease reconstruction; peripheral vascular bypass surgery, angioplasty, or stent; documented AAA, AAA repair, or stent; positive non-invasive testing

Cerebro-vascular disease documented by any one of the following: unresponsive coma > 24 hours; CVA (symptoms > 72 hours after onset); RIND (recovery within 72 hours); TIA (recovery within 24 hours); non-invasive carotid test with > 75% occlusion; prior carotid surgery

Poor mobility / Neurological dysfunction:

Sever impairment of mobility secondary to musculoskeletal or neurological dysfunction

Renal impairment: there are now 3 categories based on creatinine clearance calculated using Cockcroft-Gault formula.

Unlike serum creatinine in the old EuroSCORE model, some of the weighting for age is directly incorporated into this factor, as age is a component of creatinine clearance. The 3 categories are:

on dialysis (regardless of serum creatinine level)

moderately impaired renal function (50-85 ml/min)

severely impaired renal function (<50 ml/min) off dialysis

Critical preoperative state

any one or more of the following: ventricular tachycardia or fibrillation or aborted sudden death, preoperative cardiac massage, preoperative ventilation before arrival in the anaesthetic room, preoperative inotropic support, intraaortic balloon counterpulsation or preoperative acute renal failure (anuria or oliguria <10 ml/hour)

Pulmonary hypertension

Now in 2 classes: moderate PA systolic pressure (31-55 mmHg), severe PA systolic pressure (> 55 mmHg)

Weight of procedure:

Include major interventions on the heart such as CABG, valve repair/replacement, replacement of part of aorta, repair of a structural defect, maze procedure, resection of a cardiac tumor