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| **Bristol School of  Anaesthesia & ICM** **Higher & Advanced Level** **Training Record** version August 2017  Curriculum for Anaesthetics 2010 **Specialty Trainees Years 5, 6 & 7** Trainee name ……………………………………… |

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**Advanced units – specialty-specific**

Neuro *supplement*

Cardiac/Thoracic *supplement*

General duties *supplement*

Airway management *supplement*

Head, neck, maxillo-facial and dental surgery *supplement*

General, urological and gynaecological surgery *supplement*

Hepatobiliary surgery *supplement*

Vascular *supplement*

Day surgery *supplement*

Sedation *supplement*

Orthopaedic surgery *supplement*

Regional *supplement*

Trauma *supplement*

Transfer *supplement*

Intensive care medicine (‘additional’) *supplement*

Obstetric *supplement*

Paediatric *supplement*

Pain medicine *supplement*

Perioperative medicine *supplement*

Plastics/burns *supplement*

**Advanced non-clinical units**

Academic & research *supplement*

Improvement Science *supplement*

Teaching & learning (additional unit for a fellowship placement) *supplement*

Management *supplement*

Introduction

This training record book is based on the ‘CCT in Anaesthetics [2010 Curriculum]’ and is for Specialty Trainees in years 5, 6 & 7 who have already completed their Intermediate Level Training Certificate. It is to be used in conjunction with the RCoA E-portfolio and when completed will provide supporting evidence that the trainee has covered the higher and advanced level curriculum.

The purpose of the training record book is to provide:

* A guide to the curriculum for trainees and trainers
* A self-assessment checklist of knowledge and skills for each Unit of Training
* A summary of completed Units of Training

**Please record the date of completion for each Unit on the Summary pages**

Advanced training

Advanced training is the final preparation for independent practice and normally occurs in ST years 6-7 (preferably year 7).

Advanced training has two aims:

* To develop mastery in specific special interest areas of practice
* To extend the non-clinical skills needed for consultant practice

All trainees must complete 6-12 months advanced training. Those aiming for a more *generalist* training should do up to 12 months, but a minimum of 6 months, focusing on at least two units (e.g. two or more from ‘general duties’, obstetrics, or paediatric). Some units have overlapping competencies (e.g. airway management and head/neck). Typically trainees aiming for *specialist* practice should aim to do 12 months in one special interest area (e.g. cardiac, paediatric, pain medicine).

*To demonstrate completion of advanced training:*

* Completion of Unit of Training (CUT) form for each of the six advanced generic domains:

|  |  |  |
| --- | --- | --- |
| * \*Clinical practice | * Leadership | * Management |
| * Team working | * Innovation | * Education |

* Plus one CUT form for each special interest area (i.e. a minimum of 7 CUT forms in total)

[\*The advanced generic ‘clinical practice’ domain is applicable to the chosen special interest area(s), whereas the other advanced generic domains can apply to a broader range of areas or activities.]

Assessment of the generic domains is by relevant WPBAs, review of activities relating to that domain and multisource 360 and modular consultant feedback.

Anaesthesia trainees contemplating an additional ICM block (up to 6 months) as part of their Anaesthetics CCT need to gain prospective approval from the RCoA training department – discuss with the TPD first and refer to CCT in Anaesthetics - ICM (Annex F): <http://www.rcoa.ac.uk/CCT/AnnexF>.

***In summary – advanced training requirements:***

* Indicative duration usually 12 months
* CUT forms: 6 advanced generic + ≥1 special interest (at least 2 if from ‘general duties’)

*Supplementary Training Record book*

The following units should be printed out as required from the supplementary higher & advanced training record book on the School website:

* Higher clinical units: anaesthesia in developing countries, conscious sedation in dentistry, military anaesthesia, remote & rural anaesthesia
* Advanced clinical units: neuro, cardiothoracic, general (includes airway, head/neck/maxillo-facial/dental, general/urology/gynae, hepatobiliary, vascular, day surgery, sedation, orthopaedic, regional, trauma, transfer), obstetric, paediatric, paediatric ICM, pain medicine, plastics/burns
* Advanced non-clinical units: academic & research, additional teaching & learning unit for a fellowship placement, management

RCoA Assessment Guidance 2015 (abridged)

**The assessment process**

The assessment process contains both formative and summative elements. All assessments are reviewed at the Annual Review of Competence Progression (ARCP).

**Formative assessment**

Formative assessment is *assessment for learning*. The goal of formative assessment is to monitor progress in order to offer ongoing constructive feedback with the aim of improving performance. In formative assessment there is no grade or mark, no pass or fail. Formative assessment must provide good quality feedback; without this the process loses its purpose. The main formative assessments in the training programme are the workplace-based assessments (WPBA).

WPBAs provide only one source of evidence that a trainee has achieved the outcomes of a unit of training. Their purpose is to demonstrate engagement of trainers and trainees in professional educational conversations alongside the logbook, consultant feedback, teaching and course attendance.

*How many WPBA?*

In order to complete a unit of training, trainees should undertake WPBA that contribute to evidence showing the Core Clinical Learning Outcomes have been achieved. There may be several learning outcomes in a unit of training and a single assessment may provide evidence to satisfy more than one learning outcome.

There are minimum RCoA WPBA requirements for each unit of training. These minimum requirements must be met in order to complete a unit of training.

Trainees are generally expected to complete more than the minimum numbers of WPBA and those trainees who are not progressing as expected will be required to complete a greater number of assessments. It is unnecessary and unrealistic to undertake an assessment for each individual competence.

Core clinical learning outcomes for each Unit of Training must be assessed.

ICM is assessed in a different way (as recommended by the FICM). For details see the ICM pages.

*The WPBA process*

* Feedback is the most important element of a WPBA
* Areas for assessment should be identified prior to starting a list, and the trainee should ask the trainer in advance to perform an assessment
* **Requesting assessments retrospectively is considered bad practice, except in CBDs**
* The trainer should observe the performance of the trainee, and give immediate verbal feedback as well as suggestions for future development, further reading etc.
* Trainers should comment on clinical and non-clinical aspects of performance, such as professionalism and team-working
* If facilities exist and it is safe to do so, the assessment can be documented on the e-portfolio at this time; this is the ideal situation
* If the e-portfolio form cannot be completed at this time, the trainee will send a request for assessment to the trainer electronically
* Verbal feedback should always take place at the time of the assessment
* The trainer should complete the e-portfolio form as soon as possible
* **If the WPBA relates to a Core Learning Outcome** for one or more unit of training, the trainee should **link** the form to the relevant unit(s) of training so that the assessment can be used as evidence for the Completion of Unit of Training. (If WPBA does **not** relate to a CLO, **do not link** it to that unit of training.)

For assistance with the e-portfolio, try the School e-portfolio lead, the School Manager, the e-portfolio pages in the Careers & Training section of the RCoA website, or contact [e-portfolio@rcoa.ac.uk](mailto:e-portfolio@rcoa.ac.uk).

*Who can assess?*

Consultants, specialty anaesthetists and trainees can perform WPBA. Assessors must possess expertise in the area to be assessed and be familiar with the assessment process. Senior trainees and non-medical staff may undertake WPBA if they have completed appropriate training, and if the college tutor/educational supervisor considers it appropriate. The ES may need to enter the assessment in the e-portfolio. [In the Bristol School ST5-7 trainees may perform WPBA on those ST4 and below; and ST3-4 trainees on CT2 and below. Until a trainee has attended formal additional training a trainee is limited to performing one WPBA per trainee per placement.]

**Summative assessment**

Summative assessment is *assessment of learning* and results in a mark or grade, pass or fail. The goal of summative assessment is to test knowledge or performance against set criteria. The summative assessment in the anaesthetic training programme takes the following forms:

1. *Completion of Unit of Training (CUT)*

The CUT form (on the e-portfolio) provides evidence that a trainee has achieved the learning outcomes for a Unit of Training. Supervisors should draw upon a range of evidence including the logbook of cases completed, workplace-based assessments and consultant feedback to inform their decision as to whether the learning outcomes have been achieved. The logbook review should consider the mix of cases, level of supervision and balance of elective and emergency cases, if relevant, for the unit. Any other evidence provided by the trainee, such as course attendance certificates can be reviewed at this time. Evidence should be uploaded and assigned to the relevant CUT form, or alternatively outlined by the trainer in the ‘comments’ section of the CUT form. Trainees need to complete one MSF per year; this is not required for each Unit of Training.

All hospitals must identify appropriate designated trainers to sign the CUT form for each unit of training. Each trainer should be familiar with the Core Clinical Learning Outcomes for the unit of training and be able to provide guidance for trainees who have not yet achieved the learning outcomes. It is possible for a trainee to have all WPBAs signed off but not successfully complete the unit because of, for example, professional attitudes or inappropriate non-technical skills i.e. characteristics which will be captured by consultant feedback.

The professional judgement of the supervisor will ultimately determine whether it is appropriate to sign the Completion of Unit of Training form for a trainee.

1. *Consultant feedback*

Consultant feedback is an important source of evidence when assessing trainees’ performance. This means of assessment is valuable in identifying trainees who are performing above and below the standard expected at their level. It is now a mandatory part of completing each unit of training, and should assure whoever signs the CUT form that the trainee is considered competent to provide anaesthesia and perioperative care to the required level in this unit of training.

Consultant feedback differs from MSF as it concerns a trainee’s progress in a specific unit of training only.

The completion of each specialist unit of training (neuro/paeds/cardiac/ICM) must involve consultant feedback. For general duties units, it may be more appropriate to complete the feedback across the whole department. However, completing general duties units need not be delayed until ‘end of posting’ feedback is complete; in this case the trainer signing the CUT form must satisfy themselves (by verbal consultation if necessary) that those involved in training in the unit in question agree that the trainee has completed the unit satisfactorily.

Consultant feedback should be collated, linked to the Unit of Training and presented in the ESSR at ARCP. It should be discussed with the trainee during or at the end of a Unit of Training.

1. *Multisource feedback (MSF ‘360’)*

Most professional interaction occurs without the direct supervision of a consultant. MSF is the best way to assess the whole of a anaesthetist’s practice especially professional behaviours and attitudes. MSF should be sought (at least) once per year using the e-portfolio. A broad range of views should be included from nurses, ODPs, admin staff, consultants, SAS and other trainees. The larger the number of respondents the more representative the picture will be – about 24 requests is a reasonable number. Six weeks should be allowed for completion including discussion of the results with your ES.

1. *Educational Supervisor Reports*
2. *Educational supervisor’s structured report (ESSR)* Completed once per year prior to the ARCP and summarises the trainee’s progress throughout the year.
3. *Intermediate Progress Report (IPR)* Contains similar information to an ESSR and summarises the progress of a trainee in a placement. It is used when trainees undertake multiple short rotations during a year or before a prolonged period of absence (e.g. maternity leave, OOPT) if an ARCP is not due.

Both ESSR and IPR are available on the e-portfolio.

1. *Annual Review of Competence Progression (ARCP)*

The ARCP is the formal process where the trainee’s progress is reviewed, usually on an annual basis. The ESSR forms the basis of the evidence that is reviewed at the ARCP and other evidence such as the logbook, audit, research, teaching, management and exam results are considered when awarding an ARCP outcome. A satisfactory outcome at the ARCP is required in order to progress through the training programme. Details of the ARCP process can be found in the curriculum document on the RCoA website and in the Gold Guide.

Summary of completed **HIGHER** units

Trainee name: GMC no:

*Date when each unit is completed and signed off in the e-portfolio.*

|  |  |
| --- | --- |
| Higher clinical units *(essential)* | Date of CUT in  e-portfolio |
| Neuro |  |
|  |  |
| Cardiac/Thoracic |  |
|  |  |
| General duties *[minimum 9, \* = essential for all]* |  |
|  |  |
| Airway management\* |  |
|  |  |
| Day surgery |  |
|  |  |
| Head, neck, maxillo-facial and dental |  |
|  |  |
| General, urological and gynaecological surgery |  |
|  |  |
| Management of respiratory and cardiac arrest\* |  |
|  |  |
| Non-theatre |  |
|  |  |
| Obstetric |  |
|  |  |
| Orthopaedic |  |
|  |  |
| Perioperative medicine\* |  |
|  |  |
| Regional |  |
|  |  |
| Sedation |  |
|  |  |
| Transfer medicine |  |
|  |  |
| Trauma and stabilisation |  |
|  |  |
| Vascular surgery |  |
|  |  |
| Intensive care medicine *(3m higher block)* |  |
|  |  |
| Paediatric |  |
|  |  |
| Higher clinical units *(optional)* | Date of CUT in  e-portfolio |
| Pain medicine |  |
|  |  |
| Ophthalmic |  |
|  |  |
| Paediatric intensive care medicine |  |
|  |  |
| Plastics/Burns |  |
|  |  |
| Anaesthesia in developing countries |  |
|  |  |
| Conscious sedation in dentistry |  |
|  |  |
| Military anaesthesia |  |
|  |  |
| Remote and rural anaesthesia |  |
|  |  |
| Higher non-clinical units *(essential)* | Trainee sign & date when completed |
| Academic & research |  |
|  |  |
| Teaching & learning |  |
|  |  |
| Management |  |

Summary of completed **ADVANCED** units

Trainee name: GMC no:

*Date when each unit is completed and signed off in the e-portfolio.*

|  |  |
| --- | --- |
| Advanced generic units *(essential)* | Date of CUT in  e-portfolio |
| Domain 1 – Clinical practice |  |
|  |  |
| Domain 2 – Team working |  |
|  |  |
| Domain 3 – Leadership |  |
|  |  |
| Domain 4 – Innovation |  |
|  |  |
| Domain 5 – Management |  |
|  |  |
| Domain 6 – Education |  |
|  |  |
| Advanced clinical units *(minimum of one)* | Date of CUT in  e-portfolio |
| Neuro |  |
|  |  |
| Cardiac/Thoracic |  |
|  |  |
| General duties |  |
| Airway management |  |
|  |  |
| Head, neck, maxillo-facial and dental surgery |  |
|  |  |
| General, urological and gynaecological surgery |  |
|  |  |
| Hepatobiliary surgery |  |
|  |  |
| Vascular |  |
|  |  |
| Day surgery |  |
|  |  |
| Sedation |  |
|  |  |
| Orthopaedic surgery |  |
|  |  |
| Regional |  |
|  |  |
| Trauma |  |
|  |  |
| Transfer |  |
|  |  |
| Intensive care medicine *(‘additional’, up to 6m, prospective approval required)* |  |
|  |  |
| Obstetric |  |
|  |  |
| Paediatric |  |
|  |  |
| Paediatric intensive care medicine |  |
|  |  |
| Pain medicine |  |
|  |  |
| Perioperative medicine |  |
|  |  |
| Plastics/burns |  |
|  |  |
| Advanced non-clinical units *(optional)* | Trainee sign & date when completed |
| Academic & research |  |
|  |  |
| Improvement Science |  |
|  |  |
| Teaching & learning (additional unit for a Fellowship placement) |  |
|  |  |
| Management |  |

Neuroanaesthesia

Anaesthesia for neurosurgery, neuroradiology and neurocritical care

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| **Learning objectives:**   * Build on the knowledge, understanding and skills gained during intermediate training * Become more independent in managing neurosurgical anaesthesia as demonstrated by requiring less consultant guidance and supervision |

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| **Core clinical learning outcomes:**   * Deliver safe perioperative anaesthetic care to complicated ASA 1-3 adult patients requiring complex elective intra-cranial and spinal surgery and neuroradiological investigations under direct supervision * Deliver perioperative anaesthetic care to complicated ASA 1-3 adult patients for emergency non-complex 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 ref: Transfer] |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate numbers of WPBAs – minimum A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Risks and benefits of available anaesthetic techniques for all aspects of neurosurgery and neuroradiology identified at the intermediate level and in addition for:  • Acoustic neuroma surgery and facial nerve monitoring • Complex spinal surgery  • Interventional neuroradiological procedures including coiling of intracranial aneurysms and embolisation of vascular lesions |  |  |  |
| Anaesthetic and critical care implications of stroke including but not exclusively: subarachnoid haemorrhage, intracerebral haemorrhage and ischaemic stroke; indications for, and the management of techniques for spinal drainage |  |  |  |
| Indications and risks of therapies and monitors available to achieve optimal intracranial pressure and cerebral perfusion in both neuroanaesthesia and neuro-critical care |  |  |  |
| Current trends in the management of all aspects of neuroanaesthesia and neuro-critical care |  |  |  |
| Critically evaluate the preoperative condition, plan appropriate optimisation and deliver perioperative anaesthetic care to adult patients requiring routine and emergency neurosurgery |  |  |  |
| Provide perioperative anaesthetic care for complex spinal surgery [including patients with unstable cervical spines] |  |  |  |
| Engage appropriately in compassionate and authoritative discussions with patients preoperatively about the risks and complications associated with major neurosurgery |  |  |  |
| Authority and team leadership in the management of major neurosurgical emergencies |  |  |  |
| Supervise and teach less experienced trainees in all aspects of neuroanaesthesia |  |  |  |
|  |  |  |  |
|  |  |  |  |
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Cardiac/Thoracic

Cardiothoracic anaesthesia & cardiothoracic critical care. (Some competences may be achieved not only in the theatre setting, but also in the cardiac catheterisation suite.)

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| **Learning objectives:**   * Build on the knowledge, understanding and skills gained during intermediate training * Understand the place and value of the more complex monitoring devices used in the perioperative period * Understand the role of minimally invasive surgery for the treatment of cardiac disease and the specific anaesthetic requirements for such surgery * Provide safe and effective anaesthetic care for elective mitral/aortic valve surgery and/or coronary artery surgery and open thoracic surgery under direct supervision * Provide safe and effective care to patients admitted with acute chest trauma |

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| **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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate numbers of WPBAs – minimum A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Preoperative assessment and optimisation of patients with cardiac and thoracic disease; in depth understanding of commonly performed investigations including cardiac catheterisation, echocardiography, stress testing, radionucleotide testing & pulmonary function tests |  |  |  |
| Risks & benefits of anaesthetic techniques for all aspects of cardiothoracic surgery & cardiology identified at the intermediate level & in addition for:  • Mitral valve repair and replacement • Management of post infarct VSD • Complex thoracic aortic reconstruction  • Interventional cardiological procedures e.g. transvenous device placement for ASD and Aortic valve surgery |  |  |  |
| Anaesthetic requirements for complex cardiac and thoracic procedures, including circulatory arrest, partial bypass, chest wall resection |  |  |  |
| Physical, physiological and psychological support required for patients in the immediate postoperative period for all cardiac and thoracic procedures, including cardiovascular support systems; changes that can occur in the postoperative period associated with such surgery [including postoperative cognitive and neurological deficit, timing of withdrawal of mechanical support] |  |  |  |
| Surgical principles involved in common cardiology procedures including coronary stenting, atrial septal defect closure, ablation, pacemaker insertion, defibrillator insertion and other electrophysiological procedures, and their perioperative anaesthetic care. |  |  |  |
| Problems of anaesthetising the adult patient with congenital heart disease and also their management during anaesthesia |  |  |  |
| Perioperative anaesthetic management of adult patients with intrathoracic aortic pathology requiring surgery including [but not exclusively]:  • Assessment of thoracic aortic dissection and how this influences arterial line placement  • Indications for spinal drainage • Techniques available to monitor cerebral well being during thoracic aortic surgery |  |  |  |
| Management of postoperative bleeding in cardiac patients; signs and symptoms of cardiac tamponade, its clinical management and appropriate investigation [including any appropriate near patient testing]; indications for return to theatre versus continued haematological support. |  |  |  |
| Specific implications of blood and blood product transfusion on patient morbidity in cardiac surgery |  |  |  |
| Critically evaluate and present the salient features of the preoperative condition of patients with cardiac disease including, where relevant, decisions made within a cardiac MDT |  |  |  |
| Provide patients with information on the risks associated with complex cardiac procedures from an anaesthetic perspective |  |  |  |
| Perioperative anaesthetic care for high risk cardiac procedures, including valve surgery |  |  |  |
| Understanding of when patients are suitable for “fast track” surgery and appropriate anaesthetic management |  |  |  |
| Manage p’t for CPB, incl myocardial protection, coagulation managem’t, transfer to postop care unit & weaning from bypass with local supervision, incl:  • Understanding anaesthetist’s role in perfusionist administration of drugs • Problems with prolonged bypass & how to deal with them  • Issues surrounding disconnections, air embolisation and acid base management |  |  |  |
| Appropriate use of cardiac investigations and monitoring such as the Oesophageal Doppler, Transthoracic and Transoesophageal Echo, LIDCO, PICCO and a variety of non-invasive monitors for determining cardiac output in patients undergoing cardiac surgery |  |  |  |
| Provide a team management plan for the postoperative critical care of patients who have had cardiac surgery, including the management of associated cardiovascular problems and communicate this plan effectively to CICU staff |  |  |  |
| Recognise, and appropriately manage, patients with excessive bleeding after cardiac surgery including the investigation and immediate management of a patient with cardiac tamponade |  |  |  |
| Manage patients with assist devices Including indications for insertion and withdrawal |  |  |  |
| Leadership skills during resus & stabilisation of a sick cardiac patient preoperatively; defend decisions made, by reference to current literature |  |  |  |
| Active participation in preoperative assessment and preparation of patients for thoracic surgery; understanding of suitability for surgery, or need for optimisation of a patient for thoracic surgery; defend the decisions made with reference to current literature. Examples might include:  • Patient with borderline lung function for pneumonectomy • Relative merits of open versus video assisted lung resection |  |  |  |
| Perioperative anaesthetic care to patients undergoing thoracic surgery including procedures such as bronchoscopy, video assisted thoracoscopic surgery (VATS) and thoracotomy for lung resection |  |  |  |
| Understanding of ventilatory issues through appropriate airway and ventilatory management including the ability to utilise ventilatory strategies to minimise barotrauma or re-expansion pulmonary oedema |  |  |  |
| Management of chest drains |  |  |  |
| Postop management plan for thoracic patients; understanding of the physiological and physical changes that occur following thoracic surgery [including a rational approach to postop pain management and the use of multimodal therapies] |  |  |  |
| Manage patients with chest trauma, including recognition & management of pneumo- and haemo-thorax, fractured ribs and flail segments |  |  |  |

Airway management

Mandatory ‘general’ unit of higher training; shares a number of important competencies with Head, neck, maxillo-facial and dental surgery.

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| **Learning objectives:**   * Become skilled at managing the more complex airways by building upon intermediate knowledge, skills and experience |

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| **Core clinical learning outcomes:**   * Elective fibreoptic intubation in patients without serious intra-oral/laryngeal pathology, safely and proficiently, in awake or anaesthetised patients under distant supervision * Manage patients with complex airway disorders, safely and proficiently, in all situations, under local supervision |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum A-CEX ×1, ALMAT ×1, DOPS ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Novel airway techniques, retrograde catheters and airway exchange devices |  |  |  |
| Awake elective fibreoptic intubation, including obtaining consent |  |  |  |
| Fibreoptic intubation for elective cases including for those with airway pathology under distant supervision |  |  |  |
| Fibreoptic intubation for emergency cases including for those with airway pathology under direct supervision |  |  |  |
| Management of an operating list involving multiple patients for airway related surgery, including patients with predicted difficult airway, with appropriate airway management decision making |  |  |  |
| Jet ventilation [Cross ref: ENT] |  |  |  |
| Use of a variety of advanced airway management techniques |  |  |  |
| Demonstrates the use of novel methods of laryngoscopy including but not limited to:  • Straight blade laryngoscope • Videolaryngoscopy |  |  |  |

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Day surgery

‘General’ unit of higher training; many of the competencies may be achieved while managing appropriate day case procedures as part of other higher units of training.

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| **Learning objectives:**   * Develop expertise by building on the knowledge, understanding and skills gained in the intermediate level day surgery curriculum * Become more independent in managing anaesthesia for day case lists as demonstrated by requiring less consultant guidance and supervision |

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| **Core clinical learning outcomes:**   * Safe perioperative anaesthetic care to ASA 1-3 patients having more extensive or specialised day surgery procedures with distant supervision |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum A-CEX ×1, ALMAT ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Evidence based approach to the anaesthetic management of day case procedures for patients with a range of significant co-morbidities, and issues presented by the elderly |  |  |  |
| Team leadership and communication skills necessary to effectively manage day surgical lists to the benefit of patients and the organisation |  |  |  |
| Critical evaluation of preoperative condition and suitability of patients with significant comorbidities for day surgical procedures |  |  |  |
| Supervision and teaching of less experienced trainees in all aspects of anaesthesia for day surgery, whilst recognising limitations of expertise |  |  |  |
|  |  |  |  |
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Head, neck, maxillo-facial and dental surgery

‘General’ unit of higher training; shares a number of important competencies with the Airway management unit

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| **Learning objectives:**   * Build on knowledge, skills and experience acquired in the intermediate syllabus * Supervise more junior colleagues providing perioperative anaesthetic care for minor/intermediate cases in these surgical sub-specialties * Acquire knowledge, skills and experience treating complex clinical cases and challenging airway situations |

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| **Core clinical learning outcomes:**   * Comprehensive safe perioperative anaesthetic care to ASA 1-4 adult patients requiring Head, neck, maxillo-facial and dental [where available] surgery of greater complexity with distant supervision * Head, neck, maxillo-facial and dental [where available] surgery lists with distant supervision |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum A-CEX ×1, ALMAT ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Principles of preoperative assessment and optimisation of patients with significant ENT pathology and/or with concomitant disease [ASA 3 or 4] including team approaches to planning and management of such complex surgery |  |  |  |
| Anaesthetic techniques used for more complex surgery including, but not exclusively:  • Laryngectomy  • Major head and neck surgery  • Procedures requiring multi-disciplinary surgical teams |  |  |  |
| Techniques used to assist the preservation of facial nerve function during procedures such as parotid and mastoid surgery |  |  |  |
| Pathophysiological effects of chemotherapy and radiotherapy |  |  |  |
| Managing nutrition in major head and neck surgery and how this can be optimised |  |  |  |
| Postoperative management and complications of patients who have had complex maxillofacial surgery including but not exclusively jaw wiring, tracheostomy and HDU/ICU care |  |  |  |
| Paediatric syndromes associated with the need for anaesthesia for ENT and maxillo facial surgery, the range of surgical procedures performed and the implication for perioperative anaesthetic care [Cross ref: Paediatrics] |  |  |  |
| Assess preoperative condition and plan appropriate optimisation for patients with significant ENT pathology and/or concomitant disease [ASA 3 or 4] requiring complex surgery |  |  |  |
| Perioperative anaesthetic care to patients requiring complex ENT and maxillo-facial surgery including but not exclusively:  • Those in which the airway presents particular difficulty, such as those requiring laryngectomy  • Complex middle ear surgery  • Complex cancer surgery |  |  |  |
| Induction of anaesthesia by the inhalational route for adult and paediatric patients |  |  |  |
| Manage a list of complex cases, such as thyroidectomy or middle ear surgery; possibly mixed with more common procedures, intermediate supervision and a mixture of adults and children |  |  |  |
| Perioperative anaesthetic care for patients where preservation of the facial nerve is required e.g. parotid surgery |  |  |  |
| Surgical airway techniques [Cross ref: critical incidents; cardio-respiratory arrest] |  |  |  |
| Jet ventilation in both the emergency and elective situation [Cross ref: airway management] |  |  |  |
| Perioperative anaesthetic care for emergency ENT surgery, including bleeding tonsil under distant supervision |  |  |  |
| Being an effective member of a multi-disciplinary team, managing all elective and emergency cases/lists in these surgical sub-specialties, safely and effectively; demonstrating essential generic communication, teamwork, leadership and professional skills, as well as those specific to the perioperative anaesthetic care of the patients |  |  |  |
| Communication skills with patients and relatives particularly when allaying anxiety in patients who recognise that their surgical/medical condition is a severe risk to life, or when things have not gone well |  |  |  |
| Supervise and teach less experienced trainees in all aspects of Head, neck, maxillo-facial and dental anaesthesia whilst recognising the limitations of their expertise |  |  |  |
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General, urological and gynaecological surgery

‘General’ unit of higher training

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| **Learning objectives:**   * To supervise more junior colleagues providing perioperative anaesthetic care for general surgery, gynaecology, urology * To anaesthetise patients of all ASA grades for complex surgery |

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| **Core clinical learning outcomes:**   * 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] * Provide safe and effective perioperative anaesthetic care for patients requiring complex lower abdominal and/or bariatric surgery * Working within a multi-disciplinary team, demonstrate 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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum A-CEX ×1, ALMAT ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Evidence based approach to the management of complex ASA I-IV patients for elective and emergency major non-cardiac, non-neurological surgery, including, but not exclusively, the management of patients with significant comorbidity, recent cardiac surgery, the elderly, drug-eluting stents and organ system failure [e.g. cirrhosis/dialysis dependence] |  |  |  |
| Principles and interpretation of novel techniques for assessing coagulation, such as thromboelastography |  |  |  |
| Recommendations from NCEPOD reports; ways in which these influence care of the non-elective surgical patient |  |  |  |
| Focussed preoperative evaluation of patients of all ASA grades who are at risk of postoperative morbidity, including the implementation of risk stratification methods such as scoring systems and measures of functional capacity [including basic interpretation of cardiopulmonary exercise testing results] |  |  |  |
| Effective contribution to surgical decision making including the risks and benefits of surgery |  |  |  |
| Safe and effective perioperative anaesthetic care to patients of all ASA grades requiring major intra-abdominal surgery covered in this unit of training under distant supervision including, but not exclusively:  • Complex colo-rectal, gynaecological and urological surgery • Bariatric surgery  • High risk emergency surgery, including those with potential for massive haemorrhage [e.g. ruptured aortic aneurysm [Cross ref: vascular]] |  |  |  |
| Safe and appropriate use of equipment used to manage major blood loss during surgery, including but not exclusively rapid infusion and cell saver devices |  |  |  |
| Effective member of a multi-disciplinary team managing elective and emergency general surgery, urology and gynaecology lists; essential generic communication, teamwork, leadership and professional skills, as well as those specific to the perioperative anaesthetic care of the patients |  |  |  |
| Participate effectively in the postoperative care of the patient as part of a multi-disciplinary team |  |  |  |
| Supervise and teach less experienced trainees in all aspects of complex major colorectal, gynaecological and urological surgery |  |  |  |
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Management of respiratory and cardiac arrest

Mandatory ‘general’ unit of higher training. Because of the nature of this learning, and the fact that episodes where skills and knowledge can be tested occur infrequently and unexpectedly, it is intended that competence is only tested in simulation in the course of organised courses such as ALS and APLS.

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| **Learning objectives:**   * Develop expertise by building on the knowledge, understanding and skills gained during intermediate training |

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| **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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Pass a certified life support course e.g. ALS, APLS or similar (or have current certification) or an equivalent assessment including A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Legal principles of resuscitation, advanced directives and DNAR orders |  |  |  |
| Factors affecting prognostication and the indications for withdrawal of support |  |  |  |
| Gain a surgical airway [Cross ref: Intensive Care] |  |  |  |
| Provide comprehensive clinical care throughout the resuscitation attempt and during further care if indicated |  |  |  |
| Initiate and manage therapeutic hypothermia when indicated |  |  |  |
| Team leadership and the ability to make end of life decisions; 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 |  |  |  |
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Non-theatre

Anaesthesia and sedation outside of the operating theatre

‘General’ unit of higher training. Many of the competencies can be achieved in the course of completing a number of other units, both general and specialist.

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| **Learning objectives:**   * Develop expertise by building on the knowledge, understanding and skills gained in the intermediate curriculum * Become more independent in managing patients in a greater variety of out of theatre environments, including remote sites, under distant supervision [See section 6.2 for greater detail about Remote Site supervision] |

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| **Core clinical learning outcomes:**   * To deliver safe peri-procedure anaesthesia/sedation to adult patients outside the operating theatre, including remote sites, under distant supervision |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Peri-procedure [diagnostic or therapeutic, elective or emergency] anaesthetic/sedation needs for complex ASA 1-4 patients that may take place outside the operating theatre, including remote sites, including but not exclusively in the following settings:  • Radiology suite  • Radiotherapy  • ECT |  |  |  |
| Team leadership and communication skills necessary to manage cases/lists effectively in any non-theatre environment to the benefit of patients and the organisation |  |  |  |
| Critically evaluate the preoperative condition and suitability of patients with significant comorbidities for such procedures |  |  |  |
| Supervise and teach less experienced trainees, whilst recognising their limitations |  |  |  |
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Obstetrics

‘General’ unit of higher training

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| **Learning objectives:**   * Build on the experience gained in intermediate training and achieve a greater emphasis on undertaking more complex obstetric cases |

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| **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] |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Limitations of a non specialised maternity unit and appropriate referral to a tertiary unit |  |  |  |
| Current advances and controversies in obstetrics |  |  |  |
| Assessment of women with factors complicating pregnancy |  |  |  |
| Construct a safe and effective plan for the management of a women with factors complicating pregnancy |  |  |  |
| Be an effective part of a multidisciplinary team |  |  |  |
| Manage an elective caesarean section list effectively, to the benefit of patients and the organisation |  |  |  |
| Manage an elective or emergency caesarean section for placenta praevia |  |  |  |
| Manage emergencies including pre-eclampsia, eclampsia, major haemorrhage |  |  |  |
| Regional anaesthesia using a variety of techniques including spinal, epidural, combined spinal-epidural and abdominal wall blocks in both normal and ‘difficult’ backs |  |  |  |
| General anaesthesia to the obstetric patient, both in elective and emergency settings; anticipate, recognise and manage the expected and unexpected difficult airway |  |  |  |
| Allaying anxiety and helping mothers deal with disappointment |  |  |  |
| Effective communication with patients and relatives/partners, including when things have not gone well |  |  |  |
| Providing information about analgesia and anaesthesia to pregnant women, with or without complicating factors, to midwives and other professional groups |  |  |  |
| Supervise and teach less experienced trainees in all aspects of obstetric anaesthesia |  |  |  |
| Participation in local processes for monitoring the standards of practice |  |  |  |
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Orthopaedic surgery

‘General’ unit of higher training

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| **Learning objectives:**   * Build on the knowledge, understanding and skills gained during intermediate training * Become more independent in managing anaesthesia for complex orthopaedic surgery as demonstrated by requiring less consultant guidance and supervision |

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| **Core clinical learning outcomes:**   * 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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Evidence based approach to the management of complex ASA I-IV patients for elective and emergency major orthopaedic [including spinal] surgery, including, but not exclusively, the management of patients with significant comorbidity, the elderly, recent cardiac surgery, drug-eluting stents and organ system failure |  |  |  |
| Critically evaluate the preoperative condition, plan appropriate optimisation and deliver safe perioperative anaesthetic care to all adult patients however complex requiring routine and emergency orthopaedic surgery |  |  |  |
| Team leadership and communication skills necessary to manage major orthopaedic surgical emergencies |  |  |  |
| Provide comprehensive safe perioperative anaesthetic care for:  • Spinal surgery including scoliosis surgery • Pelvic fracture surgery • Fixation of long bone fractures in the multiply injured patient |  |  |  |
| Manage both elective and emergency orthopaedic surgical sessions effectively to the benefit of patients and the organisation |  |  |  |
| Effective communication skills with patients and relatives particularly when allaying anxiety in patients who recognise that their surgical/medical condition is a severe risk to life, or when things have not gone well |  |  |  |
| Supervise and teach less experienced trainees in all aspects of anaesthesia for orthopaedic surgery, whilst recognising the limitations of their expertise |  |  |  |

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Perioperative medicine

Mandatory ‘general’ unit of higher training. Intended to run in parallel with other units of training and not designed to be undertaken as a standalone dedicated module. Learning outcomes are applicable to all patients and will be achievable during clinical practice whilst undertaking the other units of training. Demonstrating the ability to lead a medical preoperative assessment clinic is a mandatory component of this unit of training.

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| **Learning objectives:**   * Deliver high quality preoperative assessment, investigation and management of all patients for elective and emergency surgery * Deliver high quality individualised anaesthetic care to all patients, focusing on optimising patient experience and outcome * Plan and implement high quality individualised postoperative care for all patients * Take a leadership role in the multidisciplinary team in delivering perioperative care |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| PREOPERATIVE CARE |  |  |  |
| Strategies for prehabilitation and patient optimisation and the limits of such strategies |  |  |  |
| Comprehensive knowledge of enhanced recovery pathways and their limitations |  |  |  |
| Relevance of assessments of the patient’s functional cardiorespiratory capacity to perioperative decision making |  |  |  |
| How quality improvement principles could be used to develop local services |  |  |  |
| Critical analysis of evidence related to perioperative practice |  |  |  |
| Importance of primary and social care in perioperative pathways |  |  |  |
| Effects of ethnicity on disease processes |  |  |  |
| Demonstrate a holistic and patient centred approach to care |  |  |  |
| Make complex clinical decisions in the face of uncertainty |  |  |  |
| Use risk scoring systems to inform communication with patients and colleagues |  |  |  |
| Discuss treatment options and risks with patients, including those with complex comorbidities, taking into account individual needs and requirements |  |  |  |
| Take a collaborative approach to perioperative decision making with colleagues |  |  |  |
| Communicate effectively with patients and colleagues as part of integrated care |  |  |  |
| Lead a medical preoperative assessment clinic (with appropriate supervision) |  |  |  |
| Contribute sensitively to discussions with patients, relatives and colleagues when significant uncertainty exists with regards to the benefits of a proposed procedure versus the burdens of treatment |  |  |  |
| INTRAOPERATIVE CARE |  |  |  |
| Evidence base for and limitations of Goal-Directed Therapy; use Goal-directed Therapy in clinical practice |  |  |  |
| Interpretation of evidence for the use of advanced haemodynamic monitoring |  |  |  |
| Evidence regarding the impact of anaesthetic technique on patient outcome |  |  |  |
| Techniques to minimise deviations in physiological parameters that may affect outcome |  |  |  |
| Coherent fluid management strategy including the use of blood products |  |  |  |
| Demonstrate mastery of anaesthetic techniques for patients with complex comorbidities |  |  |  |
| Use depth of anaesthesia monitoring effectively |  |  |  |
| Take steps to minimise the risk of accidental awareness under general anaesthesia |  |  |  |
| Implement strategies to avoid postoperative cognitive dysfunction |  |  |  |
| Demonstrate an appropriate leadership role in patient safety and quality improvement within an organisation |  |  |  |
| Anticipate and act to pre-empt complications during surgery |  |  |  |
| POSTOPERATIVE CARE |  |  |  |
| Benefits and limitations of perioperative patient pathways |  |  |  |
| Importance of pain management in perioperative outcomes including enhanced recovery pathways |  |  |  |
| Evidence-based methods of optimising circulating volume in the postoperative patient |  |  |  |
| Show leadership and communicate sensitively with patients regarding complications and adverse events and co-ordinates appropriate actions |  |  |  |
| Prescribe postoperative medications and therapy to optimise recovery and minimise length of stay |  |  |  |
| Take an active role in the postoperative multidisciplinary team |  |  |  |
| Demonstrate the ability to recognise when standard pathways should be adapted and tailored to individual need |  |  |  |

Regional

‘General’ unit of higher training; usually to be completed in conjunction orthopaedics unit.

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| **Learning objectives:**   * Continue to develop understanding and skills gained at the intermediate level * Demonstrate proficiency in managing the regional techniques learnt during that time under distant supervision * Increase the range of block techniques practised * Increased understanding of, and skill in, the use of ultrasound in regional anaesthesia * Take appropriate opportunities to use regional anaesthesia as part of the anaesthetic technique when clinically indicated * Become skilled in performing some more complex blocks with distant supervision * Has appropriately integrated regional anaesthetic practice into the range of clinical alternatives within their practice |

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| **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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, DOPS ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Principles, practice and complications of continuous catheter techniques for peripheral nerve blocks |  |  |  |
| Principles, practice and complications of the use of continuous spinal anaesthetic blockade |  |  |  |
| Principles of the use of ultrasound for guiding nerve/plexus blocks and the insertion of catheters including, but not exclusively:  • Mechanisms by which hyperechoic, hypoechoic and anechoic images are obtained  • Difference and uses of ‘B’ mode [bright] and ‘M’ mode [Motion] ultrasound |  |  |  |
| Clinically relevant sonoanatomy of the brachial & lumbosacral plexus [upper and lower limb] with reference to performing recommended regional anaesthetic techniques |  |  |  |
| Local anaesthetic injection and circumferential spread around the intended nerve / plexus |  |  |  |
| Correct needling technique using either an in or out of plane approach with ultrasound [Cross ref: vascular, intensive care] |  |  |  |
| Ability to develop a perioperative management plan and perform safely and effectively a number of the following blocks under distant supervision using either/or peripheral nerve stimulation or ultrasound guidance [those marked with an asterisk are considered essential, the remainder are optional]:  • Peripheral nerve blocks [e.g. femoral nerve]\*  • Deep cervical plexus blocks  • Supra and infra-clavicular blocks  • Intercostal nerve blocks  • Thoracic epidural anaesthesia\*  • Lumbar plexus blocks  • Sciatic blocks  • Simple ultra sound guided nerve blocks including, but not exclusively, femoral nerve\* and axillary brachial plexus\* blocks |  |  |  |
| Good communication skills when managing patients who require regional blockade and the staff responsible for surgical and nursing care |  |  |  |
| Co-ordinate and manage a list with suitable patients for regional blockade including liaising with surgeons, theatre nursing and anaesthetic staff |  |  |  |
| Supervise and teach regional anaesthetic techniques to less experienced trainees, whilst recognising the limitations of their expertise |  |  |  |
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Sedation

‘General’ unit of higher training

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| **Learning objectives:**   * To be able to deliver pharmacological sedation to patients of all ages, safely and effectively * To be able to teach and supervise more junior colleagues in the provision of conscious sedation |

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| **Core clinical learning outcomes:**   * Demonstrate the ability to provide safe and effective sedation to any patient using whatever drugs required, by whatever route |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| How multiple drug use may enhance sedation techniques, and how this increases risks |  |  |  |
| Focused preoperative evaluation of patients of all ASA grades who are at risk of perioperative morbidity/mortality, ensuring engagement of patients in open and compassionate discussions |  |  |  |
| Select sedation techniques appropriate to management in patients of all ages, including those with significant co-morbidities [i.e. any ASA grade] |  |  |  |
| Administer and monitor sedation techniques to all patients for appropriate clinical procedures, safely and effectively |  |  |  |
| Supervise and teach safe conscious sedation techniques to less experienced trainees |  |  |  |
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Transfer medicine

‘General’ unit of higher training; shares common competencies with the Trauma/stabilisation and ICM units

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| **Learning objectives:**   * Build on the knowledge, understanding and skills gained during intermediate training |

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| **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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Special requirements of inter-hospital transfer by helicopter |  |  |  |
| Basic understanding of HEMS legislation |  |  |  |
| Effects of flight on:  • Patient’s physiology  • Monitors / equipment  • Medical staff |  |  |  |
| Key aspects of safety relating to helicopter transfer:  • Loading / unloading a patient  • Securing a patient during transfer  • Personal safety |  |  |  |
| Drills required during common emergencies on helicopters |  |  |  |
| Principles of communication with flight crew and correct radio procedures |  |  |  |
| Principles of handover following helicopter transfer |  |  |  |
| Importance of team working and the roles and responsibilities of the medical, ambulance and aircrew |  |  |  |
| Key qualities of leadership required in undertaking transfers, including the safe management of complex or prolonged transfers by land or air |  |  |  |
| Importance of audit of the transfer process, reporting of critical incidents during air transfer and research |  |  |  |
| Basics of crew resource management |  |  |  |
| Teaching and supervising trainees the basic of intra-hospital transfer |  |  |  |
| Organisational and communication skills required to effect the transfer of patients in a timely and efficient manner |  |  |  |
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Trauma and stabilisation

‘General’ unit of higher training

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| **Learning objectives:**   * Build on the knowledge, understanding and skills gained during intermediate training * Supervise more junior colleagues providing the anaesthetic care to the multiply injured patient from arrival in the Emergency Department and on through definitive treatment * Acquire knowledge, skills and experience in treating the most complex of clinical cases |

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| **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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Role of pre-hospital care of multiply injured patients including triage and modes of transport to hospital |  |  |  |
| Importance of good communication networks with the out of hospital emergency services |  |  |  |
| Importance of major incident planning within hospitals and the roles and responsibilities of members of the anaesthetic team |  |  |  |
| Lead a multi-disciplinary trauma team, co-ordinating and delivering the early hospital care of all types of complex multiply injured patients including the primary survey, resuscitation and secondary survey and appropriate HDU/ICU admission |  |  |  |
| Lead and/or deliver the safe perioperative anaesthetic care to all multiply injured patients including HDU/ICM admission if required for continued care |  |  |  |
| Good communication skills with all members of the trauma team when leading the clinical care of the multiply injured patient; seek prompt and active advice from specialties not involved in the initial resuscitation when needed |  |  |  |
| Identify common abnormalities on the CT scans in patients with head injury, including but not limited to:  • Extradural haematoma  • Subdural haematoma  • Intracerebral haematoma  • Skull fractures  • Diffuse axonal injury  • Subarachnoid blood  • Abnormalities of the ventricular system |  |  |  |
| Demonstrates the ability to:  • Recognise when the patient’s needs exceed local resources and specialist expertise and that transfer for further definitive care is necessary  • Recognise the need to debrief and undertake in an ordered and understanding manner  • Manage end of life decisions in the multiply injured patient in a compassionate, non-discriminatory and understanding manner, communicating effectively with both relatives and the staff providing immediate care, whilst respecting spiritual and ethnic diversity |  |  |  |
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Vascular

‘General’ unit of higher training; shares a number of important competencies with the higher general, urology and gynaecology unit and the non-theatre unit

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| **Learning objectives:**   * Build on the knowledge and understanding gained at the intermediate level and obtain perioperative anaesthetic experience managing patients with vascular disease |

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| **Core clinical learning outcomes:**   * To anaesthetise patients for carotid endarterectomy and aortic aneurysm surgery with indirect supervision |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Principles of research developments in perioperative management of coexisting diseases |  |  |  |
| Methods of assessment of cardiovascular and respiratory disease and their use and limitations preoperatively, including advice on the risks of surgery relative to its benefits |  |  |  |
| National and international guidelines for management of patients with coexisting cardiac and respiratory disease |  |  |  |
| Methods of risk stratification including scoring systems |  |  |  |
| Advantages and disadvantages of using regional and combined GA/regional techniques for major vascular surgery |  |  |  |
| Techniques for preoptimisation of patients undergoing vascular surgery |  |  |  |
| Preoperative assessment of vascular patients with coexisting disease |  |  |  |
| Use of functional monitors during carotid artery surgery |  |  |  |
| Manage the effects of aortic clamping, including the implications of supra-renal or thoracic aortic clamping with distant supervision |  |  |  |
| Safe perioperative anaesthetic care of patients having combined surgical / radiological procedures, including those performed in isolated sites using either regional or general anaesthesia |  |  |  |
| Perform either general or regional anaesthesia safely and effectively for carotid artery surgery |  |  |  |
| Perform safe and effective regional anaesthesia for vascular surgery including placement and management of thoracic and lumbar epidural, spinal and combined spinal-epidural |  |  |  |
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Intensive care medicine

This is for trainees undertaking ICM at Higher Level as part of their **Anaesthetics CCT**. The curriculum uses a Training Progression Grid to measure progress.

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| **Mandatory requirements for completion of ICM module (as part of Anaesthetics CCT curriculum):**   * Three-month (whole time equivalent) ICM block * Achievement of all of the mandatory competencies at the ‘HIGHER target level’ * Evidence for each competency from either DOPS, I-CEX, ACAT, CBD, simulation or MSF (individual WPBAs may count as evidence for multiple competencies) * In addition an appropriate number of individual WPBAs – minimum I-CEX ×1, ACAT ×1, DOPS ×1, CBD ×1 (per 3m block)   *Higher ICM Completion of Unit of Training to be signed off on Anaesthesia e-portfolio by FICM tutor or FICM educational supervisor* |

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| **Optional additional Higher level ICM competencies**  Anaesthetics trainees undertaking their Higher ICM module who wish to demonstrate a broader level of competence should use:   * **Annex F** Higher level training progression grid including the additional higher level competencies <http://www.rcoa.ac.uk/careers-training/training-anaesthesia/the-training-curriculum/CCT2010> - when completed, scan and upload relevant pages to Anaesthesia e-portfolio |

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| **Dual Anaesthesia-ICM** trainees should use the more comprehensive FICM Training Progression Grid (and not this version, which is for Anaesthesia-only trainees) |

The descriptors for each level of competence in the Training Progression Grid are as follows:

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| **Level** | **Task oriented competence** | **Knowledge oriented competence** | **Patient management competence** |
| 1 | Performs task under direct supervision. | Very limited knowledge; requires considerable guidance to solve a problem within the area. | Can take history, examine and arrange investigations for straight forward case (limited differential diagnosis). Can initiate emergency management and continue a management plan, recognising acute divergences from the plan. Will need help to deal with these. |
| 2 | Performs task in straightforward circumstances, requires help for more difficult situations. Understands indications and complications of task. | Sound basic knowledge; requires some guidance to solve a problem within the area. Will have knowledge of appropriate guidelines and protocols. | Can take history, examine and arrange investigations in a more complicated case. Can initiate emergency management. In a straightforward case, can plan management and manage any divergences in short term. Will need help with more complicated cases. |
| 3 | Performs task in most circumstances, will need some guidance in complex situations. Can manage most complications, has a good understanding of contraindications and alternatives. | Advanced knowledge and understanding; only requires occasional advice and assistance to solve a problem. Will be able to assess evidence critically. | Can take history, examine and arrange investigations in a more complex case in a focused manner. Can initiate emergency management. In a most cases, can plan management and manage any divergences. May need specialist help for some cases. |
| 4 | Independent (consultant) practice. | Expert level of knowledge. | Specialist. |

| Mandatory Higher Level ICM competencies | Entry level | **HIGHER** target level | Level achieved | Evidence (eg DOPS, I-CEX, ACAT, CBD, simulation or MSF) |  | FICM Trainer initial | Date |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Domain 1: Resuscitation and management of the acutely ill patient** | | | | |  |  |  |
| 1.1 Adopts a structured and timely approach to the recognition, assessment and stabilisation of the acutely ill patient with disordered physiology | 2 | **3** |  |  |  |  |  |
| 1.4 Triages and prioritises patients appropriately, including timely admission to ICU | 2 | **3** |  |  |  |  |  |
| 1.5 Assesses and provides initial management of the trauma patient | 2 | **3** |  |  |  |  |  |
| **Domain 2: Diagnosis, Assessment, Investigation, Monitoring and Data Interpretation** | | | | |  |  |  |
| 2.1 Obtains a history and performs an accurate clinical examination | 2 | **3** |  |  |  |  |  |
| 2.2 Undertakes timely and appropriate investigations | 2 | **3** |  |  |  |  |  |
| 2.4 Obtains appropriate microbiological samples and interprets results | 2 | **3** |  |  |  |  |  |
| 2.6 Interprets imaging studies | 2 | **3** |  |  |  |  |  |
| 2.8 Integrates clinical findings with laboratory investigations to form a differential diagnosis | **2** | **2** |  |  |  |  |  |
| **Domain 3: Disease Management** | | | | |  |  |  |
| 3.1 Manages the care of the critically ill patient with specific acute medical conditions | **2** | **2** |  |  |  |  |  |
| 3.2 Identifies the implications of chronic and co-morbid disease in the acutely ill patient | **2** | **2** |  |  |  |  |  |
| 3.3 Recognises & manages the patient with circulatory failure | 2 | **3** |  |  |  |  |  |
| 3.4 Recognises & manages the patient with, or at risk of, acute renal failure | 2 | **3** |  |  |  |  |  |
| 3.6 Recognises & manages the patient with neurological impairment | 2 | **3** |  |  |  |  |  |
| 3.8 Recognises & manages patient with severe acute resp failure / acute lung injury syndromes (ALI / ARDS) | 2 | **3** |  |  |  |  |  |
| 3.9 Recognises and manages the septic patient | 2 | **3** |  |  |  |  |  |
| **Domain 4: Therapeutic interventions / Organ support in single or multiple organ failure** | | | | |  |  |  |
| 4.2 Manages antimicrobial drug therapy | 2 | **3** |  |  |  |  |  |
| 4.5 Describes the use of mechanical assist devices to support the circulation | 0 | **1** |  |  |  |  |  |
| 4.6 Initiates, manages, and weans patients from invasive and non-invasive ventilatory support | 2 | **3** |  |  |  |  |  |
| 4.7 Initiates, manages and weans patients from renal replacement therapy | 1 | **2** |  |  |  |  |  |
| **Domain 5: Practical procedures** | | | | |  |  |  |
| 5.5 Performs fibreoptic bronchoscopy and BAL in the intubated patient | 2 | **3** |  |  |  |  |  |
| **Domain 6: Perioperative care** | | | | |  |  |  |
| 6.1 Manages the pre- and postoperative care of the high risk surgical patient | 3 | **4** |  |  |  |  |  |
| 6.5 Manages the pre- and postoperative care of the trauma patient | 2 | **3** |  |  |  |  |  |
| **Domain 7: Comfort and recovery** | | | | |  |  |  |
| 7.1 Identifies & attempts to minimise physical & psychosocial consequences of critical illness for patients and families | 2 | **3** |  |  |  |  |  |
| 7.2 Manages the assessment, prevention and treatment of pain and delirium | 2 | **3** |  |  |  |  |  |
| 7.3 Manages sedation and neuromuscular blockade | **3** | **3** |  |  |  |  |  |
| 7.4 Communicates the continuing care requirements, including rehabilitation, of patients at ICU discharge to health care professionals, patients and relatives | 2 | **3** |  |  |  |  |  |
| 7.5 Manages the safe and timely discharge of patients from the ICU | **2** | **2** |  |  |  |  |  |
| **Domain 8: End of life care** | | | | |  |  |  |
| 8.1 Manages the process of withholding or withdrawing treatment with the multi-disciplinary team | 1 | **2** |  |  |  |  |  |
| 8.2 Discusses end of life care with patients and their families / surrogates | 2 | **3** |  |  |  |  |  |
| 8.3 Manages palliative care of the critically ill patient | 1 | **2** |  |  |  |  |  |
| 8.4 Performs brain-stem death testing | 1 | **2** |  |  |  |  |  |
| 8.5 Manages the physiological support of the organ donor | 1 | **2** |  |  |  |  |  |
| 8.6 Manages donation following cardiac death | 1 | **2** |  |  |  |  |  |
| **Domain 9: Paediatric care** | | | | |  |  |  |
| *Paediatric competencies can be covered elsewhere in Anaesthesia* | | | | |  |  |  |
| **Domain 10: Transport** | | | | |  |  |  |
| 10.1 Undertakes transport of the mechanically ventilated critically ill patient outside the ICU | 2 | **3** |  |  |  |  |  |
| **Domain 11: Patient safety and health systems management** | | | | |  |  |  |
| 11.1 Leads a daily multidisciplinary ward round | 1 | **2** |  |  |  |  |  |
| 11.2 Complies with local infection control measures | 3 | **4** |  |  |  |  |  |
| 11.7 Describes commonly used scoring systems for assessment of severity of illness, case mix and workload | 2 | **3** |  |  |  |  |  |
| 11.8 Demonstrates an understanding of & managerial & administrative responsibilities of the ICM specialist | 1 | **2** |  |  |  |  |  |
| **Domain 12: Professionalism** | | | | |  |  |  |
| 12.8 Ensures continuity of care through effective hand-over of clinical information | 3 | **4** |  |  |  |  |  |

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Paediatric

Essential unit of higher training. As a minimum, either a dedicated block of at least 4 weeks or the equivalent of about 20 half-day theatre sessions must be undertaken in the last two years of training, i.e. ST6/7.

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| **Learning objectives:**   * Build on the knowledge, understanding and skills gained during intermediate training * Become more independent in managing paediatric anaesthesia as demonstrated by requiring less consultant guidance and supervision * Be competent at managing complications that arise in paediatric anaesthesia without immediate consultant support |

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| **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 |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Problems and risks inherent in anaesthesia for former premature babies and children with significant co-morbidity |  |  |  |
| Commoner problems of paediatric intensive care, including ventilatory and circulatory support, upper airway problems and trauma. |  |  |  |
| Current local and national guidelines for provision of paediatric services |  |  |  |
| Provide safe perioperative anaesthetic care [including both inhalational and intravenous induction techniques] for children over the age of 3 years with distant supervision |  |  |  |
| Provide safe perioperative anaesthetic care for children less than 3 years of age under direct supervision |  |  |  |
| Manage children with difficult venous access |  |  |  |
| Manage the airway in children and babies of all ages safely and effectively |  |  |  |
| Correct management of fluids, electrolytes, glucose and temperature perioperatively |  |  |  |
| Manage acute pain in children safely and effectively, including the use of local and regional anaesthetic techniques, the use of opioids (including infusions and PCA/NCA where these are used), adjuvant NSAIDs and simple analgesics |  |  |  |
| Caudal epidural and peripheral nerve blockade without direct supervision |  |  |  |
| Anaesthetic management of the young child [less than 5 years of age] with a full stomach |  |  |  |
| Anaesthesia for children over the age of 3 years for diagnostic radiological procedures |  |  |  |
| Anaesthetic emergencies in children e.g.: acute airway obstruction, croup and acute epiglottitis, inhaled foreign body, loss of airway, laryngospasm, malignant hyperthermia, anaphylaxis [including latex allergy] |  |  |  |
| Transport of critically ill children and babies |  |  |  |
| Appropriate engagement in compassionate, authoritative discussions with patients, parents and/or carers; balanced judgement of the estimated risks and likely complications of anaesthesia |  |  |  |
| Take responsibility and appropriate action when non-accidental injury is suspected |  |  |  |
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Pain medicine

Optional unit of higher training. Progression from Basic and Intermediate training and essential for all trainees who wish to progress to Advanced Pain Medicine Training. In addition, the College and the Faculty of Pain Medicine recommend that these higher competencies are the minimum required for a trainee to consider a future consultant post with an interest in Acute Pain.

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| **Learning objectives:**   * Build on the competencies achieved at basic and intermediate level |

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| **Core clinical learning outcomes:**   * Fully competent in the assessment and management of acute surgical, acute non-surgical and acute on chronic pain in all patients and in all circumstances * To have knowledge and skills in the management of chronic and cancer pain * To be an effective member of a multi-professional pain management service |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, DOPS ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Advanced principles of neural blockade to include autonomic blocks, in acute and chronic pain |  |  |  |
| Assessment and management principles of chronic and acute on chronic pain in a multi-professional context in inpatient and outpatient settings |  |  |  |
| Advanced assessment and management principles of cancer pain in a multi-professional context |  |  |  |
| Principles, applications and side effects of physiotherapy and other physical therapies used for treating pain |  |  |  |
| Psychological mechanisms in pain and techniques for their management including cognitive behavioural approaches |  |  |  |
| The place of surgery in the management of pain |  |  |  |
| Importance of disability and incapacity, and factors influencing their assessment |  |  |  |
| Importance of psychological, social and ethical issues around good Pain Medicine |  |  |  |
| Role of social services, rehabilitation and other support services |  |  |  |
| Techniques of assessment and management principles of pain in a multi-professional context |  |  |  |
| Ability to recognise patients with pain who have psychological problems and who require psychological evaluation |  |  |  |
| Perform, within the context of a full and appropriate pain management plan the following procedures under distant supervision [those marked with an asterisk are considered essential]:  • Lumbar epidural steroid injection\*  • Lumbar facet joint / medial branch block  • Peripheral nerve blocks\*  • Intercostal nerve blocks\*  • Teaching the use a TENS machine\* |  |  |  |
| Importance of ensuring continuity of care; communicating effectively with patients, relatives and professionals in primary or secondary health care or in other organisations |  |  |  |
| Assess incapacity and disability in patients with pain |  |  |  |
| Importance of being an effective member of a multi-professional pain medicine service |  |  |  |
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Ophthalmic

Optional unit of higher training

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| **Learning objectives:**   * Build on the knowledge, understanding and skills gained during intermediate training, so developing the diversity of skills that allow optimal conditions for ophthalmic surgery and the best results for the ophthalmic patient * Become more independent in managing anaesthesia for complex ophthalmic surgery as demonstrated by requiring less consultant guidance and supervision |

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| **Core clinical learning outcomes:**   * Provide comprehensive anaesthetic care to all ASA 1-4 adult patients for all types of elective and emergency ophthalmic surgery with distant supervision * The ability to perform sub-Tenon’s and peribulbar blocks with distant supervision |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Perioperative anaesthetic care for orbital surgery including:  • Surgery for tumours of the eye and orbit  • Advanced reconstructive oculoplastic surgical techniques |  |  |  |
| Techniques for postoperative pain relief in patients undergoing major reconstructive oculoplastic surgery |  |  |  |
| Critically evaluate the preoperative condition, plan appropriate optimisation and deliver perioperative anaesthetic care to all adult patients however complex requiring routine and emergency ophthalmic surgery |  |  |  |
| Perioperative anaesthetic care for children requiring ophthalmic surgery [Cross ref: paeds] |  |  |  |
| Perioperative anaesthetic care for elderly requiring ophthalmic surgery |  |  |  |
| Peribulbar and sub-Tenon’s blocks |  |  |  |
| Sedation for ophthalmic procedures |  |  |  |
| Effective communication with and understanding of the needs of the surgeon for optimal operating conditions |  |  |  |

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Paediatric intensive care medicine

Optional unit of higher training

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| **Learning outcome:**   * Be able to manage, as a member of a skilled team, the critically ill or injured child presenting in the DGH. As defined in the DH report – ‘The critically ill and injured child in the DGH’. |

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| **Core clinical learning outcomes:**   * Recognise the signs and symptoms of clinical deterioration in infants and children which might lead to a PICU admission * Institute, as a member of a skilled team, appropriate resuscitative measures to manage acute deterioration and stabilise the critically ill and injured infant and child prior to transfer to a PICU * Understand the principles and hazards of transferring, when appropriate (e.g. acutely deteriorating head injury) a critically ill and injured paediatric patient to an appropriate referral centre for further management. |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
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| Principal anatomical and physiological differences in neonates, infants and children |  |  |  |
| Principal pharmacological differences in neonates, infants and children |  |  |  |
| Recognised paediatric ICM techniques of sedation and analgesia in children |  |  |  |
| Management of fluids and electrolytes in medical and surgical emergencies in neonates, infants and children |  |  |  |
| Respiratory management of infants & children using but not limited to nasal CPAP, pressure controlled ventilation, high frequency oscillatory ventilation |  |  |  |
| Differential diagnosis for the collapsed neonate caused by but not limited to cardiac abnormality, sepsis, metabolic abnormality or non-accidental injury |  |  |  |
| Common presentations of paediatric cardiac abnormalities; causes of cardiac arrest and how management differs from adults |  |  |  |
| Management of paediatric medical conditions requiring critical care but not limited to: septicaemia, status epilepticus, asthma [including foreign body and infective causes], diabetic ketoacidosis and basic working knowledge of other metabolic emergencies |  |  |  |
| Causes of coma and loss of consciousness in children |  |  |  |
| Management of severe trauma in children including but not limited to isolated head injuries and raised intra-cranial pressure |  |  |  |
| Principles of the psychological aspects of critically ill or injured children |  |  |  |
| Importance of parental roles and family dynamics in paediatric intensive care |  |  |  |
| Equipment required for intra and inter-hospital transfer for critically ill or injured children |  |  |  |
| Management of children and parents/carers for end of life care and child death procedures in Trusts |  |  |  |
| Intra and inter-hospital transfer of critically ill or injured children |  |  |  |
| Resuscitation of infants & children and their admission to intensive care; including intubation, insertion of arterial and CVCs, and intra-osseous needles |  |  |  |
| Correct selection of equipment for different ages & sizes of patients for procedures; including intubation, arterial and CVCs, and intra-osseous needles |  |  |  |
| Early initiation of child protection measures |  |  |  |
| Principles of ‘listen to the child’ and Gillick competence’ as applied to PICM |  |  |  |
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Plastics/Burns

Optional unit of higher training. (In the Bristol School this unit may often be undertaken in ST3/4 therefore paperwork is duplicated in the Intermediate training record .)

Plastics: major reconstructive surgery [including free-flap grafting] may be linked with other units of training such as ENT and maxillo-facial surgery

Burns: some cross competencies with Trauma and Stabilisation

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| **Learning objectives:**   * Obtain intermediate level competences for both plastics and burns [if possible] if not already completed * Become more independent in the management of major plastic reconstructive cases including free-flap surgery * Understand the principles of perioperative management of burns patients for grafting & related procedures |

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| **Core clinical learning outcomes:**   * Anaesthetise ASA 1-3 adult patients for major reconstructive plastic surgery [e.g. breast reconstruction with pedicled flap] with distant supervision |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate numbers of cases & case mix * Appropriate number of WPBAs – minimum ALMAT ×1, A-CEX ×1, CBD ×1 * Achievement of core clinical learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Anaesthetic techniques for major plastic surgical cases including free-flap surgery |  |  |  |
| Principles of anaesthesia for primary and secondary cleft lip and palate repair [Cross ref: paediatrics] |  |  |  |
| Recognition & appropriate management of the plastic surgical patient with a potentially difficult or compromised airway |  |  |  |
| Local protocols for the transfer of burns patients to specialist regional centres |  |  |  |
| Management of a patient with a severe inhalational injury |  |  |  |
| Perioperative anaesthetic care to burns patients requiring surgery including dressing changes, grafting & related procedures |  |  |  |
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Academic & research [including audit]

Essential higher non-clinical unit of training

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| **Learning objectives:**   * Be ready for independent clinical practice * Demonstrate evidence based personal practice; understand, discuss and advise in situations where evidence is absent or contradictory * Understand importance of audit; engage in continuous review of personal and team performance. * Be able to develop, complete and report audit projects * Strive to be an opinion leader through a continuous critical approach to the published literature; undertake personal evaluation and consultation with colleagues regarding the timely introduction of new practices * Be ever conscious of their responsibility for patient safety; understand how proper evidence, monitoring outcome and a cautious, critical, scientific approach to reported developments of practice will assist this * Understand basic principles of clinical research; know the ethical and organisational steps needed to initiate a project – under the mentorship of a research experienced colleague. |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Has recorded satisfactory attendance at 15 local audit, MDT, M & M and journal club meetings * Reflective portfolio of attendances * Presented literature review * Written up case report or evidence-based review (typically a CEACCP article) to a standard suitable for publication OR contribution to a departmental guideline or change in practice to a reasonable standard for implementation |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Supporting quality through participating in and promoting audit of clinical outcomes |  |  |  |
| Ethical issues relating to audit |  |  |  |
| Principles of research governance |  |  |  |
| Roles of the Royal College of Anaesthetists in postgraduate and continuing education, and in the setting and maintenance of standards |  |  |  |
| National Institute for Academic Anaesthesia |  |  |  |
| Lead in a departmental or other local journal club |  |  |  |
| Undertake & present literature review in relation to a clinical problem or topic |  |  |  |
| Produce a review article on a clinical topic, having reviewed and appraised the relevant literature |  |  |  |
| Understanding of the use statistical methods to analyse data and estimate probabilities |  |  |  |
| Design, implement and complete an audit cycle |  |  |  |
| Identify problems and develop standards for a local audit |  |  |  |
| Propose and test ways to improve patient care |  |  |  |
| Contribute to local and national audit projects as appropriate e.g. NCEPOD |  |  |  |
| Ethical issues relating to the organisation of clinical research |  |  |  |
| Principles of formulating a research question and designing a project |  |  |  |
| Awareness of and detachment from vested interests or entrenched views |  |  |  |
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Teaching & learning

Essential higher non-clinical unit of training

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| **Learning outcomes:**   * Be prepared for the consultant role of clinical teacher and assessor in the workplace * Be a valued member of the departmental educational team as participant and teacher * Deliver excellent theatre teaching in the course of clinical supervision * Prepare and deliver excellent teaching on a variety of topics * Perform workplace-based assessments reliably * Keep a comprehensive reflective portfolio of learning and of engagement with ongoing professional development |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Appropriate number of WPBAs – minimum:   + A-CEX ×1 (relating to own teaching and supervision of a more inexperienced trainee)   + CBD ×1 (on selected education topic) * Achievement of learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Formal responsibilities of clinical trainers |  |  |  |
| Ensuring safe supervision of learners; taking wide responsibility for this including checking the safety of any teaching being undertaken by trainee anaesthetists within their clinical arena |  |  |  |
| Planning a ‘teaching list’ for a more junior trainee |  |  |  |
| Using a wide range of educational methods to provide a effective clinical learning opportunities, such as: opportunistic workplace-based training, lectures, part- and whole-task simulator training, full immersion high fidelity simulation, audio-visual feedback and behavioural debriefing |  |  |  |
| Educational principles underlying the preparation of effective lessons and presentations |  |  |  |
| Assessment strategy employed by the RCoA in the context of their own learning and the learning of others |  |  |  |
| Roles and responsibilities of Clinical and Educational Supervisors and Consultant/SAS trainers |  |  |  |
| Assessing and evaluating learning; distinguishing between formative and summative assessment |  |  |  |
| Role of, and the appropriate conduct of, the workplace-based assessments |  |  |  |
| Providing timely, specific, non-judgemental and developmental feedback |  |  |  |
| Own behaviour as a role model for more junior trainees |  |  |  |
| Roles and responsibilities of educational agencies involved in educational commissioning and governance including, but not exclusively: the GMC, the DoH, Deaneries, Colleges and NHS Education Commissioners |  |  |  |
| Providing a level of clinical supervision appropriate to the competence and experience of the trainee |  |  |  |
| Structure of the effective appraisal review |  |  |  |
| How to raise concerns about a poorly performing trainee |  |  |  |
| Appropriate local course of action to assist a trainee experiencing difficulty in making progress within their training programme |  |  |  |
| Teaching trainees & others in a variety of settings to maximise knowledge, effective communication and practical skills; to improve patient care |  |  |  |
| Creating good learning opportunities to deliver the curriculum |  |  |  |
| Showing consideration for learners including their emotional, physical and psychological well being with their development needs; ensure equality of opportunity for students, trainees, staff and professional colleagues |  |  |  |
| Identifying the learning needs of trainees |  |  |  |
| Effective lecture, presentation, small group and bed-side teaching sessions |  |  |  |
| Appropriate use of teaching aids and visuals to enhance formal teaching |  |  |  |
| Opportunistic teaching of more junior trainees in clinical settings |  |  |  |
| Engaging in simulator-based learning |  |  |  |
| Assisting in simulator-based teaching |  |  |  |
| Supervising junior trainees in the course of routine and emergency anaesthesia |  |  |  |
| Leading departmental teaching programmes including journal clubs |  |  |  |
| Encouraging discussions with colleagues in clinical settings to share knowledge and understanding |  |  |  |
| Accurate and reliable use of workplace-based assessment tools; clear understanding of their purpose |  |  |  |
| Giving appropriate feedback for the purpose of training clinical professionals |  |  |  |
| Receiving feedback appropriately for the purpose of self-improvement |  |  |  |
| Assessing the quality of teaching both classroom and workplace-based and recording this in reflective portfolio |  |  |  |
| Providing appropriate career support, or referring trainee to an alternative effective source of career information |  |  |  |
| Balancing the needs of service delivery with education |  |  |  |

Management

Essential higher non-clinical unit of training.

Higher training must equip the trainee with a full understanding of the consultant’s role in departmental management and furnish them with the knowledge necessary to embark upon minor departmental management roles as they begin their consultant career. It is acknowledged that opportunities for trainees to undertake tasks within the departmental management are few compared with the number of higher trainees and that many will not have an opportunity to demonstrate their skills in practice.

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| **Learning outcomes:**   * Understands the structure of relevant national management and how this integrates with local management * Able to organise their own contractual, job planning, and quality review processes * Ready to undertake departmental administrative and managerial roles with appropriate guidance and support |

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| **Requirements for completion of module (in addition to consultant feedback):**   * Achievement of learning outcomes |

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| How funding is provided for medical services within the trust |  |  |  |
| How care trusts commission services |  |  |  |
| How patients are referred for hospital treatment |  |  |  |
| Local structure of NHS management; variation of structures between SHA areas and between countries of the UK |  |  |  |
| Ways that services for anaesthesia, pain medicine and critical care are structured including local differences |  |  |  |
| Understanding that healthcare is always subject to change and debate as a result of political, social, technical, economic, organisational and professional factors that impact on provision of service  • Recognition of role as an advocate for quality and consistency in patient care in the face of such debates  • Acceptance that compromise in such debates may have impact on medical care |  |  |  |
| Principles of:  • Clinical coding • National Service Frameworks • Health regulatory agencies [e.g., NICE, Scottish Government]  • NHS Structure and relationships • NHS finance and budgeting • Consultant contract and the contracting process  • Resource allocation • Role of the Independent sector as providers of healthcare • Patient and public involvement processes and role |  |  |  |
| Process for completion of training and admission to the specialist register |  |  |  |
| Process for appointment to a substantive post |  |  |  |
| Processes of annual appraisal, re-certification and revalidation in substantive posts |  |  |  |
| Systems for job planning and annual review |  |  |  |
| Working of the local and national ACEA process |  |  |  |
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|  |  |  |  |

*Advanced level generic domain 1*

Clinical Practice

Highly specific clinical competencies are not identified as each trainee’s focus and career intention will be different and, in many cases, be dependent upon the availability of patients that present uncommon challenges.

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Mastery of all aspects of clinical care in all clinical situations regularly encountered in the chosen area of practice and a clear understanding of:  • Why effective decision making, communication, team-working and organization skills are required by anaesthetists to ensure clinical sessions are delivered safely, efficiently and effectively to the benefit of both patients and the organisation; this implies an ability to recognise the importance of providing overall leadership of the multidisciplinary team when necessary  • How to utilise the time allocated to clinical sessions effectively for patient care, without compromising safety  • The central role human factors plays in developing a culture of safe practice and how collaboration and team working enhances safety |  |  |  |
| Demonstration and teaching of safe behaviours in prescribing practice to all members of the multi-disciplinary team |  |  |  |
| Demonstration and teaching of how to obtain consent from patients in all situations showing compassion and understanding; this includes patients where there are difficulties with communication and capacity |  |  |  |
| Safe practice in clinical care in those less common clinical situations in the chosen area of practice where mastery has not yet been achieved |  |  |  |
| Mastery in some complex clinical situations when patients requiring difficult or dangerous interventions, providing advice to other team members and participating in the planning of complex procedures |  |  |  |
| Reflection on own clinical practice in order to achieve insight and:  • Correct deficiencies identified  • Seek learning opportunities and integrate new knowledge into clinical practice |  |  |  |
| Identification of opportunities to promote changes in lifestyle and other actions which will improve health and/or disease outcomes positively |  |  |  |
| Appropriate advice to others regarding the proper management of clinical problems |  |  |  |
| Necessary maturity to guide the choice of audit cycles in developing practice |  |  |  |
| Prompt acknowledgement of mistakes and mishaps and ability to lead on managing errors including:  • Talking to patients about untoward events, apologising appropriately, providing clear explanations, acting with integrity and offering the necessary support  • Leading de-briefs with all the staff involved  • Implementing procedures to effect a full investigation  • Openness and honesty at all times  • The ability to learn from the errors and lead safety improvements to minimise likely recurrence |  |  |  |

*Advanced level generic domain 2*

Team Working

Trainees are expected to demonstrate the necessary team working, management and leadership skills required post-CCT for independent practice.

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Participate in [and lead when appropriate] the organisation of complex interventions, including liaison with clinicians, nurses, clinical support specialties and managers |  |  |  |
| Engage all members of the team, when required, to enable session time to be used efficiently and effectively for the benefit of both the patients and the organisation; ability to lead discussions in a timely and effective manner where/when necessary |  |  |  |
| Recognise own limitations and actively seek the advice of others when needed |  |  |  |
| Commit to the principle that the patient and their relatives are often equal members of the clinical team |  |  |  |
| Demonstrate leadership in engaging other healthcare professional and support workers positively and:  • Give weight to contributions of others  • Respect team decisions and is moderate in word and manner when necessarily registering their dissent  • Understand that other team members may be experiencing strong emotions which must be recognised |  |  |  |
| Always show appropriate understanding and control of emotions when working with others |  |  |  |
| Understand the particular ways of working of the highly specialised teams in which anaesthetists contribute |  |  |  |
| Teach others how to work properly in teams |  |  |  |
| Desire to achieve high standards and monitor compliance to standards by the whole team |  |  |  |
| Maintaining high levels of individual and team situation awareness at all times; asks for, or shares, information and anticipates future problems to maximise safe practice |  |  |  |
| Adopt strategies to reduce risk [e.g. the use of the WHO Safe Surgery Checklist] and a willingness to participate in improvement strategies [e.g. critical incident reporting]; act to rectify error immediately if it is made |  |  |  |
| Demonstrate openness when talking to patients about untoward events, apologising appropriately, providing clear explanations, acting with integrity and offering the necessary support |  |  |  |
| Ability to learn from errors and share that learning with the rest of the organisation |  |  |  |

*Advanced level generic domain 3*

Leadership

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Understand that the role of the consultant involves demonstrating leadership in clinical management, service delivery and forward planning |  |  |  |
| Aware of position as an important positive role-model for others |  |  |  |
| Commitment to the highest clinical standards personally; encourage others to achieve the best |  |  |  |
| Show flexibility in accommodating the needs and work patterns of others and a preparedness to work flexibly in order to allow cover of unpredictable duties [e.g. the unavoidable absence of a colleague] to maintain essential clinical care to patients |  |  |  |
| Take the lead where appropriate in dealing with difficulties that have arisen in the clinical care of patients including communicating bad news, participating in clinical review and liaising with managers and dealing with complaints |  |  |  |
| Create opportunities to bring colleagues together to further clinical and institutional goals including reducing unnecessary resource usage [environmental and financial] in all healthcare |  |  |  |
| Communicate clearly, promptly and effectively with colleagues by means appropriate to the urgency of the situation [e.g. personal presence, telephone, email, letter etc]; recognise its crucial importance when transferring responsibility for patient care [e.g. at handovers] |  |  |  |
| Analyse information about performance from a wide range of resources; participate in [and if appropriate initiate and lead] initiatives to improve performance |  |  |  |

*Advanced level generic domain 4*

Innovation

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Demonstrate understanding of the need to be aware of new trends and developments and:  • Question the status quo  • Actively look for ways to improve clinical practice and the patient experience  • Commit to the changing roles and responsibilities of healthcare groups as practice develops  • Be receptive to the attempts of others to improve practice  • Urge responsible individuals and groups to seek and implement beneficial change |  |  |  |
| Understand the importance of research [clinical and laboratory] in the development of clinical practice in chosen area[s]; aware of current areas of research and achieves competence in understanding, and explaining, the methodology and statistics involved |  |  |  |

*Advanced level generic domain 5*

Management

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Commit to the objectives of the team, of the hospital and to the national planning of healthcare |  |  |  |
| Plan work efficiently to accomplish own targets and meet institutional objectives |  |  |  |
| Understand the central role of the patient and the public in determining directions and priorities in service development |  |  |  |
| Take the initiative in:  • Demonstrating the efficient use of resources and encouraging others to do the same  • Identifying and reporting any significant deficiency of resources  • Contributing to discussions and planning for service and facilities development |  |  |  |

*Advanced level generic domain 6*

Education

| Knowledge/Skills | Tick if confident/ discussed | Trainer initial | Date |
| --- | --- | --- | --- |
| Continuously seek to improve and update knowledge and skills, using a variety of strategies, whilst keeping records of learning that is planned and undertaken, reflecting on outcomes |  |  |  |
| Develop a personal learning network of individuals and organisations; attend specialist educational meetings and read specialist journals in special interest areas of practice |  |  |  |
| Receive feedback appropriately for the purpose of self-improvement and provide feedback to others when asked |  |  |  |
| Commit to the supremacy of patient safety issues in providing an appropriate level of clinical or educational supervision |  |  |  |
| Actively participate in the planning and delivery of departmental teaching and training |  |  |  |
| Understand the roles and responsibilities of Clinical and Educational Supervisors; this includes:  • Assessment strategy employed by the RCoA • Importance of assessing and evaluating learning  • Importance of providing timely, specific, non-judgemental and developmental feedback and is able to do so effectively  • Role of and appropriate conduct of the workplace-based assessments; able to perform accurately and reliably  • How to raise concerns about a poorly performing trainee  • Responsibilities of clinical trainers as defined by relevant national organisations and regulators |  |  |  |
| Roles and responsibilities of educational agencies involved in educational commissioning and governance, GMC, DoH, Deaneries Colleges and NHS Education commissioners |  |  |  |