### **CCT** in Anaesthetics

## **Higher Level Training**



Health Education England (West Midlands)

**Training Guidebook** 

### **Guidance for Higher Level Anaesthetic Trainees**

#### Welcome to Health Education England (West Midlands) Schools of Anaesthesia

You have embarked on a five year Specialist Training Programme and hopefully a successful career in Anaesthesia. Your West Midlands trainers hope very much that you will enjoy the experience & challenges ahead.

Your training will be in one of the 3 schools:

- Birmingham School of Anaesthesia
- Warwickshire School of Anaesthesia
- Stoke School of Anaesthesia

#### CCT in Anaesthesia

The curriculum is divided into stages of training:

- Introduction to Anaesthesia First 3-6 months
- Core Level Training
   Intermediate Level Training
   Years 3 and 4
   ST3 and ST4
- Higher Level Training Years 5 and 6 ST5 and ST6
  - Advanced Level Training Year 7 ST7

This work book covers the Higher Level Training

Higher Level Training is divided into 7 essential and at least 6 optional Units of Training. All Units of Training have formal Work Place Based Assessments (WPBA) identified for them by the RCoA. The minimum standard Set by the RCoA is to undertake one of each relevant WPBA for each Unit of Training (A-CEX, DOPS, CBD, ALMAT). Each School of Anaesthesia is then encouraged to set their own expectations above and beyond this in order to complete each Unit of Training.

#### Completion of Units of Training

In order to complete a Unit of Training and sign off a CUT form, the trainee must demonstrate:

- Achievement of all the Learning Outcomes
- Completion of WPBA's necessary set out in this workbook
- Logbook review
- MSF (if appropriate)
- Consultant Feedback

#### Certificates to be gained in this stage of training

- CCT Certificate of Completion of Training
  - In combination with Advanced Level Training

For further details regarding training in your School of Anaesthesia please visit your website

www.stokeanaesthesia.org.uk www.thebsa.info www.wsoa.org.uk

### **Guidance for Higher Level Anaesthetic Trainees**

### **Units of Training**

<b>Essential Units of Training</b>		Page Number
Anaesthesia for neurosurgery, neuroradiology and ne	uro critical care	4
Cardiothoracic anaesthesia and cardiothoracic critical	care	5
General duties	3 Mandatory units + at least 6 other units	V
Airway management	(Mandatory)	6
Day surgery	VCTRA DESTRUCTION	7
Head, neck, maxillo-facial and dental		8
General, urological and gynaecological surgery		9
Management of respiratory and cardiac arrest	(Mandatory)	10
Non-theatre		11
Obstetrics		12
Orthopaedic	500 500	13
Perioperative medicine	(Mandatory)	14
Regional		15
Sedation		16
Transfer medicine		17
Trauma and stabilisation	Mak 1 TOWN / IN	18
Vascular		19
Intensive care medicine	No Santa da d	20
Paediatric	(Salab)	21
7/4111111	N CTO	1 1/4/4

Optional units of Training	
Pain medicine	
Paediatric intensive care medicine	
Ophthalmic	777
Plastics/Burns = 1	
Anaesthesia in developing countries	
Conscious sedation in dentistry	
Military anaesthesia	
Remote and rural	

# Anaesthesia for Neurosurgery, Neuroradiology & Neurocritical Care

### **Core Clinical Learning Outcomes**

- Deliver safe peri-operative anaesthetic care to complicated ASA 1-3 adult patients requiring complex elective intra-cranial and spinal surgery and neuroradiological investigations under direct supervision.
- Deliver peri-operative anaesthetic care to complicated ASA 1-3 adult patients for emergency noncomplex intracranial and spinal surgery with indirect supervision [i.e. craniotomy for acute sub-dural / acute decompressive lumbar laminectomy]
- Lead the resuscitation, stabilisation and transfer of adult patients with brain injury [Cross reference Transfer section]

- Minimum of 20 clinical sessions
- WPBA's as indicated
- Consultant feedback (sought by the module lead from other neuro consultants)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Acute decompressive craniectomy	1	NA_HS_01
	Complex intra-cranial or spinal surgery	THE	NA_HS_01
	Acoustic neuroma surgery with facial nerve monitoring		NA_HS_01
	Interventional neuroradiological procedures		NA_HS_01
	Demonstrating team leadership in the management of major neurosurgical emergencies	TY You	NA_HS_04
	Conduct a ward round in neuro-critical care	11 1 862	NA_HS_06
CbD	Interventional neurological procedures including coiling	1	NA_HK_01
	Complex spinal surgery including patients with unstable cervical spine	A COLL	NA_HK_01
	Stroke, including SAH, ICH and ischaemic stroke	7	NA_HK_02
	Pre-operative assessment of patients requiring routine or emergency neurosurgery.		NA_HS_01

### **Cardiothoracic Anaesthesia and Cardiothoracic Critical Care**

#### **Core Clinical Learning Outcomes**

- Deliver perioperative anaesthetic care to complicated ASA 1-3 adult patients requiring elective aortic or mitral valve surgery under direct supervision
- Deliver perioperative anaesthetic care to complicated ASA 1-3 adult patients requiring open resection of lung tissue under local supervision

- Minimum of 20 clinical sessions including a logbook with ten pump cases during higher training,
- WPBA's as indicated
- Consultant feedback (sought by the module lead from other cardiac consultants)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Mitral or aortic valve surgery on cardio-pulmonary bypass	1	СТ_НК_0
	Evaluation of patient with borderline respiratory function for lung resection		CT_HK_12
	Anaesthetise a patient for thoracotomy and resection of lung tissue with local supervision.	11/17	CT_HS_12
CbD	Explains the relevance of pre-operative assessment and	I II II	ст нк с
	optimisation of patients with cardiac or thoracic disease.	INT.	AY
	Management of post infarct VSD		ст_нк_с
	Management of post infarct VSD  Anaesthetic technique for complex thoracic aortic repair		СТ_НК_0 СТ_НК_0
			H = -

### **Airway Management**

#### **Core Clinical Learning Outcomes**

- Able to perform elective fibreoptic intubation in patients without serious intra-oral/laryngeal pathology, safely and proficiently, in awake or anaesthetised patients under distant supervision
- Able to manage patients with complex airway disorders, safely and proficiently, in all situations, under local supervision

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Management of the airway in a patient with complex head/neck pathology	1	AM_HS_02
2005		TIV: 1	A.A. U.S. O.
DOPS	Fibreoptic intubation in the awake patient, including consent	_   <i>       </i>	AM_HS_0
	Use of an alternative airway device	]	AM_HS_06
	Correct use of high frequency jet ventilation	111/2	AM_HS_05
ALMAT	Management of an operating list involving multiple patients for airway related surgery, including patients with predicted difficult airway, with appropriate airway management decision making.	1	AM_HS_04

### **Anaesthesia for Day Case Surgery**

#### **Core Clinical Learning Outcome**

• Deliver safe perioperative anaesthetic care to ASA 1-3 patients having more extensive or specialised day surgery procedures with distant supervision

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Anaesthetic management of day case surgical procedures for patients with significant co-morbidity	1	DS_HS_02
CbD	The evidence base for the anaesthetic management of day case procedures for patients with significant co-morbidity and issues presented by the elderly	1	DS_HK_01
ALMAT	Management of an operating list involving multiple patients for day	13	DS_HS_03

### **ENT, Maxillofacial and Dental Anaesthesia**

#### **Core Clinical Learning Outcomes**

- Provides comprehensive safe perioperative anaesthetic care to ASA 1-4 adult patients requiring ENT, maxillo-facial and dental surgery of greater complexity with distant supervision
- Manage ENT, maxillo-facial and dental surgery lists with distant supervision

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Undertake anaesthesia for major ENT or maxillo-facial surgery such as laryngectomy, thyroidectomy or major resection for cancer		EN_HS_02
	Supervise a more junior trainee undertaking uncomplicated ENT or maxillo-facial surgery		EN_HS_11
CbD	Pre-operative assessment and optimisation of patients with significant ENT pathology	1	EN_HK_0
	Anaesthetic technique for laryngectomy		EN_HK_0
	Anaesthetic technique for major head and neck surgery	NAT	EN_HK_0
	Emergency ENT surgery including bleeding tonsil		EN_HS_0
			_
ALMAT	Be an effective member of the MDT, managing elective and emergency cases effectively.	1	EN_HS_0

### General surgery/gynaecology/urology

#### **Core Clinical Learning Outcomes**

- Demonstrates the ability to provide safe and effective perioperative anaesthetic care to high risk emergency surgical cases, including those with potential for massive haemorrhage [e.g. the ruptured aortic aneurysm]
- Demonstrates the ability to provide safe and effective perioperative anaesthetic care for patients requiring complex lower abdominal and/or bariatric surgery
- Working within a multi-disciplinary team, demonstrates the necessary communication, teamwork, leadership, professional and practical [anaesthetic] skills needed to manage patients on elective and emergency general surgery, urology and gynaecology lists, safely and effectively

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case (s)	Minimum Number	Code
A-CEX	Anaesthesia for a major complex general surgery, urology or gynaecology case involving invasive monitoring	- 1	GU_HS_03
	Anaesthesia for a patient with a BMI > 40	用人	GU_HS_03
	Emergency laparotomy		GU_HS_03
	Anaesthesia for complex laparoscopic procedure e.g. anti-reflux surgery	YTY	GU_HK_03
CbD	Discuss the perioperative management of patients with significant co-morbidity (e.g. the elderly, recent cardiac surgery, drug eluting stents and organ system failures (cirrhosis or dialysis dependence).	1	GU_HK_0:
	Principles and interpretation of techniques for assessing coagulation such as thromboelastography.	沙国	GU_HK_02
ALMAT	Be an effective member of the MDT managing an elective/emergency general surgery, urology or gynaecology list safely and effectively.	1	GU_HS_0

### Management of respiratory and cardiac arrest

#### **Core Clinical Learning Outcomes**

The management of patients requiring cardio-respiratory resuscitation [with distant supervision] by

- Demonstrating the ability to lead a multidisciplinary resuscitation team in the initial assessment and management through to definitive care in the Intensive Care Unit if successful [including necessary transfer]
- Leading the debrief sessions for both staff and relatives in a sensitive, compassionate and constructive manner

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
Certificates	ALS	In date	RC_HS_02
Uploaded	APLS/EPLS	11/13	RC_HS_02
A-CEX	Demonstrates the ability to provide comprehensive clinical care throughout the resuscitation attempt and during further care if indicated	12	RC_HS_02
	Demonstrates team leadership and the ability to make end of life decisions and when to cease active treatment in a compassionate and caring manner, including leading the discussion on the appropriateness, or otherwise, of withdrawing treatment with both staff and relatives		RC_HS_04
CL D		4 (7)	DC LIV O
CbD	Legal principles of resuscitation, advanced directives and DNAR orders		RC_HK_0:
	Factors affecting prognostication and the indications for withdrawal of support		RC_HK_02

### **Non Theatre**

#### **Core Clinical Learning Outcome**

• To deliver safe peri-procedure anaesthesia/sedation to adult patients outside the operating theatre, including remote sites, under distant supervision

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Anaesthesia for adult patient undergoing interventional imaging, ECT, cardioversion or radiotherapy	1	DI_HK_01
CbD	Discuss the anaesthetic/sedation needs for complex ASA I-IV patients for procedures that may take place outside the operating theatre, including remote sites	1	DI_HS_01



### **Obstetric Anaesthesia**

#### **Core Clinical Learning Outcomes**

- To be able to provide the appropriate anaesthetic management for any patient who requires emergency obstetric anaesthesia
- To be able to provide elective anaesthetic services to the obstetric unit (excepting those patients with unusual problems who would normally be referred to a specialist centre).

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Undertake the management of caesarean section in a complex obstetric case such as twin delivery, preecampsia, placenta praevia, obstetric haemorrhage	1	OB_HS_05
	Deliver safe and effective general anaesthesia to the obstetric patient in the elective or emergency setting		OB_HS_09
	Demonstrate effective communication with patients and relatives/partners and help alleviate anxiety		OB_HS_10
		17 17 1 1 1	17. 17. 81
CbD	Limitations of a non-specialised maternity unit and appropriate referral to a tertiary unit	1	OB_HK_01
	Discuss current advances and controversies in obstetrics		OB_HK_02
	Construct a safe and effective plan for the management of women with factors complicating pregnancy	7/1	OB_HS_02
	Obstetric emergencies and their management	1	OB_HS_06

### **Orthopaedic Anaesthesia**

#### **Core Clinical Learning Outcome**

 Provide comprehensive safe perioperative anaesthetic care to all ASA 1-4 adult patients for all types of elective and emergency orthopaedic/trauma surgery to the limbs, pelvis and spine [excluding scoliosis surgery] with distant supervision.

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Undertake anaesthesia for major orthopaedic surgery (spinal/scoliosis-surgery, pelvic surgery, hip revision arthroplasty).		OR_HS_05
	Anaesthesia for a patient with significant co-morbidities for an orthopaedic procedure.		OR_HK_01
-1-	83.00	TTI I W	
CbD	Describes an evidence based approach to the management of complex ASA I-IV patients for elective and emergency major orthopaedic surgery.	1	OR_HK_01

### **Perioperative Medicine**

#### **Learning Outcome**

- To deliver high quality preoperative assessment, investigation and management of all patients for elective and emergency surgery
- To deliver high quality individualised anaesthetic care to all patients, focusing on optimising patient experience and outcome
- To plan and implement high quality individualised post-operative care for all patients
- To take a leadership role in the multidisciplinary team in delivering perioperative care

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months) CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Makes complex clinical decisions in the face of uncertainty	1	POM_HS_02
	Uses risk scoring systems to inform communication with patients and colleagues		POM_HS_03
	Interprets the evidence of the use of advanced haemodynamic monitoring	其太	POM_HK_09
	Demonstrates the ability to recognise when standard pathways should be adapted and tailored to individual need		POM_HS_19
CbD	Describes strategies for pre-habilitation and patient optimisation and the limits of such strategies	1	POM_HK_01
	Describes the evidence base for and limitations of Goal-Directed Therapy		POM_HK_08
	Evaluates the benefits and limitations of perioperative patient pathways		POM_HK_13
ALMAT	Leads a medical pre-operative assessment clinic (with appropriate supervision)	1	POM_HS_07

### **Regional Anaesthesia**

#### **Core Clinical Learning Outcomes**

- Demonstrates ability to perform both lower and upper limb plexus/regional blocks with distant supervision.
- Always considers the option of regional anaesthesia in appropriate clinical contexts.

#### **Unit Requirements**

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Manage surgery with regional anaesthesia and sedation for a complex or lengthy procedure.	1	RA_HS_03
	Teach a junior colleague how to do a peripheral nerve block.		RA_HS_08
			17.3
DOPS	Brachial Plexus Block (E)	All (E)	RA_HS_01
	Femoral nerve block (E)	月月上	RA_HS_01
	Thoracic epidural anaesthesia (E)		RA_HS_01
	Other regional blocks including deep cervical, supra and infra clavicular, intercostal, lumbar plexus, and sciatic.	MY	RA_HS_01
	Placement of a catheter for continuous peripheral nerve blockade		RA_HK_01
CbD	Principles of the use of ultrasound for guiding nerve/plexus blocks	1	RA_HK_03
	Principles, practice and complications of catheter techniques for peripheral nerve blocks	沙厦	RA_HK_02
ALMAT	Co-ordinate and manage a list with suitable patients for regional blockade.	1	RA_HS_07

(E) = essential and must be completed by end of year 7 for sign off

### **Sedation**

### **Core Clinical Learning Outcome**

• Demonstrates the ability to provide safe and effective sedation to any patient using whatever drugs required, by whatever route

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Use of sedation in an adult patient with significant co- morbidities	1	CS_HS_02
	Focused pre-operative evaluation of a patient at risk of perioperative mortality/morbidity.		CS_HS_01
		W. 1191	17
CbD	How multiple drug use may enhance sedation techniques, whilst detailing how this increases risk	1	CS_HK_01
	Risks and benefits of specific procedures that require the use of conscious sedation to ensure they are completed successfully.	1 4	CS_HS_02
	How patient age affects choice of sedation technique		CS_HS_03
ALMAT	Demonstrates the ability to supervise and teach safe conscious sedation techniques to less experienced trainees	1	CS_HS_05

# Page 17

### **Higher Level Anaesthetic Competencies**

### **Transfer Medicine**

#### **Core Clinical Learning Outcomes**

- Demonstrates the ability to lead a multidisciplinary team undertaking the initial assessment and stabilisation of patients, prioritising their early treatment
- Demonstrates the leadership and clinical management skills needed to lead teams delivering safe and effective intra-/inter hospital transfer of any patient, however complex, and for prolonged journeys within the UK if required, by either land or air.
- Demonstrates an understanding of the roles and responsibilities of teaching and supervising those undergoing training in the transfer of patients

#### **Unit Requirements**

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio..

NB: Any trainee who has successfully completed a Helicopter Crew Course or equivalent may be assumed to have achieved the competencies below.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Inter or intra hospital transfer of adult patient	- 1	TF_HS_01
	Leadership of the MDT team undertaking a transfer	刊人	TF_HS_06
	Demonstrates the correct use of communication by radio		TF_HS_08
CbD	Principles of handover following a transfer	1	TF_HK_07
	Importance of team working and the roles and responsibilities of medical, ambulance and transfer crew	1/1/8/	TF_HK_08
	Discuss the importance of audit/quality improvement projects of the transfer process, reporting of critical incidents during transfer and research.		TF_HK_11
ALMAT	Demonstrates the necessary organisational and communication skills required to effect the transfer of patients in a timely and efficient manner	1	TF_HK_04
Certificate	Attendance at a Transfer Training Course	Non- essential	All

### **Trauma and Stabilisation**

#### **Core Clinical Learning Outcomes**

The safe management of patients with multiple injuries from arrival in hospital and onwards through definitive treatment with distant supervision by:

- Demonstrating the ability to lead a multidisciplinary trauma team in the initial assessment and stabilisation of the multi-trauma patient and prioritise early further treatment
- Delivering safe anaesthetic management for all multiply injured patients for ongoing assessment and early/definitive treatment

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Anaesthesia for multiply injured patient	1	MT_HS_02
	Lead initial resuscitation in multi-trauma patient	TY//X	MT_HS_01
مار	Ability to lead the multidisciplinary trauma team	11111	MT_HS_01
		I Water con-	
CbD	The role of pre-hospital care of a multiply injured patient including triage and modes of transport to hospital	1(3)	MT_HK_0:
	Importance of good communication networks with the out of hospital emergency services		MT_HK_0
	Importance of major incident planning and the responsibilities of the anaesthetic team		MT_HK_0
ALMAT	Demonstrates good communication skills with all members of the trauma team when leading the clinical care of the multiply injured patient and seek prompt and active advice from specialties not involved in the initial resuscitation when needed	1	MT_HS_0
Certificate	Attendance at ATLS/ETC or equivalent	Non- essential	All

### **Vascular Anaesthesia**

#### **Core Clinical Learning Outcome**

• To anaesthetise patients for carotid endarterectomy and aortic aneurysm surgery with indirect supervision

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Anaesthesia for open repair of abdominal aortic aneurysm with indirect supervision	1	VS_HS_04
	Carotid endarterectomy under general or regional anaesthesia		VS_HS_05
CbD	Pre-operative optimisation of vascular patients with co-existing disease	1	VS_HS_0:
	Methods of risk stratification including scoring systems	DIA S	VS_HK_0
	Methods of assessment of cardiovascular and respiratory disease and their use and limitations preoperatively		VS_HK_0
ALMAT	Be an effective member of the MDT managing elective/emergency vascular list safely and effectively	1	VS_HS_04

### **Intensive Care Medicine**

Please refer to the separate Intensive Care Medicine guidebook available on the Stoke School website.



### **Paediatric Anaesthesia**

#### **Core Clinical Learning Outcomes**

- Be able to resuscitate and stabilise a sick baby or child prior to transfer to a specialist centre
- Provide perioperative anaesthetic care for common surgical conditions, both elective and emergency, for children aged 3 years and older with distant supervision

- WPBA's as indicated.
- Consultant feedback (sought by the supervisor during general duties within the last six months)
- CUT form on e-Portfolio.

e-Portfolio WPBA	Index Case(s)	Minimum Number	Code
A-CEX	Emergency surgery for a child aged three years or older e.g. ORIF fracture, appendicectomy, bleeding tonsil	1	PA_HK_01
	Management of a child with difficult venous access		PA_HS_03
CbD	Management of septic child prior to transfer to PICU	1	PA_HS_1:
	Problems and risks inherent in anaesthesia for former premature babies or children with significant co-morbidity	It L	PA_HK_01

### **Optional Units of Training**

- 1. Pain medicine
- 2. Paediatric Intensive Care Medicine
- 3. Ophthalmic
- 4. Plastics/burns
- 5. Anaesthesia in developing countries
- 6. Conscious sedation in dentistry
- 7. Military anaesthesia
- 8. Remote and rural anaesthesia

If you wish to complete any of these units, please refer to the 2010 curriculum document and discuss with your clinical/educational supervisor the necessary assessments required. These then need to be uploaded to the e-Portfolio as well as a unit of training sign off.

