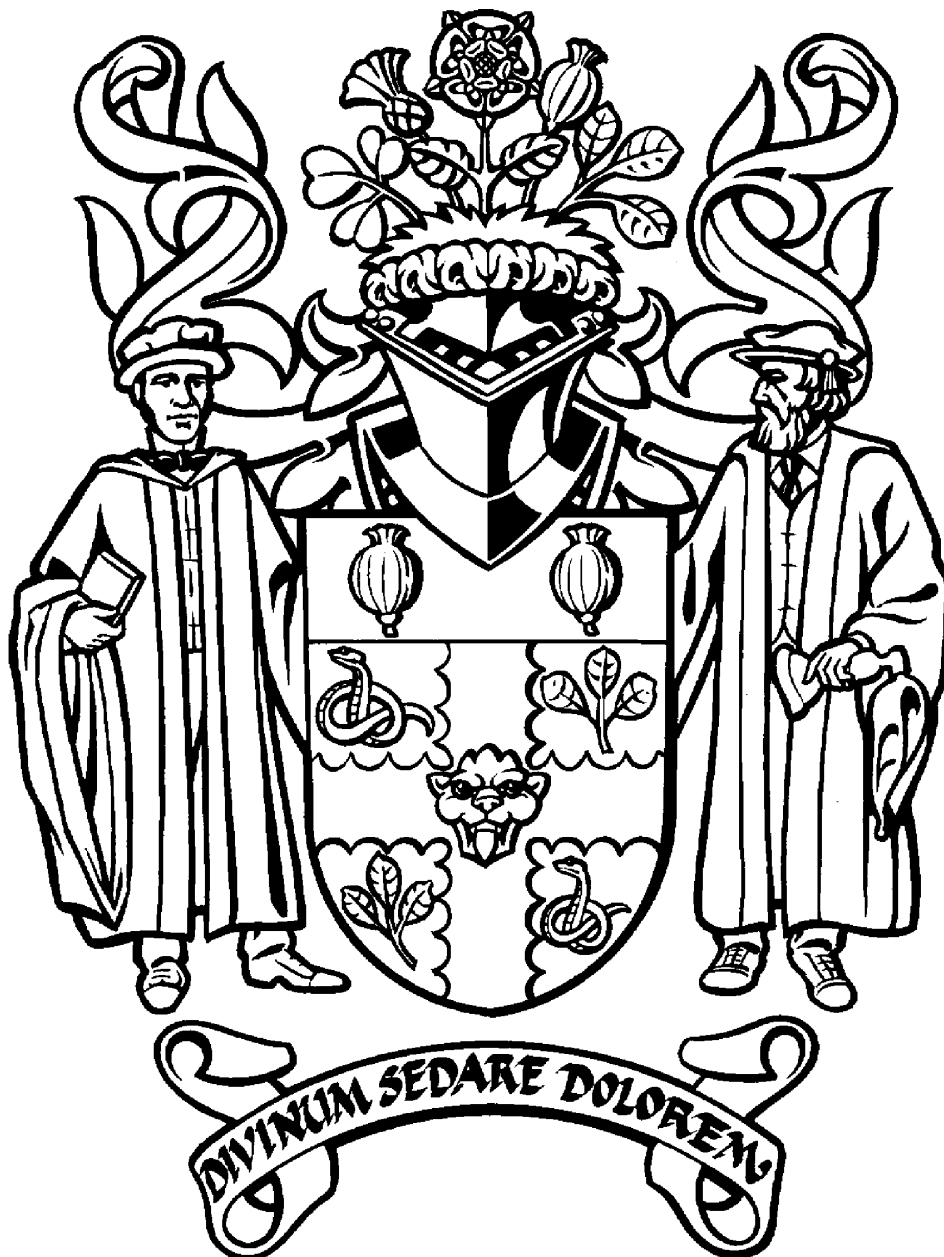


The Royal College of Anaesthetists

THE CCST IN ANAESTHESIA

III: Competency Based Specialist Registrar
Years 1 and 2
Training and Assessment

A manual for trainees and trainers



January 2002

NOTE ON THE IMPLEMENTATION OF COMPETENCY BASED TRAINING FOR SpR 1/2 TRAINEES IN ANAESTHESIA

The requirement to make anaesthetic training competency based was agreed with the STA following the decision to extend the period SpR training to five years. It was also agreed that the sub-specialty elements of training identified in this manual as 'key units of training' would be included in the SpR 1/2 period. The basis for this was the concept that following an introduction to anaesthesia and the attainment of basic knowledge and skills as an SHO, the trainee would receive an introduction to the broad range of anaesthetic practice within the major sub-specialties at the beginning of their SpR training. The College is committed to this pattern of training and it cannot be modified without renegotiation with the STA.

However, following the circulation of the draft of Competency Based SpR 1/2 Training and Assessment, a number of Regional Training Committees and Schools have expressed reservations as to their ability to implement the programme as set out. There is a general concern that Schools will be forced into short periods of sub-specialty training which will, on occasion, be detrimental to the quality of training. This is particularly the case when surgical sub-specialties are placed in geographically isolated separate units. There are also other specific arrangements which make it very difficult for Schools to comply with the requirements for trainees to receive initial training in particular sub-specialties without there being a major restructuring of current arrangements which could be potentially harmful to the quality of training. Over the longer term, particularly with new hospital building and the bringing together of acute services, many of these problems can be solved but in the interim some flexibility is required without destroying the fundamental concepts that have been agreed with the STA.

The College will therefore consider requests, on a limited basis, from Schools for the deferral of particular key units of training from the SpR 1/2 to the SpR 3/4/5 training period. Such deferrals can only occur when a clear case is made and there is a formal agreement between the School and the College. Such agreements would be time limited and subject to regular review. The purpose of this proposal is to assist Schools in introducing SpR 1/2 competency based training. The signing up of 'Workplace Assessments' for a deferred unit of training will therefore have to be carried back to the SpR 1/2 period such that all the key units are ultimately signed off. When a School has arranged a deferral, this will be available to all trainees within the School but deferrals will not be available on the basis of requests from individual trainees elsewhere.

The College asks Schools to begin introducing this programme with the effect from February 2002. It recognises that time will be needed to effect necessary change and hopes that full implementation can be achieved by February 2004. In order to further assist Schools, it is intended to suspend for a period of 12 months, the planned 5 yearly programme of visits to Schools from the College which is due to recommence in 2002.

We hope that these proposals will be seen as being helpful and that they will enable Schools to move ahead with the competency based training thereby allowing the RCA to comply with its agreement to the STA.

This is the third in a series of four training guides published by the Royal College of Anaesthetists (RCA) which describes the programme of training leading to a CCST in anaesthesia.

It was developed, following consultation with Specialist Societies, by a working party that reported to the RCA Training Committee. An initial draft was then circulated to Specialist Societies, Regional Advisers, RCA Tutors and other interested parties. Many helpful responses were received (see acknowledgements) and modifications were made. This final version was then prepared and approved by the College Council. Great efforts were taken to try to ensure that the programme of training described could actually be delivered. The final content of these published documents is the responsibility of the RCA and does not necessarily exactly match the content of submitted advice.

The RCA Training Committee consists of members from College Council (including one of the elected Trainee Members of Council), a representative from the Group of Anaesthetists in Training, the 2 Bernard Johnson Advisers, 2 representatives from the Association of Anaesthetists of Great Britain and Ireland, a representative of the Postgraduate Deans, 2 representatives from the Irish College of Anaesthetists, a representative from the Scottish Standing Committee, 2 Regional Advisers (RAs) and a representative of the Association of Professors of Anaesthesia.

The working party composition was as follows:

G S Ingram (Chairman, Medical Secretary to the Training Committee)
P Hutton (President)
D P Cartwright
G M Cooper
C P H Heneghan
D M Justins
G N C Kenny
P G P Lawler
V J Webster

The RCA will be pleased to receive comments on the SpR 1/2 Training Programme from both trainers and trainees. These should be addressed to the Medical Secretary of the Training Committee at the RCA [medsec@rcoa.ac.uk]. In response to such feedback and other information on its implementation, this manual will be updated with an implementation date of any change being not less than 6 months after its publication date.

ACKNOWLEDGEMENTS

The Royal College of Anaesthetists acknowledges the wide support that it has received from groups and individuals in the development of this programme of Competency Based Training. In particular, several templates were based upon the Northern Schools of Anaesthesia Training Manual edited by Dr J D Greaves and Prof C P Dodds.

The following Specialist Societies and Associations who responded to a request for proposals based on their areas of expertise.

Anaesthetic Research Society
Association of Burns and Reconstructive Anaesthetists
Association of Cardiothoracic Anaesthetists
Association of Dental Anaesthetists
Association of Paediatric Anaesthetists
British Association of Immediate Care
British Medical Acupuncture Society
British Ophthalmic Anaesthesia Society
British Society of Orthopaedic Anaesthesia
Difficult Airway Society
European Society for Regional Anaesthesia
Group of Anaesthetists in Training
Intensive Care Society
Neuroanaesthesia Society
Obstetric Anaesthetists' Association
Paediatric Intensive Care Society
Pain Society
Resuscitation Council
Society for Computing and Technology in Anaesthesia
Society for Intravenous Anaesthesia
Vascular Anaesthesia Society

Following the circulation of the draft document helpful responses were received from:

Adrian Pearce - Difficult Airway Society: Alison Budd – RCA Tutor, Moorfields: Andrew Norton – RCA Tutor, Boston: Andy Tomlinson – RA, West Midlands: Anne May – President, OAA: Barrie Fischer – Chairman, ESRA: Caroline Carr - Clinical Director, Moorfields: Carolyn Evans – Deputy RA, Yorkshire: Chandra Kumar – Secretary, BOAS: Charles Gillbe – RA, North Thames: Chris Barham – Chairman, SCATA: David Fell – Consultant Leicester: David Gabbott – ALS Committee of Resusc Council (UK): David Smith – President, ACTA: David Zideman – Secretary, BASICS: Diana Swallow – ex-RA, North Thames: Frank Waters – President, NAS: James Dougall – West of Scotland PGMEB: Jenifer Meek – Hon Sec, RCA Board in Scotland: John Peacock, - RCA Tutor, Sheffield: Keith Myerson – ex-Deputy RA, South East Thames: Nick Fauvel – RCA Tutor, Westminster & Chelsea: Prof Howard Fee – Professor of Anaesthesia, Belfast: Robert Johnson – Consultant, Bristol RI: Sarah Harries - Chairman, GAT: Simon Bricker – RA Mersey: Simon Fletcher – TPD, Anglia: Steve Graystone – RCA Tutor, Worcester: Stuart Hargrave – President, Assoc of Dental Anesthesia: Teresa Dorman – Consultant, Sheffield Children's: Nick Watson – Consultant ITU, Eastbourne: Martin Herrick – ex-TPD Anglia: Peter Phillips – RA, Anglia

Many others both within the College and outside have also assisted in discussion relating to this manual and its development.

CONTENTS

	Page
1 Introduction	5
2 Schools of Anaesthesia	7
3 Entry to the SpR Grade	7
4 Objectives of SpR 1/2 Training and Assessment	8
5 Supervision and Delivery of Training	11
6 Methods of implementing SpR 1/2 assessments	12
7 Supervision of more junior staff by SpR 1 & SpR 2s	13
8 Role of NCCG anaesthetists in teaching trainees	14
9 Current RCA requirements relevant to SpR 1/2 Training	14
SpR 1/2 Training Certificate and	15
Record of Fundamental Transferable Skills	16
10 Generic knowledge and skills	17
11 Academic / Research	20
<u>Key Units of Training</u>	
12 Cardiac / Thoracic	21
13 Intensive Care Medicine	24
14 Neuroanaesthesia	27
15 Obstetrics	29
16 Paediatric anaesthesia	31
17 Pain management, acute & chronic	33
18 Vascular	35
<u>General Units of Training</u>	
19 Day surgery	36
20 Ear, Nose and Throat (Otorhinolaryngology)	38
21 General surgery / Gynaecology / Urology (+/- Transplantation)	40
22 Orthopaedics	42
23 Regional	43
24 Trauma and accidents	44
<u>Additional Units of Training</u>	
25 Diagnostic imaging, anaesthesia & sedation	45
26 Maxillo-facial / Dental	46
27 Ophthalmic anaesthesia	48
28 Plastics / Burns	49
29 Miscellaneous	51
30 Applied physiology	52
31 Applied clinical pharmacology	54
32 Statistical basis of clinical trial management	56
33 Clinical measurement	57
Appendix 1: Example of 'Workplace Assessment' Record	58
Appendix 2 Assessments relevant to training in ICM	59
Appendix 3 Attitudes to patients and behaviour in the workplace	69
Appendix 4: RCA Recommendations for Trainee Logbooks	72
Appendix 5: Example of Training Summary	73

The content of this manual will be reviewed annually and, if necessary, updated.
Please work from the latest version.

1: Introduction

This manual replaces all existing Royal College of Anaesthetists (RCA) documentation on Specialist Registrar 1/2 (SpR 1/2) training and the published Final Examination Syllabus. Its content will be applied, progressively, to all SpR 1/2s taking up a post on or after 1st February 2002 with full implementation by 1st February 2004. It should be read in conjunction with *The CCST in Anaesthesia, I: General Principles*.

The new training program leading to a Certificate of Completion of Specialist Training (CCST) in Anaesthesia is required by the Specialist Training Authority (STA) to be 'competency based'. The training and assessment of trainees is required to reflect this philosophy.

The Royal College of Anaesthetists (RCA) in its submission to the STA stated that:

- ## Competence in a trainee describes possession of the knowledge, skills and attitudes required to undertake safe clinical practice at a level commensurate with stated objectives;

and that

- ## Professional practice means more than the performance of clinical skills, no matter how complex. It very importantly carries a built-in commitment to standards, and the attitudes which will maintain those standards throughout life.

The necessary knowledge, skills and attitudes have therefore now been defined for all aspects of training and all three need to be assessed. During the training process, it is expected that both trainees and trainers will comply with the guidance issued by the GMC and RCA in their monographs.¹

Since the RCA made its submission to the STA, the Clinical Negligence Scheme for Trusts (CNST) has stated (in October 1999):

'The CNST will require that all medical staff in training when taking up a new post are required to be given by their supervisor a list of the technical tasks they are expected to be able to perform. The trainees must indicate their competence to perform the specified tasks.'

This emphasises the need for the assessment of competence and an added responsibility to document the satisfactory achievement of training objectives.

At present, the training of anaesthetists is of a high standard. Many Schools of Anaesthesia have training programmes which already test competence. The policy of the RCA is to recognise this and to provide a framework of assessment into which successful existing schemes can be accommodated. This manual consequently lays down the knowledge skills and attitudes (including behavioural patterns²) which are required to complete Specialist Registrar 1/2 (SpR 1/2) training and prescribes the competencies which have to be 'signed up': it does however allow considerable latitude as to how this can be done.

Whilst it would theoretically be possible in applying assessment, to break down every sub-component of an anaesthesia procedure and provide a checklist assessment of each detail, it is neither practical nor profitable to do so. Furthermore, such a methodology would remove

¹ *Good medical practice*, GMC 1998, *Maintaining good medical practice*, GMC 1999; *The Early Years*, GMC 1999, *The doctor as teacher*, GMC 1999, *Recommendations on the Training of Specialists*, GMC 1987, *Good Practice*, The Royal College of Anaesthetists and the Association of Anaesthetists of Great Britain and Ireland, 1998: *Guidelines for the Provision of Anaesthetic Services*, Royal College of Anaesthetists, 1999.

² See Appendix 3

the assessment of the total task, which carries the important aspects of decision making, attitude to the patient and response to events as they occur. It is also not possible for every trainee to have exposure to identical patients, so there has to be an in built factor that relies on the common sense of an experienced trainer to know what is acceptable. Consequently, the majority of assessments in the workplace are directed towards broader categories and topics. As stated above, it is known and accepted by the RCA that many centres are already undertaking assessments of this type, albeit in different ways. The exact method of doing them can be chosen to meet local preferences and conditions (see sections 4 & 6).

This manual sets out the competencies required of any SpR 1/2 before he/she is eligible, with the possession of the FRCA or equivalent, to move forward to an SpR 3/4/5 post. It is based on the existing Final FRCA syllabus. The RCA competency based standards for Intensive Care Medicine are encompassed within the competency based schedule of Step1 (previously Intermediate) Training set out by the Intercollegiate Board for Training in Intensive Care Medicine. The 6-month Step 1 (general) training would be expected to be undertaken in blocks of at least 2-months duration.

This new competency based SpR 1/2 training manual now replaces the Final SpR 1/2 Syllabus with effect from January 1st 2002. The material has been rearranged to bring it all under the headings *Knowledge, Skills and Attitudes*, whilst retaining the existing clinical divisions and the basic sciences. This format inevitably results in the same topic appearing in more than one place. Similarly there is some inevitable crossover between the knowledge and skills lists. Each section relating to clinical practice also has a list of 'Workplace training objectives'. These are intended to assist the trainees' self-directed learning and to indicate the important aspects of clinical practice on which they could be expected to demonstrate and answer simple questions, to satisfy their 'Workplace Assessments'.

Assessment of the SpR 1/2 will be done in the workplace and by RCA examinations.

- ## 'Workplace Assessments' (carried out by the RCA Tutor or other designated consultants who meet the criteria to be trainers³) will concentrate primarily on clinical skills, attitudes and behaviour together with a confirmation that the trainee has a practical understanding of the knowledge base across anaesthesia, critical care and pain management.
- ## Examination assessments (in the RCA Final Examination) will mainly test the knowledge base across anaesthesia, critical care and pain management with the associated applied basic science, together with the assessment of some skills and attitudes.

The various components of the SpR 1/2 training programme are listed in sections 12 - 33. They are set out in the same order of knowledge, skills and attitudes together with the workplace training objectives required. In many instances the local requirements necessary to support training are also listed. A proforma is provided in Appendix 1 for a 'Workplace Assessment', which should take place within most units of training. How these are used, will be determined locally by the School of Anaesthesia. Some of the sections (30 – 33) relating to applied basic science have only knowledge listed for obvious reasons. When assessing a trainee's competency, it is not expected that the assessor should cover all aspects of the knowledge lists in detail: the latter are there as a guide to aid the trainee's study and, together with the supporting applied basic science, will continue to be assessed in the Final Examination of the RCA. In section 10 are listed additional Generic knowledge and skills which may or may not have been covered within the various units of training, but which should not be omitted. Knowledge and skills relating to the airway are particularly emphasised here. Similarly section 11 covers aspects of Academic / Research training which are relevant to the whole of SpR 1/2 training. The RCA is relying on the good sense of its assessors in 'signing trainees off'. It is recognised that, as with consultant practice, there are individual variations in ability, aptitude and application. What is required of the assessor is a confirmation that the trainee has been trained in the relevant aspect of practice and has

³ A trainer is defined in *The CCST in Anaesthesia, I: General Principles*

attained a minimum standard that would be acceptable to other trainers. This method of semi-continuous surveillance is already in informal use in most of the hospitals in the UK. What is needed is for it simply to become formalised: it is the confidence that the College has in its Tutors and other consultants committed to training standards that allows this step to be taken. This confidence has been built up over the past few years from reports to the Training Committee following hospital visits.⁴

The Objectives of SpR 1/2 Training and Assessment are found in section 4. Section 6 describes how assessment should be implemented. With the completion of each 'Workplace Assessment', a record will be kept both by the School of Anaesthesia and by the trainee. Examination assessments are described in other RCA documentation.⁵

As the trainee progresses, he/she will gradually be judged to have achieved competence in additional aspects of practice. At the end of their SpR 1/2 training, to be able to move on to a Specialist Registrar (SpR) 3/4/5 post, the SpR 1/2 should have:

- a) passed all the required 'Workplace Assessments' (see section 4.2)
- b) demonstrated reasonable attitudes and behaviour
- c) passed the RCA Final examination or the Final examination of the Irish College of Anaesthetists

2: Schools of Anaesthesia

Training in anaesthesia, critical care and pain management for Specialist Registrars in years 1 and 2 is organised through Schools of Anaesthesia. The RCA sets out the following recommendations for the incorporation of hospitals into a School of Anaesthesia.⁶

Hospitals within a School of Anaesthesia will, in general, be expected to offer experience and training in anaesthesia for elective and emergency general surgery, urology, trauma and orthopaedics, obstetrics and gynaecology, ENT and oral surgery, day case surgery and surgery for children excluding neonates. In addition, experience in pain management, resuscitation techniques and intensive care medicine should be provided. Experience in Accident and Emergency medicine will require an Accident and Emergency department, which is staffed and operational 24 hours a day.

Single specialty hospitals that can provide units of specialised training may be attached to Schools of Anaesthesia in order to complement the overall provision of training within the recognised rotational training scheme.

These training programmes will be co-ordinated by the Regional Postgraduate Dean and the College's Regional Advisers. All trainees' programmes will be supervised by a Programme Director in conjunction with the Regional Specialist Training Committee.

3: Entry to the SpR Grade

In order to enter the grade of Specialist Registrar (SpR) trainees must:

- have full or limited registration with the General Medical Council (GMC)

⁴ The method of assessment whereby experienced practitioners are delegated the task of determining the line of acceptability is known as 'Limen Referencing'.

⁵ *Primary and Final Examinations for the FRCA: Regulations*. This is available on the RCA website at <http://www.rcoa.ac.uk>

⁶ *Specialist Training in Anaesthesia, Guidelines for Educational Approval*, Royal College of Anaesthetists, 1996

- § have spent at least two years in training as an SHO in anaesthesia, of which one year must have been in a recognised post in the United Kingdom and which included 3 months training in Intensive Care Medicine (ICM)
- § have passed the Primary FRCA or alternatively, have passed an examination taken overseas, which the College recognises as having equivalent status
- § have been appointed to an SpR programme of training by a properly constituted appointments committee

With effect from 1 February 2002 those who satisfactorily complete SHO training have to be issued with an SHO Training Certificate.⁷ With effect from 1 February 2003 the Certificate will be mandatory before an SHO can take up an SpR or LAT post.

4: Objectives of SpR 1/2 Training and Assessment

The units of training set out in sections 12 - 29 of this manual for individual sub-specialty subject areas are not intended to be the basis of a comprehensive programme which must be completed by every SpR 1/2 training in anaesthesia. However, it is recognised that some units of training are key components for the training of SpR 1/2 trainees. Although it is competence that will be judged, nevertheless in these sub-specialties, it is necessary that trainees have the equivalent of at least one month (but not normally more than 3 months)⁸ of training in each during their initial two years of SpR training (whether these are contiguous blocks or a series of shorter one week attachments will depend on local arrangements). It is intended that trainees should receive an initial exposure to anaesthetic practice in all these fields. The seven 'Key Units of Training' are as follows:

1. Cardiac / Thoracic
2. Intensive Care Medicine
3. Neuroanaesthesia
4. Obstetrics
5. Paediatric anaesthesia
6. Pain management, chronic & acute
7. Vascular

By contrast there are six 'General Units of Training' which are widely available, in which it would be expected that all SpR 1/2 trainees will receive appropriate training and in which 'Workplace Assessments' will take place from the time that this programme is introduced.

1. Day surgery
2. ENT
3. General surgery / Gynaecology / Urology (+/- Transplantation)
4. Orthopaedics
5. Regional Techniques
6. Trauma and accidents

Finally there are five 'Additional Units of Training' which may or may not be available depending on the distribution and availability of services locally. For these it would be expected that SpR 1/2 trainees will receive training in at least some of these sub-specialties and, on occasion, one or more specialist units of training could be linked together. For instance, maxillo-facial / dental, ENT and some experience with plastic surgery might be linked in a single head and neck unit of training and then assessed as a single entity.

1. Diagnostic imaging, anaesthesia & sedation
2. Maxillo-facial / Dental
3. Ophthalmic surgery
4. Plastics / Burns
5. Miscellaneous

⁷ *The CCST in Anaesthesia, II: Competency Based SHO Training and Assessment*

⁸ For ICM the full 3 month period would be the expected minimum.

In recognising the difficulties for Schools of Anaesthesia in providing training in these sub-specialty areas, it is intended that the College will seek to encourage the development of teaching materials, such as CD-ROMs to assist local teaching. Any such materials would be orientated to the practical management of anaesthesia in these fields.

Thus for each trainee the programme of training will be a mosaic, incorporating elements from these various units of training to a greater or lesser extent. Inevitably there will be overlap, for instance, the skill of arterial cannulation could be learnt and assessed in any one of a number of the listed sub-specialty subject areas. Similarly the knowledge relating to ventilation / perfusion in the lung may be learnt as part of thoracic anaesthesia or critical care. It is for the local trainers and the School of Anaesthesia to determine, within the constraints of local sub-specialty arrangements, what is the appropriate balance. There are however a number of 'Fundamental Transferable Skills' in which all trainees will need to obtain competency. To ensure that this has been achieved a list is provided on the reverse of SpR 1/2 Training Certificate (page 16), some are listed but space has been left so that Schools, if they wish, can add additional skills to this list.

For many units of training, the skills listed in the following sections may initially appear overly ambitious for an SpR 1/2 trainee but it should be remembered that their attainment relates to a trainee who has completed at least 4 years of training in anaesthesia, critical care and pain management. The description of knowledge, skills, and attitudes for each speciality, represents a curriculum for both trainees and trainers. It will evolve and change both in scope and content, as anaesthetic practice evolves. Although it is intended to keep updating this manual, it can never be comprehensive for all aspects of professional practice. Trainers will need to exercise their professional discretion when assessing trainees. With the exception of certain discreet practical tasks, it is not intended to provide comprehensive 'tick lists'. The intention is to ensure that appropriate training takes place.

Some trainees will progress more quickly than others and if the local opportunities for training allow, then these 'fast-track' trainees may progress to cover aspects of training which others, progressing more steadily, will not be capable of covering until they enter SpR 3/4/5 training. Such variation is inevitable if training is to be based on competency rather than time. For example, it may therefore be that, exceptionally, some trainees will be able to complete a longer period in some units of training and some, who intend to proceed to a CCST in ICM, will thereby be able to complete 6 rather than 3 months of training during these 2 years. Any such extensions must be based on the trainee's interests and capability and not be determined by the excessive needs of service.

4.1 THE RCA FINAL EXAMINATION

The Final examination consists of multiple choice and short answer questions together with 2 oral examinations. In combination these assess:

1. The knowledge and understanding (and some of the skills and attitudes) listed under the various 'units of training' in this manual
2. The knowledge of medicine and surgery appropriate to the practice of anaesthesia, critical care and pain management
3. The knowledge and understanding of those aspects of applied basic science (listed in sections 30-33) required to inform the clinical practice of an SpR 1/2 and to underpin subsequent SpR training.

A knowledge of the principles of the specialised areas of post-fellowship training is therefore required, but not the details of practice.

The purpose of the examination is to assess trainees who have obtained the Primary FRCA examination and completed a minimum of 30 months recognised training.

The College very strongly recommends that candidates should only sit the Final FRCA examination when they have spent a minimum of 6 months in an SpR post whether substantive, LAT, or FTTA. The SHO years should be used to obtain the training necessary to be successful in the Primary FRCA examination and to provide a broad clinical base from which to enter SpR training.

Trainees will be expected to demonstrate knowledge at an appropriate level under the following headings:

- Ø Anaesthetic equipment
- Ø Preoperative assessment
- Ø Pre-medication
- Ø Pre-, per- and postoperative management of anaesthesia
- Ø The medical management of the surgical patient
- Ø Anaesthesia for patients with co-existing disease
- Ø Audit and quality control
- Ø Ethics, relevant legislation and the duty of care, consent, and information given to patients before anaesthesia

Applied Basic Science

Candidates should be able to demonstrate a good understanding of human anatomy, physiology and pharmacology relevant to the practice of anaesthesia, critical care and pain management. The syllabus for the Primary FRCA examination is considered core knowledge. For the Final FRCA examination, application of this knowledge to clinical practice will be explored. For instance, this will include the knowledge of anatomy as demonstrated by endoscopic and imaging techniques.

4.2 THE DOCUMENTATION OF TRAINING BY THE TRAINEE

To enable external evaluation to take place as part of RCA visits to hospitals with trainees, and to ensure that individual trainees are receiving an appropriately balanced training, it is essential that trainees maintain proper records. The RCA's requirements for the maintenance of logbooks and other records are therefore set out in Appendix 4, and an example of the training summary that should be kept as part of the trainee's portfolio is in Appendix 5. It is the trainee's responsibility to maintain a portfolio of their training activity as set out in these two appendices.

Similarly trainees must ensure that their 'Workplace Assessments' for individual units of training take place by reminding those responsible at the appropriate time. If however the trainee experiences unreasonable difficulty in arranging the necessary assessment they should communicate this to the College Tutor or, exceptionally, to the Regional Adviser. In due course it will be expected that by the end of their SpR 1/2 training, trainees will have 'Workplace Assessments' in all 7 key units of training and in the 6 general units of training together with some in the additional units of training.

5: Supervision and Delivery of Training

The RCA sets out the following requirements for Anaesthetic Departments providing training for SpR 1/2 trainees.^{9 10 11}

- § It is expected that all consultant anaesthetists who are involved with trainees should themselves be aware of the educational objectives of the training programme and participate actively in the optimal construction and delivery of the programme.
- § Consultants and others involved in teaching must fulfil the RCA CME/CPD requirements. Evidence of such fulfilment must be produced by the CME co-ordinator annually and at the time of hospital visits by the RCA.
- § Named consultants should be responsible for the supervision and training in specialist areas such as ICM and obstetrics, paediatric and dental anaesthesia and pain management.
- ## SpRs 1/2 trainees are normally expected to undertake a minimum of three supervised sessions per week with a consultant.
- ## The consultant / trainee ratio should normally not be less than 1:1 for the number of consultants to the total of SHOs and SpRs 1/2, with sufficient consultant sessions still available for the proper training of SpRs 3/4/5.
- § Within the department there should be arrangements for a formal educational weekly departmental meeting and for audit including both critical incident reporting and morbidity and mortality meetings. Although it is accepted that not all consultants can always be present at regular teaching sessions, it is expected that all consultants will participate whenever possible.
- § In total, the time available for the formal educational activity for SpR 1/2 trainees should normally amount to the equivalent of one half day each week (this is averaged over a period of time and excludes external study leave). This time should be 'ring fenced' such that trainees are not required to cover service commitments during this period save in exceptional circumstances.
- § Records of attendance by all grades of anaesthetic staff at these teaching sessions must be kept. If a trainee is absent, the reason should be recorded. These records may be considered in the assessment of individual trainees.
- § The RCA College Tutor should act as an organiser and co-ordinator of training. Specific tasks can be delegated by the Tutor to other members of the department. In particular the Tutor should co-ordinate the organisation of teaching / training and examination preparation for trainees.
- § The Tutor is the prime point of contact for the trainees with the Royal College of Anaesthetists but in addition is an important role model and general adviser to all trainees in anaesthesia.
- § Copies of the teaching programme should be available and a record of educational achievements (examination results, publications etc.).

⁹ *Specialist Training in Anaesthesia, Guidelines for Educational Approval*, Royal College of Anaesthetists, 1996

¹⁰ *The CCST in Anaesthesia, I: General Principles*

¹¹ *College Tutor – Roles and Responsibilities*, Royal College of Anaesthetists, 2000

- § Trainees should have access to IT equipment such that they can carry out basic tasks on a computer including the preparation of audio-visual presentations. Access to the internet is recognised to be an increasingly important adjunct to learning.
- § Departmental accommodation should provide space for each consultant, adequate secretarial assistance in a separate office and a trainee common room / seminar room. There must be a focal point for the anaesthetic staff so that an effective service can be co-ordinated and optimal opportunities provided for gaining experience and teaching. The Association of Anaesthetists makes the following specific recommendations that are relevant to SpR 1/2 trainees, in relation to departmental accommodation. These recommendations are based on a department of 10 whole time equivalent consultants.¹²

Staff lounge (+ /- beverage preparation area)

This area provides facilities for the departmental staff to meet and discuss topics of mutual interest. The size of this room should be based on the number of WTE consultants on the basis of 3.5 sq. m. per consultant to take into account other staff also using the facility. A beverage preparation area should be provided, preferably as a separate small kitchen.

Library / quiet room

This area will house a small reference library of bench books and provide an area where trainees can study and make notes.

Seminar room

This room will provide essential facilities for training anaesthetists, undergraduates, nursing staff, paramedics and ODAs.

Locker bay

The provision of a locker for each member of staff will permit secure storage of each individual's personal belongings.

6: Methods of implementing SpR 1/2 assessments

Examination assessments

The structure of the Final Examination assessments are described in the RCA booklet Primary and Final Examinations for the FRCA.¹³

'Workplace Assessments'

The RCA tutor and other designated consultants who meet the criteria to be trainers will undertake the 'Workplace Assessments'. As described above in section 1, 'Workplace Assessments' are intended to focus primarily on the attainment of clinical skills, attitudes and behaviour together with a confirmation that the trainee has an understanding of the practical aspects of the knowledge base.

Assessment of clinical skills

The RCA accepts that 'Workplace Assessments' will vary from hospital to hospital: this is inevitable because of the different types of hospital and the selection of work they do. There are already several very successful 'Workplace Assessment' schemes in place and it is the intention of the RCA to support these when appropriate.

As has been stated, there is no expectation that every sub-component of a 'Skill' will be individually investigated and assessed, but rather that trainers will become confident, through their personal knowledge of the trainees, that the individual trainee has acquired sufficient

¹² *Department of Anaesthesia: Secretariat and Accommodation*, Association of Anaesthetists, 1992

¹³ *Primary and Final Examinations for the FRCA: Regulations*. This is available on the RCA website at <http://www.rcoa.ac.uk>

competence in an area of practice to be signed off. If they cannot be signed off, the reason why should be identified, documented and advice given to the trainee.

Each hospital can choose the way in which it carries out the assessments provided that the College Tutor or other designated consultant can, in good faith, sign to say that they have been completed. Some hospitals may have identified assessment lists, others may put trainees with specific consultants at specific times and others may have meetings at which trainees are reviewed. Most will probably use a mixture of these and/or other methods. Whatever method is chosen, it is essential that the trainee's logbook is kept up to date and reviewed.

An example of a suggested 'Workplace Assessment' form is given in Appendix 1. If preferred, hospitals can use their own in a different style. However the assessment is done, three principles are important:

1. Both the trainee and the School of Anaesthesia and/or hospital must keep a copy of the outcome
2. If the trainee does not meet the required standard the reasons must be given and documented
3. The sum of the assessments must allow the Certificate of Satisfactory Completion of SpR 1/2 Training to be confirmed.

If a trainee does not meet the necessary standard on an individual assessment, they must be re-assessed at a later date. Whether this should consist of all or part of the assessment is left to the discretion of the assessor.

Assessment of attitudes and behaviour

These are an integral part of the 'Workplace Assessments' and are included in sections 11 - 29, but in addition should be carried out at least annually in the format described in section 26 of *The CCST in Anaesthesia, II: Competency Based Senior House Officer Training and Assessment* and reproduced here in Appendix 3. Any problems identified must be discussed with the trainee.

The confirmation of satisfactory SpR 1/2 Training

Towards the end of the initial 2 years of SpR training, arrangements will be made, when appropriate, for the completion of the SpR 1/2 Training Certificate confirming the satisfactory attainment of SpR 1/2 training. It must be signed by the Royal College of Anaesthetists' Regional Adviser and another designated consultant. This will also record the attainment of the various Fundamental Transferable Skills by the trainee. The possession of this certificate is required before commencing SpR 3/4/5 training. A copy of this Certificate must therefore be sent to the Training Department at the Royal College of Anaesthetist as an indication of when the trainee will enter SpR 3/4/5 training.

Although some latitude is allowed in the way individual assessments are carried out, none is permitted in the wording or layout of the final certificate, shown on page 15.

7: Supervision of more junior staff by SpRs 1 & 2¹⁴

The RCA recognises the benefits that result when trainees work together. Without wishing to discourage this on routine lists, SpRs 1 & 2 should not provide formal intermediate cover between an SHO and consultant whilst on-call unless they have received training in

¹⁴ *The CCST in Anaesthesia, I: General Principles*

supervision of junior staff that is satisfactory to the Consultants supervising them when they are on-call.

This does not preclude them from:

- a) giving help in emergency situations when assistance is required immediately by the SHO or
- b) undertaking a case with or instead of an SHO if the latter is insufficiently experienced.

8: Role of NCCG anaesthetists in teaching trainees.

The Royal College of Anaesthetists recognises that NCCGs have a valuable role in training. It encourages College Tutors to identify those with aptitude, and to nominate them to the local School of Anaesthesia, specifying the areas in which they have appropriate expertise. For this, possession of the Fellowship is not a prerequisite and Members and Associate Members may apply. Like consultants, they must fulfil the RCA CME/CEPD requirements and this is essential for those areas where they have an on-call responsibility. Where needed they should also have the opportunity to 'learn to teach'.

The specific areas in which NCCGs train are best identified at local level, but may include specialist operating lists where a NCCG has expertise, participation in local courses, other programmes of tutorial and small group teaching and the 'generic' aspects of training as well as provision of immediate advice and supervision for emergency cover. As with supervision of one trainee by another (see 7: Supervision of more junior staff by SpR 1 & SpR 2s) trainees must at all times have unimpeded access to consultants for advice.

9: Current RCA requirements relevant to SpR 1/2 Training.

1. Years 1 and 2 of SpR training must be completed in their entirety before SpR 3/4/5 training can commence. There is no 'optional' time during this phase of training.
2. SpR 1/2 trainees training flexibly are required to "meet the same requirements as full-time training, which shall differ only in the possibility of limited participation in medical duties to a period of at least half that of full-time trainees, including on-call duties". [European Medical Directive 93/16/EEC Annex 1(2)]. This is now interpreted to require that flexible trainees should, pro rata, undertake the same out-of-hours work as full-time trainees, including weekend on-call duties.
3. The Royal College of Anaesthetists recognises that computer driven whole-body simulators are now available in a number of centres in the UK. Where they are so available, the College would like to encourage their use for relevant aspects of postgraduate training in anaesthesia.

ROYAL COLLEGE OF ANAESTHETISTS



SpR 1/2 TRAINING CERTIFICATE

This is to certify that _____

GMC number _____ RCA reference number _____

has completed the full competency based programme of training for SpR years 1 and 2, has had satisfactory 'Workplace Assessments' as listed in the RCA guide **'The CCST in Anaesthesia, III: Competency Based SpR 1/2 Training and Assessment'** and

has passed the RCA Final Examination in _____(month/year)* or

has passed the Final examination of the Irish College of Anaesthetists in _____(month/year)

and has thereby successfully completed SpR 1/2 training and will therefore commence SpR 3/4/5 training

with effect from _____(month/year)

Signed..... Name (print)..... Date.....
[Regional Adviser in Anaesthesia]

Signed..... Name (print)..... Date.....

* Delete and fill in as appropriate

The original of this certificate should be kept by the trainee with a copies held by the School of Anaesthesia and/or hospital. A copy should also be sent to the Training Department at the Royal College of Anaesthetists in order to confirm the date of entry into SpR year 3.

[Please complete the reverse side of this Certificate]

ROYAL COLLEGE OF ANAESTHETISTS

RECORD OF FUNDAMENTAL TRANSFERABLE SKILLS

SKILL	DESCRIPTION AND DATE OF TRAINING	COMPETENT Signed/Dated
--------------	---	-----------------------------------

Required

Aseptic technique		
Spinal		
Epidural		
Combined spinal & epidural		
Internal Jugular line		
Arterial line		

Optional

Subclavian line		
PA catheter		
Double lumen tube insertion		

Skills laboratory / manikin based training

Fibreoptic intubation		
Percutaneous tracheostomy		

It is for the School of Anaesthesia to decide which skills are required and which are optional.

10: Generic knowledge and skills

Listed here are generic aspects of knowledge and skills that may or may not have been covered within the various other units of training, but which should not be omitted. Knowledge and skills relating to the airway are particularly emphasised. As with other aspects of SpR 1/2 competence, these will generally represent a further development of the basic competencies obtained as an SHO.

Knowledge

Anaesthetic and monitoring equipment

- standards

- care, cleaning, disinfecting and sterilisation (particularly airway equipment)

- potential defects and problems

- safety precautions and checking

Anaesthesia in abnormal environments

- altitude

- in pressure chambers / at depth

- low temperature

Problems for patients and staff of:

- age (anaesthesia and the elderly)

- obesity

- smoking

- alcoholism

- drug dependency and addiction

- hepatitis B & C carriers

- HIV and AIDS

- variant CJD

- pacemakers

Hazards for patients and staff of:

- anaesthetic drugs and pregnancy

- electricity and electrocution

- diathermy

- sharps injury

- pollution by anaesthetic gases

- fires and explosions

Intravenous fluid replacement

- blood transfusion

- Jehovah's Witnesses

- blood substitutes

- disseminated intravascular coagulation

- colloid / crystalloid

Posture and positioning

- lateral position

- prone position

- Trendelenberg position

- lithotomy

- peripheral nerve damage

- prevention of deep vein thrombosis

Airway Management

Anatomy of the airway

Physiology of airway and airway reflexes

Pharmacology relevant to the airway

- control of secretions

- control of airway reflexes in conscious sedation

- effect of anaesthetic drugs on airway reflexes

- reducing the prevalence and sequelae of gastro-oesophageal reflux

Evaluation of the airway
history
general examination
specific predictive tests
special investigations

Airway strategy
aspiration risk
predicted difficult direct laryngoscopy
predicted difficult mask inflation
known abnormal / narrowed tracheo-bronchial tree
unexpected difficult ventilation
unexpected difficult intubation
can't intubate / can't oxygenate

Preoxygenation – techniques / purpose

Confirmation of position of tracheal tube within trachea

Monitoring of ventilation by pressure changes, gas flows and capnography

Application of cricoid force in a rapid sequence induction

Cricoid force induced difficulties with airway management

Airway equipment - difficult airway trolley

Tracheostomy tubes, types, fixation and care

Conscious sedated (awake) intubation

- preparation of patient
- topical anaesthesia
- nerve blocks
- laryngoscopy, bronchoscopy
- specialised tubes

The obstructed airway

- recognition
- immediate treatment of acute obstruction
- anaesthetic management of acute and chronic obstruction
- flexible nasendoscopy and imaging

Emergency cricothyrotomy

- needle
- purpose built cannula >4 mm ID
- surgical

Extubation strategies - routine, predicted and unexpected difficulty

Complications of difficult airway management

Follow-up care of patient, documentation and patient information

Surgical approach to the airway - indications, techniques, conduct

Percutaneous cricothyrotomy and tracheostomy

Skills

Recognition of the difficult airway

- when to ask for help

Failed rapid sequence intubation

- performance of recognised 'drills' for failed intubation / ventilation

Alternative methods of intubation

- other laryngoscopy blades and bougies
- low skill fiberoptic intubation e.g. via laryngeal mask or specialised airway

Placement and checking of double lumen tubes

Anaesthetic techniques for laryngoscopy, bronchoscopy and tracheostomy

Extubation in abnormal airway

Clinical review of patient to detect and treat airway instrumentation damage

Interpretation of CT, MRI imaging and flow-volume loops

Additional desirable clinical skills to be learnt primarily in the non-clinical environment (skills laboratory / manikin / simulator) but supplemented by some clinical experience. The availability of equipment to display the fiberoptic image on a screen will also extend the opportunities for clinical teaching.

Awake intubation

- indications

- use with the compromised airway

Fiberoptic intubation through the nose and mouth with and without concurrent ventilation

Fibre-endoscopy skills to:

- visualise tracheo-bronchial tree

- confirm placement of single and double lumen tubes

- intubate through the laryngeal mask

Blind and fiberoptic assisted intubation via the intubating laryngeal mask

Elective trans-tracheal ventilation to aid difficult intubation

Retrograde intubation - blind and fiberoptic assisted

Placement bronchial blockers

Specialised bougies and airway exchange catheters

Use of the combitube or other supraglottic balloon device

Emergency cricothyrotomy

- landmarks

- insertion of needle / cannula

- confirmation of position within trachea

- fixation

- pressures required for adequate gas flows

- ventilation through cannula / catheter

- complications

Application of 30 N cricoid force

11: Academic / Research

An understanding of the scientific basis of anaesthetic practice is essential. This unit of training effectively underwrites the understanding and education of trainees in all other the other aspects of the training that they will receive in SpR years 1&2. Even if separate time is not allocated, the concepts identified here should be fundamental to the education of SpR 1/2 Trainees.

Knowledge

The scientific explanations basis of clinical practice

The methodology and processes of clinical and laboratory research including the ethical considerations raised by research , the importance of study design in clinical research and the importance of statistical analyses

The audit cycle

The major national audit processes, including National Confidential Enquiry into Perioperative Deaths (NCEPOD)

Critical Incident Reporting:

purpose and value

methods – local / national

anonymity – pros and cons

Skills

Able to locate published research in a systematic manner

Critically interpret and evaluate the value of published clinical research

Plan and prepare a presentation and present to a live audience.

Attitudes and behaviour

Maintain an inquisitive, questioning approach to clinical practice

Cultivate an evidence-based practice

Awareness of and detachment from vested interests or entrenched views

Develop a readiness to both listen and explain

Demonstrate a willingness to teach and learn

Develop an informed critical approach to the scientific literature

Workplace training objectives

Trainees should gain competency in the critical interpretation and evaluation of published clinical research and be able to assess the benefit of applying the results of research to clinical practice.

Recommended local requirements to support training

- š A suitably experienced consultant or clinical academic
- š Library and computing facilities
- š Regular academic meetings

12: Cardiac / Thoracic

This is a 'Key Unit of Training' in which SpR 1/2 trainees should spend the equivalent of at least 1 month of training and, normally, not more than 3 months.

It is recognised that for SpR 1/2 training there will, due to the distribution of specialist units, be considerable variability in the degree of experience available to individual trainees. Through attachments and links between Schools of Anaesthesia it is expected that the majority of trainees will receive at least one month of experience in this anaesthetic sub-specialty. However, where experience in this sub-specialty is more freely available, a unit of training should be limited to 3 months within the 2-year SpR 1/2 training programme.

Knowledge

Cardiac Anaesthesia

Preoperative assessment and perioperative care of patients with cardiac disease
Induction and maintenance of anaesthesia for high risk cardiac procedures, including valve replacement
Antibiotic prophylaxis against subacute bacterial endocarditis
Problems of cardiopulmonary bypass
Postoperative cardiac critical care, including analgesia, sedation and ventilatory management
Significance of cardiac tamponade
Interpretation of ECG and CXR
Interpretation of invasive and non-invasive cardiovascular monitoring
Temperature control and patient rewarming methods
Coagulopathy
Cardiac pacing modes
Intra-aortic balloon counter pulsation
Understanding of the adult patient with congenital heart disease
A working knowledge of the following investigations:
 stress testing
 cardiac catheterisation
 echocardiography – transthoracic / transoesophageal
 radionuclide scan

Thoracic Anaesthesia

Preoperative pulmonary function tests
Local and general anaesthesia for bronchoscopy including techniques of ventilation
Understanding of fiberoptic bronchoscopic techniques for airway management
Principles of one-lung anaesthesia
Management of a pneumothorax
Principles of underwater seals on chest drains
Postoperative care and analgesia after thoracic surgery

Skills

Generic

Internal jugular and subclavian venous cannulation
Arterial cannulation
Invasive pressure monitoring, including pulmonary artery catheters and interpretation of derived indices
Postoperative analgesia by appropriate methods including local techniques
Cardiopulmonary resuscitation and appropriate use of defibrillators

Cardiac Anaesthesia

Preoperative assessment of patients with valvular and with ischaemic heart disease
Induction and maintenance of anaesthesia for elective coronary bypass
Management of the patient during cardiopulmonary bypass
Use of inotropes and vasodilators

Anaesthesia for procedures in intensive care including emergency re-sternotomy, re-intubation, tracheostomy or cardioversion

Thoracic Anaesthesia

Preoperative assessment, preparation of patients with pulmonary disease
Preoperative assessment, preparation of patients for thoracic surgery
Induction and maintenance of anaesthesia for minor thoracic procedures, in particular, bronchoscopy and the use of the Sanders injector
Use of single and double lumen endobronchial intubation
Fibreoptic endoscopic confirmation of tube placement
Induction and maintenance of anaesthesia for major thoracic procedures
One lung ventilation

Attitudes and behaviour

To communicate effectively with surgical colleagues / other members of the theatre team
To be able to summarise a case to critical care staff
Understand how to communicate with the intubated patient in intensive care
To be able to recognise the need for senior help when appropriate
Maintain accurate clinical records
Presentation of material to departmental meetings and participation in clinical audit

Workplace training objectives

By gaining experience in cardiothoracic anaesthesia, the trainee should also develop competency in the management of cardiovascular and pulmonary problems arising in non-cardiac surgical patients

Cardiac Surgery

The trainee should develop the ability to assess the circulation and have experience in the use of inotropes and vasoactive agents to support of the circulation in patients with cardiac disease. They should also develop an understanding of the problems of extracorporeal circulation.

Thoracic Surgery

The trainee should understand the problems of one lung anaesthesia and develop experience in the placement of double-lumen tubes

Recommended local requirements to support training

Cardiac Surgery

- ⚡# Cardiac surgery must take place in theatres equipped to a high standard for anaesthesia and monitoring with facilities for cardiopulmonary bypass and mechanical support of the circulation.
- ⚡# Rapid access to biochemistry and haematology services.
- ⚡# Each cardiac unit must have a consultant anaesthetist with dedicated responsibility for cardiac anaesthetic services.
- ⚡# There must be appropriate support facilities provided.
- ⚡# Extensive patient monitoring is required.
- ⚡# Adequate critical care facilities must be provided.
- ⚡# There must be resident medical staff cover of the intensive care unit.
- ⚡# There must be an ongoing, adequately resourced, audit programme.

Thoracic Surgery

- ⚡# On-site pulmonary function laboratory facilities must be available.
- ⚡# Patients must be managed in an area, equipped and staffed to a high standard.
- ⚡# Patients may routinely return to a high dependency care facility, however supporting intensive care facilities should also be easily accessible.
- ⚡# Pain relief and other clinical protocols must be clearly defined.

13: Intensive Care Medicine

This is a 'Key Unit of Training'. Step 1 (previously Intermediate) Training in ICM requires 6 months of training within the specialty. All trainees in anaesthesia must receive the initial 3 months of this training during their SpR 1/2 time, this requirement is based on the recognition that knowledge and skills gained in critical care underpin the trainees ability to gain competency in aspects of anaesthesia later in their training. The second 3 months training in ICM would normally be obtained in year 3. However, provided other 'units of training' in the SpR 1/2 period are not compromised, this second period can also be completed during this time. It is anticipated that this will be the exception rather than the rule.

Assessments appropriate to this 'Unit of Training' are set out in Appendix 2. These assessments are taken directly from the documentation of the InterCollegiate Board for Training in Intensive Care Medicine (ICBTICM) whose property they are. They are reproduced here for convenience.

Knowledge

General

Trainees should have a good understanding of the diagnosis and management of the critically ill patient. All trainees should be familiar with the monitoring and life support equipment used in the treatment of critically ill patients. Trainees must be able to demonstrate their knowledge of practical invasive procedures, with an understanding of the principles and hazards involved and the interpretation of data from such procedures.

Transport of the critically ill

- assessment and organisation of transfer
- physiological consequences of acceleration
- problems of working in isolated environments

Outreach care

- early warning signs and symptoms
- infection and Multiple Organ Failure

Sepsis and endotoxaemia

- nosocomial infections
- assessment and management of oxygen delivery
- antibiotics and immunotherapy
- reperfusion injury and antioxidants

Cardiovascular system to include

- pathophysiology and management of cardiogenic and hypovolaemic shock
- pulmonary embolism
- investigation and management of cardiac failure
- investigation and management of arrhythmias

Respiratory system to include

- airway care, including tracheal intubation and clearance of secretions
- humidification
- management of tracheostomy and decannulation
- ventilators and modes of pulmonary ventilation (including non-invasive ventilation)
- management of acute and chronic respiratory failure
- management of severe asthma

Nervous system to include

- central nervous system infection
- acute polyneuropathy
- traumatic and non-traumatic coma
- encephalopathies
- cerebral ischaemia
- status epilepticus
- brain stem death

Renal, Electrolyte and Metabolic Disorders to include

- diagnosis, prevention and management of acute renal failure
- fluid, electrolyte and acid-base disorders
- body temperature
- adrenal and thyroid dysfunction
- Haematological Disorders to include
 - coagulopathies
 - immunocompromised patients
- Gastrointestinal Disorders
 - acute liver failure - diagnosis and management
 - acute pancreatitis
 - gut ischaemia
 - gastrointestinal ulceration and bleeding
 - translocation and absorption disorders
- Nutrition
 - enteral and parenteral nutrition: methods, nutrients, and complications
- Analgesia, Anxiolysis and Sedation
- Trauma
 - management of multiple injuries
 - near-drowning
 - burns and smoke inhalation
- Cardiopulmonary Resuscitation
- Management of Acute Poisoning
 - paracetamol
 - aminophylline
 - digoxin
 - ecstasy
 - tricyclics
- Organ Donation
- Scoring Systems and Audit
- Ethics

Skills

Generic

- arterial and central venous access
- insertion of thoracic drain
- insertion of oro- or naso- gastric tube

Specific

- recognition of the critically ill patient
- insertion of flow directed pulmonary artery catheter
- insertion of transvenous pacemaker
- insertion of oesophageal Doppler probe
- ultrasound visualisation of main veins
- percutaneous tracheostomy
- fiberoptic bronchoscopic clearance of sputum
- peritoneal lavage
- set up ventilator for adult suffering from severe ARDS
- assist in prone positioning patient
- assist in weaning patient from IPPV via assist/CPAP

Attitudes and behaviour

An awareness of the importance of communication skills and interpersonal relationships will be expected

- Obtaining consent / assent for procedures in the critical care unit
- Breaking bad news
- Requesting post mortem investigation
- Explaining need for unexpected / early discharge
- Introducing the concept of organ donation

Workplace training objectives:

There will be variation in the experience and degree of competence that individual trainees will achieve in this initial period of ICM training. However, for example, they should be able to admit and manage a patient who has undergone major emergency for instance in vascular surgery or to admit and organise the early management of a patient suffering from severe respiratory failure complicated by acute renal failure.

Recommended local requirements to support training

- § There should be a separate designated facility (the Intensive Care Unit) for the care of the critically ill patient.
- § There must be a sufficient number of intensive care and high dependency beds available to serve the designated population.
- § The Critical Care Unit must be properly staffed and equipped for the care of such patients.
- § All staff providing Critical Care, medical, nursing and paramedical must be appropriately trained.
- § Critical Care services should be subject to clinical audit using the Intensive Care National Audit and Research Centre Case Mix Program.
- § Information on the provision of intensive care and high dependency care within a Trust (Augmented Care Period Dataset) must now be collected as part of the Contract Minimum Dataset.

14: Neuroanaesthesia

This is a 'Key Unit of Training' in which SpR 1/2 trainees should spend the equivalent of at least 1 month of training and, normally, not more than 3 months.

Anaesthetic training for Neurosurgery and Neuroradiology will take place within designated specialist centres with the appropriate critical care facilities.

Knowledge

Preoperative assessment and management of patients with neurological disease
Anaesthesia for imaging relevant to the CNS
Anaesthesia for MRI including problems of magnetic fields
Anatomy of the skull and skull base
Anatomy, physiological control and effect of drugs on cerebral blood volume and flow, ICP, CMRO₂
Principles of anaesthesia for craniotomy, to include vascular disease, cerebral tumours and posterior fossa lesions
Anaesthetic implications of pituitary disease including endocrine effects (acromegaly) and trans-sphenoidal surgery
Perioperative management of interventional neuroradiological procedures
Anaesthesia for spinal column surgery and anaesthetic implications of spinal cord trauma
Principles of immediate postoperative management including pain relief and special considerations with narcotics
Principles of neurological monitoring
Implications of prion diseases for the anaesthetist and other staff
Anaesthetic and critical care implications of neuromedical diseases
 Guillain-Barré syndrome
 myasthenia gravis - pharmacological management / thymectomy
 myasthenic syndrome
 dystrophia myotonica
 muscular dystrophy
 paraplegia and long-term spinal cord damage
 control of convulsions including status epilepticus
 tetanus
 trigeminal neuralgia including thermocoagulation

Skills

The trainee will be supervised during the provision of anaesthesia for:

Planned

- intracranial surgery
- spinal surgery

Emergency neurosurgery for

- head trauma

Safe patient positioning – prone, park-bench (lateral)

The trainee will be instructed in the non-surgical management of the head trauma patient

Resuscitation and patient transfer

Monitoring

- insertion of arterial lines
- insertion of CVP lines
- techniques for detection and management of air embolism
- EEG and evoked potentials
- intracranial pressure measurement
- spinal drainage

Critical Care:

- indications for ventilation
- the role of drugs

management of raised intracranial pressure and manipulation of cerebral perfusion pressure
fluid and electrolyte balance in neurocritical care
complications
treatment of raised intracranial pressure
cerebral protection and prevention of cerebral ischaemia
management of patients for organ donation

Neuroradiology

practical aspects of patient management for CT and MRI
anaesthetic considerations in interventional radiology

Attitudes and behaviour

To understand the problems of obtaining consent in patients with impaired consciousness.

To appreciate the limits of medical intervention

To gain the ability to establish a rapport with the operating neurosurgeon and exchange information during surgery on aspects of changes in the patient's vital signs which are relevant to the operative procedure

To communicate well with the nursing staff in the ICU, patients, relatives and other hospital staff

To offer comfort to the patient and relatives when there is no prospect of survival

To understand the requirements for organ donation

Workplace training objectives:

Trainees should gain an understanding of the principles of neuroanaesthesia and the associated neuro-critical care in order to manage, with safety, patients for routine operations on the brain and spinal cord. For patients with head injury, trainees should be able to manage their resuscitation, stabilisation and transfer.

Recommended local requirements to support training

- § Neuroanaesthesia should only take place in Neuroscience Centres.
- § Staffing levels in the operating theatre should be sufficient to allow anaesthetists to work in teams during long operations.
- § Interventional neuroradiology requires full neuroanaesthesia cover by consultants
- § Neuro-critical care is a joint responsibility between neuroanaesthesia and neurosurgery; there should be specific sessions for neuroanaesthetists in Critical care.
- § The provision of beds for neuro-critical care must be adequate, the ventilation of patients in other areas should only occur in exceptional circumstances.
- § Operating theatres, Intensive Care Units (ICU) and neuroradiology facilities including scanners should all be in close proximity.

For patients with Head Injuries

- § The care of head injured patients is an integral part of neuroanaesthesia. Specialist units accepting these patients need to make specific arrangements including protocols, staff training and rapid availability of facilities. Optimal management will improve outcome and save resources in the long term.
- § Local guidelines on the transfer of patients with head injuries should be drawn up between the referring hospital trusts and the neurosurgical unit which should be consistent with established national guidelines. Details of the transfer of the responsibility for patient care should also be agreed.
- § Only in exceptional circumstances should a patient with a significantly altered conscious level requiring transfer for neurosurgical care not be intubated.

15: Obstetrics

This is a 'Key Unit of Training' in which SpR 1/2 trainees should spend the equivalent of at least 1 month of training and, normally, not more than 3 months.

Obstetric anaesthesia and analgesia is the only area of anaesthetic practice where two patients are cared for simultaneously. Pregnancy is a physiological rather than a pathological state. Patient expectations are high and the mother expects full involvement in her choices of care. The majority of the workload is the provision of analgesia in labour and anaesthesia for delivery. The importance of multidisciplinary care for the sick mother is increasingly highlighted.

Knowledge

Anatomy and physiology of pregnancy

Physiology of labour

Placental structure and mechanisms affecting drug transfer across the placenta

Basic knowledge of obstetrics

Gastrointestinal physiology and acid aspiration prophylaxis

Pharmacology of drugs relevant to obstetric anaesthesia

Pain and pain relief in labour

Emergencies in obstetric anaesthesia:

pre-eclampsia, eclampsia, failed intubation, major haemorrhage,
maternal resuscitation, amniotic fluid embolus, total spinal

Use of magnesium sulphate

Incidental surgery during pregnancy

Assessment of fetal well being in utero

Thromboprophylaxis

Feeding / starvation policies

Influence of common concurrent medical diseases

Management of twin pregnancy

Management of premature delivery

Maternal morbidity and mortality

Management of difficult or failed intubation

Maternal and neonatal resuscitation

Legal aspects related to fetus

Skills

Assessment of pregnant woman presenting for anaesthesia / analgesia

Epidural / subarachnoid analgesia for labour

Management of complications of regional block and of failure to achieve adequate block

Epidural and subarachnoid anaesthesia for Caesarean Section, and other operative deliveries

Conversion of analgesia for labour to that for operative delivery

General anaesthesia for Caesarean Section

Airway management

Management of the awake patient during surgery

Ability to ventilate the newborn with bag and mask

Anaesthesia for interventions other than delivery

Post-delivery pain relief

Management of accidental dural puncture and post-dural puncture headache

Recognition of sick mother

High dependency care of obstetric patients

Optimisation for the 'at risk' baby

Attitudes and behaviour

To be aware of local guidelines in the obstetric unit

To communicate a balanced view of the advantages, disadvantages, risks and benefits of various forms of analgesia and anaesthesia appropriate to individual patients
To communicate effectively with partner and relatives
To help deal with disappointment
To be involved in the initial management of complaints
To communicate effectively with midwives
To obtain consent appropriately
To keep good records
To identify priorities
To attempt by conscientious care to recognise problems early
To allocate resources and call for assistance appropriately
To be aware of local audits and self audit

Workplace training objectives:

Within the obstetric team, the trainee should play a full part; communicating effectively about anaesthetic and analgesic techniques used in obstetrics and developing organisational skills. They should consolidate clinical management of common obstetric practice but recognise and treat common complications exercising proper judgement in calling for help.

Recommended local requirements to support training

- ## Training should normally be provided in units carrying out at least 2,000 deliveries annually.
- ## There should be at least 1 consultant anaesthetic session allocated for every 500 deliveries. (In units with a frequent turnover of inexperienced trainees, with a higher than average epidural or Caesarean Section rate and/or a substantial number of high risk cases, sessions above this minimum will be required).
- ## Local protocols should be available to guide trainees in the management of common obstetric emergencies based on the individual units staffing and local support.
- ## Appropriately trained assistance for the anaesthetist (to NVQ level 3 in Operating Department Practice or in possession of the appropriate ENB qualification) must be locally available whenever a trainee anaesthetist is required to manage a patient during an operative delivery. The person providing this assistance to the anaesthetist should have no other duties at that time.
- ## Access for patients to critical care facilities must be immediately available at all times.
- ## Appropriate anaesthetic 'bench books' should be available within the delivery suite.

16: Paediatric anaesthesia

This is a 'Key Unit of Training' in which SpR 1/2 trainees should spend the equivalent of at least 1 month of training and, normally, not more than 3 months.

Paediatric anaesthesia and pain management includes everything from healthy children in DGHS to the sickest premature babies in tertiary referral centres and in paediatric intensive care units (PICU).

It is not expected that all SpR 1/2s will be able to gain experience with neonates and preterm babies. In considering the listed competencies required, it should be recognised that these will generally relate more to *Knowledge* rather than to *Skills*. However, those who intend to progress to a post with an interest in paediatric anaesthesia may be able to gain access to more paediatric training in SpR 1/2, when their *Skills* should begin to include those areas listed under *Knowledge: Neonates*.

Knowledge

General

Anatomical and physiological characteristics which affect anaesthesia and the changes which take place during growth from neonate to a young child

Paediatric medical and surgical problems including major congenital abnormalities, congenital heart disease and syndromes e.g. Down's and their implications for anaesthesia

Starvation and hypoglycaemia

Preoperative assessment and psychological preparation for surgery

Anaesthetic equipment and the differences from adult practice

Children and Infants

Anaesthetic management of children for minor operations and major elective and emergency surgery

Management of recovery

Management of postoperative pain, and nausea and vomiting in children

Management of acute airway obstruction including croup and epiglottitis

Neonates

Anatomical, physiological and pharmacological differences to the older child / adult

Preoperative assessment

Anaesthetic techniques and thermoregulation

Analgesia

Neonatal equipment and monitoring

Anaesthetic problems and management of important congenital anomalies including those requiring surgical correction in the neonatal period (tracheo-oesophageal fistula, diaphragmatic hernia, exomphalos, gastroschisis, intestinal obstruction, pyloric stenosis)

Special problems of the premature and ex-premature neonate

Resuscitation of the newborn

PICU

Principles of paediatric intensive care: management of the commoner problems, ventilatory and circulatory support, multi-organ failure

Principles of safe transport of critically ill children and babies

Skills

Children and Infants

Resuscitation – Basic life support (BLS) and advanced life support (ALS) at all ages

Preoperative assessment and preparation

Techniques of induction, maintenance and monitoring for elective and emergency anaesthesia

Selection, management and monitoring of children for diagnostic and therapeutic procedures carried out under sedation

Maintenance of physiology: glucose, fluids, temperature

Strategies and practice for the management of anaesthetic emergencies in children: loss of airway, laryngospasm, failed venous access, suxamethonium apnoea and anaphylaxis including latex allergy.

Postoperative pain management including the use of local and regional anaesthetic techniques, simple analgesics, NSAIDs and use of opioids (including infusions and PCA)
Communication with paediatric patients and their family

Attitudes and behaviour

To understand consent in children: the law, research, restraint

To communicate with parents (carers) and children throughout the surgical episode

Workplace training objectives:

The trainee should develop a wide knowledge of the anaesthetic needs of children and neonates. They should, as SpR 1/2 trainees at the end of their training, be able to organise and manage safely a list of straightforward paediatric cases over the age of 3 years with available consultant cover. They should understand the potential hazards of paediatric anaesthesia and have had as much practical training as is possible in planning for the management of such events.

Recommended local requirements to support training

- § Trainers for the initial period of training should be spending not less than the equivalent of one full operating session a week in paediatric anaesthesia
- § Anaesthesia for children requires specially trained staff and special facilities
- § Provision should be made for parents to be involved in the care of their children
- § Adequate assistance for the anaesthetist by staff with paediatric training and skill should be available
- § Paediatric anaesthetic equipment must be available where children are treated

17. Pain Management, Acute & Chronic

This is a 'Key Unit of Training' in which SpR 1/2 trainees should spend the equivalent of at least 1 month of training and, normally, not more than 3 months.

The recommendations for basic training are in addition to the knowledge, skills, attitudes and workplace training objectives described for SHO training. Topics that are already included in the lists for SHO training are treated in greater depth during the SpR 1/2 period.

Knowledge

Anatomy, physiology, pharmacology and basic psychology relevant to pain management

Mechanisms of pain: somatic, visceral and neuropathic pain

Consequences of peripheral nerve injury, spinal cord injury and deafferentation

Assessment and measurement of acute pain

Techniques for control of acute pain: postoperative and post-traumatic - including children and neonates, the elderly, and patients who are handicapped, unconscious or receiving critical care

Application of pharmacological principles to the pain control: conventional analgesics and adjuvant analgesics; side effects; problems of drug dependency and addiction

Opioid and non-opioid medication, opioid infusions, patient controlled analgesia

Other medication used to manage chronic pain: antidepressants, anticonvulsants, antiarrhythmics and other adjuvant medication

Pharmacology of local anaesthetics

Principles of neural blockade for pain management: peripheral nerve, plexus, epidural and subarachnoid blocks; sympathetic blocks including stellate, coeliac plexus and lumbar sympathetic blocks; neurolytic agents and procedures; implanted catheters and pumps for drug delivery

Non-pharmacological methods of pain control. The principles of stimulation induced analgesia: transcutaneous electrical nerve stimulation and acupuncture

The role of other treatment modalities; physical therapy, surgery, psychological approaches, rehabilitation approaches, pain management programmes

Assessment of patients with chronic pain and of pain in patients with cancer

Understanding of the principles of chronic pain management in the pain clinic setting

Understanding of the importance of psychology and pain

Management of severe pain and associated symptoms in palliative care

Principles and ethics of pain research

Skills

Assessment and management of acute pain: postoperative, post-traumatic and non-surgical acute pain

Management of acute pain including special clinical groups: infants, patients with opioid dependence or tolerance, non-surgical acute pain (e.g. sickle cell disease crisis), patients who are handicapped or with impaired consciousness

Explanation of analgesic methods: oral; sublingual; subcutaneous, IM; IV; inhalational analgesia, patient controlled analgesia, epidural; regional techniques and local blocks; possible side effects and complications

Neural blockade: brachial plexus blocks, paravertebral nerve block, intrathecal and epidural drug administration for acute and cancer pain

Management of side effects of pain relieving medication and procedures

Basic assessment of patients with chronic pain

Recognition of neuropathic pain

Prescription of medication for chronic pain including antidepressants and anticonvulsants

Use of stimulation induced analgesia: transcutaneous electrical nerve stimulation

Basic assessment and management of pain in patients with cancer

Attitudes and behaviour

Listens to patients and their relatives
Provides explanations in a way that patients and relatives can understand
Appropriate communication with staff
Enlists help / advice from other professionals when appropriate
Awareness of role in a multi-professional team
Awareness of ethnic, cultural and spiritual issues in pain
Keeps adequate records

Workplace training objectives

Able to assess and manage acute pain for patients after most types of surgery including cardiothoracic, neurosurgery and paediatric surgery
Able to provide explanation of analgesic methods: oral, sublingual, subcutaneous, IM, IV drugs, inhalational analgesia, patient controlled analgesia, epidural and regional techniques; possible side effects and complications
Able to institute appropriate action for patients with unrelieved pain in the immediate postoperative period and unrelieved non-surgical acute pain on the wards
Able to establish priorities and formulate a treatment plan
Able to diagnose and institute initial management for neuropathic pain
Able to demonstrate technical proficiency with procedures from the skills list
Able to work as a part of a multi-professional team

Recommended local requirements to support training

- š Pain Management Services should be planned as an integrated programme although staffing and equipment resources for acute and non acute pain may differ
- š Acute and non-acute pain management in all hospitals requires:
 - š Appropriate facilities, consultant sessional allocation and equipment
 - š Responsibility for the management of pain to be undertaken by appropriately trained consultants
 - š Liaison between pain management, palliative care services and other specialties to provide an inter-disciplinary approach in all areas
 - š Ongoing education in the understanding of pain, its presentation and management, for all grades and disciplines caring for patients
 - š The provision of inter-disciplinary programmes which will improve patient rehabilitation whilst reducing pain and use of other health care resources
- š Specific arrangements must be made for the treatment of children
- š The services of investigation departments must be readily available and information concerning their services easily available to both staff and patients.

18: Vascular surgery

This is a 'Key Unit of Training' in which SpR 1/2 trainees should spend the equivalent of at least 1 month of training and, normally, not more than 3 months.

Developments in interventional radiology are changing the range of elective vascular procedures taking place in the operating theatre. However, the demands for the anaesthesia and critical care of patients undergoing emergency vascular procedures, make it essential that all SpR 1/2 trainees receive appropriate training in this sub-specialty.

Knowledge

Resuscitation and management of major vascular accidents
Management of the patient with atherosclerotic disease
Management of the patient for major vascular surgery
Management of patients for endovascular radiological procedures (stenting etc)
Management of carotid artery surgery
Management of phaeochromocytoma
Sympathectomy
Postoperative management and critical care
Postoperative analgesia
Anaesthesia for non-cardiac surgery in patients with cardiac disease
Effects of smoking on health
Morbidity and mortality of vascular surgery
Massive blood transfusion, strategies for blood conservation, red cell salvage
Consequences of aortic cross-clamping and renal protection

Skills

Preoperative assessment
Insertion of invasive monitoring
Interpretation of information from monitoring
Management of massive blood loss
Maintenance of normothermia
Recognition and management of complications
Postoperative care

Attitudes and behaviour

Sympathetic explanation of risks and benefits of surgery and anaesthesia
Preoperative optimisation
Teamwork with surgeons throughout perioperative period
Anticipation of problems
Recognition of need for help
Clarity of instructions for postoperative care

Workplace training objectives:

Trainees should demonstrate competency in assessing cardiac and pulmonary function in patients with limited exercise tolerance, in the management of significant blood loss and in the use of drugs to support the heart and circulation.

Recommended local requirements to support training

- § Investigative facilities for cardiac and pulmonary function must be available
- § Surgeons must be available with vascular expertise
- § Anaesthetist with regular vascular list
- § Vascular emergencies dealt with routinely
- § Intensive Care / HDU facilities must be available

19: Day Surgery

This is a 'General Unit of Training' in which it is expected that all SpR 1/2 trainees will gain appropriate training.

Training should take place within a dedicated Day Surgery Unit where the management of cases as an outpatient is not compromised by elective or other operations taking place for in-patients.

Knowledge

Selection criteria and preoperative evaluation – limitations: age, ASA, weight etc.

Anaesthetic pre-assessment clinics

Instructions to patients, anaesthetic and social

Regional analgesia appropriate to day cases

General anaesthesia appropriate to day cases

Appropriate drugs for day cases

Recovery assessment

Postoperative analgesia

Skills

Instructions to patient:

- transport

- accompanying person who can drive if in own car

- home not more than 1 hour away from day stay unit

- level of care overnight

- telephone availability

Anaesthesia:

- regional or local anaesthesia

- local topical anaesthesia or sedation

- general anaesthesia

- recognise those unsuitable for day case management

General Anaesthesia:

- to limit the loss of physiological stability and to achieve rapid recovery

- to select where appropriate analgesics and muscle relaxants used during outpatient GA

- to recognise when a patient is sufficiently recovered to return home supervised

Use of protocols or guidelines

Attitudes and behaviour

Good communication with nursing staff, patients, relatives and other hospital staff

The development of a professional and reassuring manner in order to allay patient anxieties

Workplace training objectives:

The trainee must understand and apply agreed protocols with regard to patient selection and other aspects of care, and also appreciate the importance of minimising postoperative complications such as nausea and pain, in patients who are returning home the same day.

Recommended local requirements to support training

- ⌘ Clear guidelines must exist for appropriate patient selection for day case surgery, these will include consideration of social factors
- ⌘ Day surgery units will have a consultant in charge who chairs a multi-disciplinary management team
- ⌘ Specific arrangements must be made for the treatment of children
- ⌘ All patients must be assessed during the recovery phase for the adequacy of analgesia and fitness for discharge
- ⌘ Clear written discharge criteria must be established
- ⌘ Full written records must be maintained
- ⌘ Specific instructions and information must be available for patients, their relatives and community services

20: Ear, Nose and Throat (Otorhinolaryngology)

This is a 'General Unit of Training' in which it is expected that all SpR 1/2 trainees will gain appropriate training.

Knowledge

Preoperative assessment, particularly prediction of a difficult intubation
Management of patients of all ages to include patients with: stridor; intubation difficulties; sleep apnoea; concomitant diseases
Local techniques and surface analgesia
Acute ENT emergencies (e.g. bleeding tonsils, croup, epiglottitis, foreign bodies)
Laryngoscopy and bronchoscopy
Knowledge of special tubes, gags and equipment for microlaryngoscopy, bronchoscopy, laser surgery (e.g. Venturi devices, ventilating bronchoscope and fiberoptic bronchoscopy)
Middle ear surgery including hypotensive techniques
Major head and neck surgery (including laryngectomy)
Emergency airway management including tracheostomy
Use of helium
Postoperative management

Skills

Preoperative

Recognise the importance of preoperative assessment with particular attention to:
 age (paediatric / adult / elderly)
 concomitant disease GI tract
 patients with sleep apnoea, stridor and intubation difficulties
Discuss the anaesthetic procedures with the patient and/or relatives (if a child is involved)
Discuss special requirements with the surgical team
Acute ENT emergencies such as bleeding tonsil bed, croup / epiglottitis
Prepare all appropriate drugs, appropriate masks, airways, tracheal tubes, bougies, laryngoscopes, throat packs
Use of appropriate disposable equipment to prevent transmission of nvCJD

Peroperative

Provide smooth anaesthesia / analgesic / surgical operating conditions
Cope with parental presence in the anaesthetic room
Use the appropriate tracheal tube or laryngeal mask
Use of special tubes, gags and goggles (laser surgery)
Techniques available for microlaryngoscopy and bronchoscopy (Venturi devices and ventilating bronchoscope)
Hypotensive anaesthetic techniques, when appropriate
To use invasive monitoring (arterial, CVP, urinary) for major surgical procedures on the head and neck

Postoperative

Extubation procedures to avoid laryngospasm
Oxygen therapy
Appropriate postoperative analgesia
Postoperative fluid balance
Maintain venous access after operation, if required
Postoperative anti-emetics

Attitudes and behaviour

Develop an understanding of the needs of the surgeon when operating on a shared airway but the absolute importance of not compromising patient safety

To support and guide recovery and other staff taking responsibility for the unconscious patient who has undergone surgery to the airway

Workplace training objectives:

To develop confidence in the anaesthetic management of adults and children undergoing surgery to the airway.

Recommended local requirements to support training

- š Surgery is undertaken on patients of all ages from neonates to the elderly. Ear Nose and Throat units must have a paediatric facility with trained paediatric nurses
- š Upper airway problems are commonplace, equipment and expertise for fiberoptic intubation must be available
- š Rapid access to an experienced and efficient emergency service is required.
- š Access to beds for intensive or high dependency care must be available when required

21: General surgery / Gynaecology / Urology (+/- Transplantation)

This is a 'General Unit of Training' in which it is expected that all SpR 1/2 trainees will gain appropriate training.

Anaesthesia for general surgical procedures forms the backbone of specialist anaesthesia. Knowledge skills and attitudes learned as an SHO should be enhanced and refined as increased responsibility is taken by the trainee.

Knowledge

General surgery

Relevant anatomy and physiology for common surgical procedures
Anaesthesia for complex GI surgery including intrathoracic procedures
Emergency anaesthesia for general surgery
Carcinoid syndrome / tumours
Endocrinology; diseases relevant to hepatobiliary, pancreatic, splenic surgery
Management of thyroid (and parathyroid) surgery
Starvation / obesity
Metabolism; nutrients, carbohydrates, fats, proteins, vitamins, minerals

Gynaecology

Relevant anatomy and physiology
Endocrinology relating to gynaecology
Preoperative assessment
Laparoscopic surgery
Gynaecological procedures during pregnancy

Urology

Anatomy of the renal tract
Blood flow, GFR, plasma clearance
Tubular function, urine formation and micturition
Assessment of renal function
Disturbances of fluid balance, oedema and dehydration
Management of acid-base abnormalities
Renal failure and its management
Plasma electrolyte disturbances
Anaesthesia on spinal injuries patients for urological procedures
TUR syndrome

Transplantation

Principles and complications of Immunosuppression
Specific anaesthetic problems associated with renal transplantation
Anaesthetic management of patients with transplanted organs

Skills

General surgery

Preoperative assessment and resuscitation of emergency surgical patient e.g. trauma, obstruction and perforation
Postoperative analgesia e.g. regional and field blocks
Assessment of need for ICU and HDU admission
Assessment of the elderly and children
Laparoscopic surgery
TIVA

Gynaecology

Regional techniques
Laparoscopic surgery

Urology

Regional techniques
Major procedures – e.g. nephrectomy, cystectomy

Attitudes and behaviour

General surgery

Can assess preoperative patients effectively and resuscitate appropriately

Links with other staff showing ability to co-ordinate a team

Gynaecology

Shows appropriate attitude and behaviour to the female patient

Transplantation

Understands the ethical implications of transplantation

Workplace training objectives:

The trainee should demonstrate the required professional judgement in assessing and managing the risk of aspiration, in deciding the urgency of a case against any delay necessary for resuscitation and in assessing the requirement for postoperative critical care.

22: Orthopaedics

This is a 'General Unit of Training' in which it is expected that all SpR 1/2 trainees will gain appropriate training.

Knowledge

Preoperative assessment with particular reference to the problems of children, the elderly and patients with co-existing disease or injury such as congenital syndromes, rheumatoid arthritis or vertebral fractures
Special airway problems especially in the rheumatoid patient and those with cervical spine injury or pathology
Emergency anaesthesia for fractures
Resuscitation and management of patients with multiple injuries
Routine anaesthesia for joint replacement surgery, arthroscopy, fractured bones, dislocations and tendon repair
The problems that may result from the use of tourniquets and of cement
Problems of operations in the prone position
Anaesthesia for spinal surgery (including scoliosis)
Perioperative analgesia, including use of regional analgesia
Prevention, recognition and management of potential postoperative complications, including prophylaxis, recognition and management of deep venous thrombosis & pulmonary embolus, and fat embolus
Other specific complications of orthopaedic surgery including continuing blood loss, compartment syndromes, neurovascular deficit, complications due to difficulty of access to patients who may be on traction, in hip spicas, plaster jackets, and the problems of pressure areas

Skills

Airway assessment and management in the patient with rheumatoid arthritis
Safe positioning of patient, particularly in lateral and prone positions
Assessment and management of major blood loss
Correct application and use of tourniquets

Attitudes and behaviour

Provides explanations of anaesthesia for orthopaedic surgery in a way that patients can understand
Gentle handling of patient during positioning and performance of general or regional anaesthesia
Enlists help / advice from other professionals when appropriate

Workplace training objectives

Anaesthesia for orthopaedic lists enables trainees to attain competency in ensuring the smooth and efficient running of an operating list; liaising with other staff, avoiding delays and reassuring patients. They should demonstrate their ability to employ safe but effective methods for postoperative pain relief. In addition they should develop awareness of the potential hazards and complications of orthopaedic surgery.

Recommended local requirements to support training

As well as the requirements for adequately staffed and equipped operating theatres, there must be provision of adequate recovery facilities, and access to an HDU if there is massive blood loss, severe hypothermia, or postoperative compromised lung function. An ICU will be needed if ventilation is required.

23: Regional

This is a 'General Unit of Training' in which it is expected that all SpR 1/2 trainees will gain appropriate training.

Knowledge

Basic sciences applied to regional anaesthesia: anatomy, physiology and pharmacology
Advantages / disadvantages, risks / benefits and indications / contra-indications
Assessment, preparation and management of the patient for regional anaesthesia
The principles of minor and major peripheral nerve blocks (including cranial nerve blocks) and central neural blocks
Desirable effects, possible side effects and complications of regional anaesthesia
Management of effects and complications

Skills

Assessment and preparation of the patient for regional anaesthesia, to include discussion of anaesthetic options (i.e. regional versus general)
Management of the patient receiving a regional block during surgery (whether awake or as part of a 'balanced' anaesthetic technique) and during labour
Management of the patient receiving regional techniques in the postoperative period, including liaison with surgeons, acute pain teams, and ward staff
Central nerve blocks: Spinal anaesthesia
Epidural block (lumbar & sacral)
Combined spinal / epidural
Major nerve block: Brachial plexus) Able to perform at least one
Sciatic) method for upper and lower
Femoral) limb surgery respectively
IVRA)
Minor nerve block: Superficial cervical plexus
Trunk (penile, intercostal & inguinal blocks)
Upper limb (elbow and distal)
Lower limb (ankle & distal)
Miscellaneous: Topical, infiltration & intra-articular

[Note: Thoracic epidural and deep cervical plexus blocks are SpR 3/4/5 competencies. A fuller range of 'major' nerve block techniques would be appropriate at SpR 3/4/5 level also. Cranial nerve, cervical epidural, paravertebral, lumbo-sacral and autonomic block competencies are appropriate only to senior trainees working towards competency in pain and other relevant sub-specialties].

Recognition and management of the adverse effects of regional anaesthesia

Attitudes and behaviour

Provides explanations of regional techniques in a way that patients can understand
Understands patients' anxieties about regional techniques, especially the stress of undergoing surgery while conscious
Recognises need for communication with staff about use of regional block
Handles patients gently during performance of regional block
Meticulous attention to safety and sterility during performance of regional blocks
Enlists help / advice from other professionals when appropriate

Workplace training objectives:

Trainees should take appropriate opportunities to use regional anaesthesia in patients undergoing a range of operations in specialties such as orthopaedics, gynaecology, urology and plastic surgery in order to demonstrate their attainment of the listed requirements. All such cases should be fully detailed in the logbook.

24: Trauma and accidents

This is a 'General Unit of Training' in which it is expected that all SpR 1/2 trainees will gain appropriate training.

Many aspects of this unit of training will be closely linked with knowledge and skills covered in other units of training. The recommendations made here are therefore broadly stated.

Increasingly anaesthetic trainees completing training as SpR 1/2 s will have taken part in a course in Advanced Trauma Life Support (ATLS or equivalent) which will have fulfilled the requirements of this unit of training. For those trainees that have not had this opportunity, it is suggested that this unit of training be modelled along similar lines.

Knowledge

Management of head injury, spinal injury and multiple trauma with major blood loss
Major incident management, triage and anaesthesia in situations outside the hospital
Transfer of the traumatised patient including emergency airway and pain management
Management of the burned patient
Immersion / drowning and near-drowning
Hypothermia
Trauma scoring systems

Skills

Many of the skills required are those also associated with other specialties, but there is the additional requirement to be able to perform rapid assessments and to prioritise patients' needs

Experience in transfers should be gained
Management of allergy

Attitudes and behaviour

Linking with other specialists to work in a team (this includes paramedic and ambulance personnel)
Understanding and adherence to, agreed protocols
Recognising the essential requirement for stabilisation prior to transfer
To be able to organise and manage the safe transfer of the intubated / ventilated patient

Workplace training objectives:

The trainee should attain the ability to be an effective member of the trauma team and take an appropriate role in managing transfers

Recommended local requirements to support training

- š· Every hospital should have a designated consultant anaesthetist to co-ordinate anaesthetic services for trauma
- š· In hospitals designated to receive major trauma patients there should be a defined trauma team to respond immediately whenever a patient with major injuries is admitted
- š· Hospitals designated to receive major trauma patients should have:
 - š· Access to core specialities at all times
 - š· An intensive care unit
 - š· Facilities for high dependency care
- š· Any hospital designated to manage major trauma in children should have staff with paediatric training and experience. There should be an agreed set of guidelines for the treatment of children
- š· There should be agreed guidelines for the referral and transfer of trauma patients

25: Diagnostic imaging, anaesthesia & sedation

This is an 'Additional Unit of Training' which may or may not be available to SpR 1/2 trainees depending on the distribution and availability of services locally.

The role of the anaesthetist in providing general anaesthesia and sedation together with physiological and pharmacological support for patients in the X-ray department is evolving rapidly. Trainees need to understand the benefits and risks particularly with regard to interventional procedures.

Knowledge

Preanaesthetic preparation

Techniques appropriate for adults and children for CT scanning, MR imaging and angiography

Post-investigation care

Skills

Pre-anaesthetic preparation

Sedation and general anaesthetic techniques for:

angiography and interventional procedures

CT scanning, adults and children

Magnetic resonance imaging with respect to:

the isolated patient

the problems due to magnetic field

Post-investigation care

Attitudes and behaviour

Establishing good communication and an understanding of their working needs with nursing staff, radiographers and radiologists

Workplace training objectives:

Trainees should understand the implications of different interventional radiological procedures in their anaesthetic care of the patient and be able to establish safe anaesthesia or sedation within the confines and limitations of the X-ray department.

Recommended local requirements to support training

š The provision of anaesthetic and monitoring equipment together with assistance for the anaesthetist should be to a similar standard as is provided in the operating theatres for an equivalent case.

26: Maxillo-facial / Dental

This is an 'Additional Unit of Training' which may or may not be available to SpR 1/2 trainees depending on the distribution and availability of services locally.

Maxillo-facial surgery covers a range of procedures from simple dental extractions to complex resections and reconstructive procedures. The age range of patients is similarly wide, from childhood to the elderly.

Knowledge

Preoperative assessment

Day case / inpatient requirements

Resuscitation facilities

Anaesthesia for dental extractions (to include sedation and analgesic techniques)

Paediatric anaesthesia

Assessment and management of the difficult airway including fiberoptic intubation

Anaesthesia for maxillo-facial surgery including the perioperative management of the fractured jaw and other major facial injuries.

Postoperative management for all patients undergoing dental or maxillo-facial procedures

Skills

Many of the skills required for this unit of training are shared with ENT surgery

Patient assessment for day-stay surgery, including children and the mentally and physically handicapped

Pre and postoperative instructions for patients

Talking to patients and explaining the anaesthesia proposed

Choice of anaesthetic technique

Potential problems and hazards of the shared airway

Airway management including nasal masks, naso-pharyngeal airways, laryngeal mask airways, oral and nasal endotracheal intubation

Working with dental and oral surgeons and their use of mouth props and packs

Appropriate monitoring techniques and record keeping

Recovery and patient assessment for discharge including regular audit of outcomes

Management of emergencies

Conscious sedation

Patient selection, assessment and suitability for treatment under sedation

The techniques and drugs available including non-pharmacological methods

Administration methods - oral, inhalational, intravenous, transmucosal, patient-controlled

Monitoring and management of the sedated patient

Attitudes and behaviour

Develop an understanding of the needs of the surgeon when operating on a shared airway but the absolute importance of not compromising patient safety

To support and guide recovery and other staff taking responsibility for the unconscious patient who has undergone surgery to the airway

Workplace training objectives:

Trainees should develop confidence in the anaesthetic management of adults and children undergoing surgery to the airway.

Recommended local requirements to support training

- § Surgery is undertaken on patients of all ages from neonates to the elderly. There must be a paediatric facility with trained paediatric nurses
- § Upper airway problems are commonplace, equipment and expertise for fiberoptic intubation must be available
- § Rapid access to an experienced and efficient emergency service is required.
- § Access to beds for intensive or high dependency care must be available when required

27: Ophthalmic anaesthesia

This is an 'Additional Unit of Training' which may or may not be available to SpR 1/2 trainees depending on the distribution and availability of services locally.

This specialty affords potentially very valuable training for SpR 1/2 trainees. The age range of the patients and the wide adoption of local anaesthetic techniques are particular aspects that can be beneficial to the development of the trainee. However, it is recognised that only a proportion of trainees will be able to gain this experience in the first 2 years of SpR training.

Knowledge

Preoperative assessment with particular reference to patients with co-morbidities
Choice of local or general anaesthetic techniques in relation to the patient and surgery with particular reference to:
 strabismus surgery
 cataract surgery
 surgery for the detached retina
Penetrating eye injury
Control of intraocular pressure
Action of anaesthetic drugs on the eye
Anatomy relevant to local anaesthetic blocks
Local analgesia
 topical anaesthesia
 risks of sharp needles in peribulbar and retrobulbar techniques
 sub-Tenon's block
Problems of glaucoma surgery
Postoperative care

Skills

Assessment and preparation, including the use of day care facilities
Anaesthetic management of patients for lachrymal surgery including syringing and probing and dacrocystorhinostomy
Requirements for strabismus surgery, including knowledge of the oculocardiac reflex
Control of intraocular pressure
The use of topical preparations, possible effects and interactions
Appropriate local anaesthetic methods
Techniques of general anaesthesia for ophthalmic surgery
Choice and use of appropriate method for airway maintenance under general anaesthesia
Postoperative care

Attitudes and behaviour

Understanding of the importance of the patient's general health and wishes to decisions relating to the choice of anaesthetic techniques
Being an effective communicator with elderly patients in explaining the risks and benefits of general and local anaesthesia for eye surgery

Workplace training objectives:

Trainees should develop expertise in the administration of local anaesthesia for eye surgery trying to obtain competency in at least one block. They should also show the necessary medical knowledge and skill in the preoperative assessment of elderly patients.

Recommended local requirements to support training

§ Availability of facilities, support staff including assistance for the anaesthetist and the anaesthetic and monitoring equipment must be to the standards set out in documents from the RCA and AAGBI.

28: Plastics / Burns

This is an 'Additional Unit of Training' which may or may not be available to SpR 1/2 trainees depending on the distribution and availability of services locally.

Whilst much plastic surgery takes place in specialist centres, there are often routine lists in other hospitals, this should enable most SpR 1/2 anaesthetic trainees to gain some experience in this specialty. However severe burns, although initially admitted to many A&E departments will, following resuscitation, be transferred to a specialist unit. Training opportunities will therefore be limited, although the expectation is that many anaesthetists will be involved in the initial resuscitation of burns at a receiving hospital. It is recognised that training in this field will, in many cases, need to be supplemented by other teaching and instructional methods such as CD-ROM presentations.

Knowledge

Preoperative assessment

Assessment and management of the difficult airway including fiberoptic intubation

Day case / inpatient requirements

Paediatric anaesthesia

Postoperative management for patients who have undergone plastic surgical procedures with particular reference to free flaps

Physiology of tissue blood flow

Benefits and risks of hypotensive anaesthesia

Pathophysiology of the patient with burns

Resuscitation of the patient with burns with particular reference to fluid management

Pathophysiology, assessment, diagnosis and management of injury due to heat and smoke inhalation

Skills

Plastic surgery

General and regional anaesthesia for plastic surgery including:

- anaesthesia for head and neck surgery

- anaesthesia for free flaps and reimplantation

- anaesthesia for cleft palate repair

Specific problems of prolonged anaesthesia

Manipulation and control of blood pressure to assist surgery

Managing the acutely compromised airway including experience with trans-tracheal ventilation

Prediction and management of the difficult intubation

Selection of the appropriate method of airway maintenance, use of the LMA

Techniques for continuous local anaesthesia

Burns

Resuscitation in the management of the patient with burns

Recognition and treatment of airway problems

Institution of intravenous fluid therapy and fluid replacement

Analgesia

Transportation requirements

Temperature maintenance

Monitoring

- insertion of lines

- problems with access

Responses to drugs in burned patients

Recognition and management of the airway burn and initiating appropriate treatment

Attitudes and behaviour

To be able to foresee potential problems and plan appropriately

When using elective hypotensive techniques to maintain professional independence, recognising the absolute need to protect the patient's safety at all times and not to succumb to unreasonable pressure from the surgeon

Workplace training objectives:

Trainees should develop skills in the management of the difficult airway, learn the value and limitations of hypotensive techniques and obtain a clear understanding of the priorities in the resuscitation of the patient with burns.

Recommended local requirements to support training

Plastics

- § The care of head & neck patients is an integral part of plastic anaesthesia. Specialist units accepting these patients need to make specific arrangements including protocols, staff training and rapid availability of facilities, especially access to HDU or ICU beds. Optimal management will improve outcome and save resources in the long term.

Burns

- § Emergency anaesthetic assessment and treatment of burned patients may be required in any hospital with an A & E department. Guidelines should be available concerning immediate care and transfer to an appropriate Burn Care service.
- § The critical care of burned patients is an integral part of burns anaesthesia services. Specialist departments accepting these patients need to make specific arrangements including protocols, staff training and rapid availability of facilities. Optimal management will improve outcome and save resources in the long term.
- § Major burn anaesthesia should take place only in a Burns Centre or Burns Unit. Full consultant cover should be available.
- § Paediatric burn cases, which constitute a major proportion of burn victims, require special facilities & staffing.
- § Pain relief throughout the care process and especially for interventions is an integral part of burn anaesthesia provision.

29: Miscellaneous

This is an 'Additional Unit of Training' which may or may not be available to SpR 1/2 trainees depending on the distribution and availability of services locally.

There are a number of other aspects of the practice of anaesthesia, critical care and pain management which will, to a greater or lesser extent, be available to trainees within a specific training programme. Some are itemised here, others may be added.

Knowledge

Electro-convulsive therapy (ECT)

Radiotherapy

Minimal access surgery

Perioperative management of a patient with sleep apnoea

Skills

The ways in which anaesthetic techniques need to be modified to suit the requirements of particular environments, surgical techniques and patients with uncommon but potentially dangerous problems

Attitudes and behaviour

Co-operation with other medical professionals in using anaesthetic skills to assist their work but only within the anaesthetist's responsibility to safeguard the patient

Recognising the ethical duty that the anaesthetist has to their patient

Workplace training objectives:

Trainees should demonstrate adaptability in their approach to anaesthetic practice but recognise the essential importance of not compromising the safety of the anaesthetised patient whatever the external demands that are being made.

30: Applied Physiology

Knowledge

Candidates are expected to be able to apply the basic knowledge of human physiology necessary to pass the Primary FRCA examination to the clinical practice of anaesthesia and intensive care medicine. While all branches of physiology are of importance, it is recognised that clinical relevance dictates the topics selected for the examination.

Haematological

Anaemia
Polycythaemia
Immunity and allergy
Inflammation
Blood groups
Alternative oxygen carrying solutions
Abnormalities of coagulation and haemostasis
Abnormal haemoglobins: sickle cell disease; thalassaemia

Muscle Function

Muscle contracture and malignant hyperthermia
Disturbances in neuromuscular transmission
Myopathies

Cardiovascular

Abnormal electrocardiogram and arrhythmias
Cardiomyopathy and abnormal ventricular function
Heart failure
Hypovolaemia and shock
Ischaemic heart disease
Valvular defects
Hypertension
Common congenital heart defects

Kidney and Body Fluids

Disturbances of fluid balance, oedema and dehydration
Management of acid-base abnormalities
Assessment of renal function
Renal failure and its management
Diuresis
Plasma electrolyte disturbances

Liver

Hepatic failure
Jaundice
Porphyria

Respiration

Disorders of respiratory mechanics, gas exchange and gas transport
Disorders of the pulmonary circulation
Respiratory failure and ventilatory support
Effects of changes in ambient pressure

Nervous System

Consciousness and sleep

Depth of anaesthesia

Consequences of spinal cord injury and deafferentation

Monitoring of spinal cord function under general anaesthesia

Mechanisms of pain; somatic, visceral, neuropathic

Control of cerebral circulation, intracranial and intraocular pressures

Disorders of the autonomic nervous system

Gastrointestinal Tract

Nausea and vomiting

Oesophageal reflux

Obstruction

Swallowing disorders

The mucosal barrier

Metabolism and Body Temperature

Hormonal and metabolic response to trauma

Hyperthermia and hypothermia

Starvation / obesity

Endocrinology

Endocrine diseases of significance in anaesthesia

Obstetrics and Paediatrics

Principles of neonatal physiology

Effects of prematurity

Development in infancy and childhood

Physiology of normal and abnormal pregnancy

31: Applied Clinical Pharmacology

Knowledge

This section requires a wider knowledge of drugs than in the Primary FRCA examination. For drugs used in anaesthesia and Intensive care medicine candidates will also be expected to be aware of new drugs which are undergoing evaluation and whose human application has been reported in the mainstream anaesthetic journals. There will be emphasis on the practical application of pharmacological and pharmacokinetic knowledge, and upon an appreciation of the hazards and limitation of individual techniques.

General therapeutics. Pharmacological management of:

Heart failure, coronary insufficiency and arrhythmias

Hypertension, including hypertension in pregnancy

Acute and chronic respiratory diseases

Hepatic and renal failure

Gastrointestinal disorders including modification of gastric contents

Musculo-skeletal problems such as rheumatoid and osteoarthritis

Myasthenia and muscle diseases

Pituitary, adrenal and thyroid dysfunction

Depression, anxiety states and schizophrenia

Epilepsy

Bacterial, fungal and viral infections

Malignant disease

Adverse reactions: Types of reactions: The yellow card system; Regulation of drug licensing

Application of pharmacological principles to the practical management of anaesthesia:

Premedication:

The use of anxiolytics, sedatives and antisialogogues.

Pro-kinetic and anti-emetic drugs.

H₂ and proton pump antagonists

Inhalational anaesthesia:

Control of alveolar tension during induction and recovery

Control of anaesthetic depth and prevention of awareness

Management of sedation techniques (including entonox)

Environmental effects

Intravenous anaesthesia:

Methods for achieving specified plasma concentrations

Bolus, infusion, and profiled administration

Management of neuromuscular blockade:

Techniques for the use and reversal of muscle relaxants

Management of abnormal responses

Regional anaesthesia:

Choice of agent and technique

Additives

Systemic effects

Avoidance of toxicity

Prevention of postoperative nausea and vomiting

Application of pharmacological principles to the control of acute pain (including intraoperative analgesia and postoperative pain management) and chronic pain.

Pharmacological control of myocardial function, vascular resistance, heart rate and blood pressure

Anticoagulant and thrombolytic therapies. Management of coagulopathies

Pharmacological control of blood sugar

Pharmacological problems in cardiopulmonary bypass. Cardioplegia

Therapeutic problems associated with organ transplantation: heart, lung, liver kidney

Management of malignant hyperthermia

Pharmacological considerations in cardiopulmonary resuscitation, major trauma and exsanguination

Pharmacological control of severe infections

Pharmacological treatment of severe asthma

Effect of renal or hepatic impairment on drug disposition

32: The Statistical Basis of Clinical Trial Management

Knowledge

Candidates will be expected to understand the statistical fundamentals upon which most clinical research is based. They may be asked to suggest suitable approaches to test problems, or to comment on experimental results. They will not be asked to perform detailed calculations or individual statistical tests.

Data Collection and analysis

Simple aspects of study design defining the outcome measures and the uncertainty of measuring them

Application to clinical practice

Distinguishing statistical from clinical significance

Understanding the limits of clinical trials

The basics of systematic review and its pitfalls

Study design

Defining a clinical research question

Understanding bias

Controls, placebos, randomisation, blinding exclusion criteria

Statistical issues, especially sample size ethical issues

33: Clinical Measurement

Knowledge

The Final examination assumes knowledge of the Primary FRCA examination syllabus, with the addition of more sophisticated measurements. There is an emphasis on clinical applications of clinical measurement, such as indications, practical techniques and interpretation of acquired data. Candidates will be expected to understand the sources of error and the limitations of individual measurements.

Assessment of respiratory function

Assessment of cardiac function

The electroencephalograph (EEG) and evoked potentials

The electromyograph (EMG) and measurement of nerve conduction

Assessment of neuromuscular function, peripheral nerve stimulators

Principles and practice of in vitro blood-gas measurements. Interpretation of data

Interpretation of biochemical data

Interpretation and errors of dynamic pressure measurements including systemic, pulmonary arterial and venous pressures, intracranial, intrathoracic and intra-abdominal pressures

Methods of measurement of cardiac output and derived indices; limitations and interpretation

Principles of imaging techniques including CT, MRI and ultrasound. Doppler effect

Interpretation and errors of capnography, oximetry and ventilatory gas analysis

Appendix 1
EXAMPLE OF WORKPLACE ASSESSMENT RECORD

'Workplace Assessment'

School of Anaesthesia:

Unit of Training:

Trainee:

NTN:

RCA No.:

The above trainee has completed a unit of training that provided the necessary instruction to gain the skills, attitudes and behaviour, and in addition to achieve the workplace training objectives as they are set out and required by the Royal College of Anaesthetists.

This assessment is based on:

Direct observation on wards/clinics	Y/N
Direct observation in theatre	Y/N
Direct observation in other treatment areas	Y/N
Direct observation in critical care areas	Y/N
Comments from patients	Y/N

Inspection of logbook summaries indicating:

Attainment of required skills	Y/N
Direct involvement in sufficient clinical cases	Y/N

[details of case numbers can be recorded on the back of this form]

Assessment

Satisfactory / Unsatisfactory

Based on input from:

	Designation	Date
.....
.....
.....
.....

If an unsatisfactory assessment is given examples of the reasons for this must be given:

.....
.....
.....
.....

Signed by Trainee:

Date:

Signed by College Tutor:

[a copy of this assessment should be retained by the trainee for inclusion in their training portfolio and a copy should be kept in the trainee's file held by the School of Anaesthesia]

Appendix 2

ASSESSMENTS RELEVANT TO TRAINING IN INTENSIVE CARE MEDICINE

PLEASE NOTE - Assessments in the following section are taken from the documentation of the ICBTICM and cover Step1 (previously Intermediate) Training in ICM. It is suggested that anaesthetic trainees are best assessed by the utilisation of the appropriate parts of this documentation. However, as Step 1 training covers a period of 6 months and as most anaesthetic trainees in SpR years 1 & 2 will receive a period of training in ICM considerably shorter than this, it is fully recognised that many aspects listed here will only be covered in later years of training.

- oOo -

Notes and guidance on Assessments

Clinical Skills and Knowledge:

In these assessments, the trainee will be expected to support the demonstration of clinical skills with knowledge of the relevant areas as described in the core curriculum. This will include establishing a safe environment for critically ill patients inside and outside the ICU, and one in which patient suffering is minimised by a humanitarian approach to patient care and the judicious use of drugs to relieve distress. The trainee should be able to develop clinical management plans for several hours of intensive care, and to modify those plans according to changes in the patient's condition. The trainee should be able to support junior or less experienced colleagues, and to prioritise work based on competing clinical needs.

Setting:

Patients: Patients receiving or requiring intensive and high dependency care

Location: Intensive or high dependency care unit, and other clinical areas caring for acutely ill patients

Situations: Supervised delivery of patient care

Guidance:

The trainee should be observed caring for a patient in the ICU. Each assessment can be conducted in its totality on one occasion, or separate items can be assessed at different times. However, the assessment should represent a summary view of the trainee's abilities over a period of time, and as for the other assessments, should represent the assessments of more than one trainer.

The assessor(s) should let the trainee proceed as far as possible without interference, while noting strengths and weaknesses of technique. This should be combined with a question and answer session covering the underlying comprehension of the trainee. Communication with patient and staff, and personal responsibility for standards of care are all important elements.

Practical procedures, comfort care and organ system support

This assessment will be conducted in the ICU or related clinical environments. If individual items are assessed by different assessors at different times, the assessor should indicate that a specific topic has been assessed by entering his or her initials in the relevant box

Name of trainee: _____

The Trainee:

	Yes	No	Assessor
Is caring to the patient, considerate to clinical colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Plans procedures, and prepares working environment appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Performs pulmonary artery catheterisation (PAC) safely & aseptically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Interprets results from thermodilution PAC or oesophageal Doppler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Discusses use of vasoactive drugs and fluids to optimal endpoints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Performs or describes aseptic insertion of tunnelled iv. feeding catheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Describes technique for cricothyroidotomy (needle or surgical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Performs insertion of chest drain safely & aseptically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Performs tracheal intubation of a patient in the intensive care unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Establishes a critically ill patient on mechanical ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Prescribes hypnotics, analgesics and neuromuscular blockers safely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Manages fluid balance in patients receiving renal replacement therapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Describes suitable antimicrobial regimens for pneumonia, septic shock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
This assessment was completed satisfactorily IF NO, GIVE REASONS:	<input type="checkbox"/>	<input type="checkbox"/>	

Signed

Print name.....

Date

Signed:

Print name

Date.....

Signed by trainee:

Patient management: assessment, investigation, monitoring and diagnosis

This assessment will be conducted in the ICU or related clinical environments. If individual items are assessed by different assessors at different times, the assessor should indicate that a specific topic has been assessed by entering his or her initials in the relevant box

Name of trainee: _____

The Trainee:

	Yes	No	Assessor
Ensures physiological safety as a priority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Is able to obtain relevant clinical information from available sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Conducts an effective clinical examination with consideration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Proposes appropriate clinical investigations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Discusses and evaluates differential diagnoses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Proposes appropriate initial treatment plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Evaluates patients' responses and modifies treatment plans accordingly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Identifies major abnormalities on portable chest X-rays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Interprets results of arterial blood gas analyses correctly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Discusses techniques for cross infection prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Discusses conditions in which senior/more experienced help is required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
This assessment was completed satisfactorily IF NO, GIVE REASONS:	<input type="checkbox"/>	<input type="checkbox"/>	

Signed

Print name.....

Date

Signed:

Print name

Date.....

Signed by trainee:

Outreach and Transport care

This assessment will be conducted in the ICU and in other acute care environments such as the ordinary ward. If individual items are assessed by different assessors at different times, the assessor should indicate that a specific topic has been assessed by entering his or her initials in the relevant box

Name of trainee: _____

The Trainee:

	Yes	No	Assessor
Responds promptly and courteously for requests for help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Makes an accurate initial assessment of patient complexity, dependence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Informs senior colleagues of referral, actions proposed and taken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Supports clinical staff outside the ICU in delivering effective care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Manages and identifies common causes of hypotension & hypoxaemia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Describes methods of managing postoperative pain safely in the ward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Describes immediate management of status epilepticus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Discusses factors which determine need for ICU/HDU admission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Defines the risks and benefits of patient transfer (intra or inter-hospital)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Stabilises the patient appropriately before transfer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Anticipates and prevents complications during transfer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Communicates effectively with receiving department or hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Maintains a safe environment at all times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
This assessment was completed satisfactorily	<input type="checkbox"/>	<input type="checkbox"/>	
IF NO, GIVE REASONS:			

Signed

Print name.....

Date

Signed:

Print name

Date.....

Signed by trainee:

Cardiopulmonary resuscitation (CPR).

Clinical skills

1. Able to recognise cardiac and respiratory arrest
2. Able to perform cardiac compression.
3. Able to manage the airway during cardiopulmonary resuscitation (CPR): using expired air breathing, bag and mask, laryngeal mask and endotracheal intubation.
4. Able to perform CPR either single-handed or as a member of a team.
5. Able to use the defibrillator.
6. Able to interpret arrhythmias causing and associated with cardiac arrest
7. To perform resuscitation sequences for ventricular tachycardia, VF, asystole, EMD.
8. Able to move a patient into the recovery position

Knowledge:

1. Resuscitation guidelines of Resuscitation Council (UK)
2. The factors relating to brain injury at cardiac arrest.
3. Factors influencing the effectiveness of cardiac compression.
4. Drugs used during CPR.
5. The ethics of CPR: who might benefit.
6. Record keeping at CPR.

Setting:

Simulated scenario of collapse requiring cardiopulmonary resuscitation during a practical teaching session

Role: Initiate and maintain CPR when necessary. Undertake the role of team leader if no more senior doctor is present, continuing CPR as appropriate, administering necessary drugs and defibrillating if needed. If a more experienced resuscitator is available will adopt an appropriate role in the resuscitation team.

Locations: Wherever necessary.

Assessments:

- ## Manikin based practical assessment of CPR skills
- ## Arrhythmia recognition session using monitor and simulator
- ## Oral assessment of knowledge of resuscitation.

If a trainee has a valid ALS provider certificate, the assessment of CPR competency can be assumed and signed with a comment made to that effect under the signature(s) overleaf.

Assessment of Cardiopulmonary resuscitation

This assessment may be undertaken at any time and may be combined with a practical teaching session.

Name of trainee.....

The Trainee:

	Yes	No
Ensures personal safety and that of the staff	<input type="checkbox"/>	<input type="checkbox"/>
Calls for help	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates the diagnostic method	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates mask to mouth rescue breathing.	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates ventilation with mask and bag	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates satisfactory insertion of and ventilation with ET tube	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates satisfactory cardiac compression.	<input type="checkbox"/>	<input type="checkbox"/>
Satisfactorily interprets common arrhythmias on ECG monitor.	<input type="checkbox"/>	<input type="checkbox"/>
Explains the indications for defibrillation.	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates correct use of defibrillator	<input type="checkbox"/>	<input type="checkbox"/>
Explains the use of appropriate drugs during resuscitation	<input type="checkbox"/>	<input type="checkbox"/>
Can undertake the lead role in directing CPR.	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates moving a patient into the recovery position	<input type="checkbox"/>	<input type="checkbox"/>
This assessment was completed satisfactorily IF NO, GIVE REASONS	<input type="checkbox"/>	<input type="checkbox"/>

Signed..... Print name..... Date

Signed Print name Date.....

If a trainee has a valid ALS provider certificate, the assessment of CPR competency can be assumed and signed with a comment made to that effect under the signature(s)

Assessment of communication skills, attitudes and behaviour

This assessment will be conducted using the examples below, which are provided for guidance only, and not as prescriptive or exclusive standards. Suboptimal performance must be recognised and discussed with the trainee as early as possible and appropriate remedial action taken. Trainees must not be presented with an adverse assessment at the end of their ICM module without extensive prior warning and attempts to resolve the problem(s) in a supportive and confidential manner.

Attitude or behaviour	Example of minor problem	Example of serious problem
Communication Skills (with patients and relatives)	Occasional communication difficulties with patients or relatives have been noticed	Repeated communication difficulties with patients and relatives have been noticed. Others have commented on them.
Communication skills (with staff)	Occasional communication difficulties have been noticed; unsatisfactory transmission of clinical information, e.g.: handovers, ward-round	Repeated communication difficulties with staff have been noticed. Others have commented on them. Fails to pass on important clinical information
Communication skills (sensitivity to needs of others)	On occasions fails to listen to patients or relatives or to respect their wishes. Lacks sensitivity in handling patients occasionally	Appears oblivious to what patients and relatives say, or insensitive to their likely feelings. Fails to understand or respect different cultural and ethical perspectives
Reliability and time-keeping	Isolated episodes of lateness, sometimes fails to warn of problems, tends to need reminding to get things done.	Repeated episodes of lateness, often fails to warn of problems, usually needs reminding to get things done
Control of moods and emotions	Occasionally shows irritability or bad temper with no apparent cause. Although other staff are aware of it, work continues normally.	Is well known for being moody, irritable and bad-tempered. Other staff modify their behaviour to accommodate them. The pattern of work is adversely affected
Personal presentation	When seeing patients, occasionally dresses in an unprofessional way.	Frequently dresses in an unprofessional way when seeing patients who may find this distasteful or upsetting. Other aspects of personal hygiene sometimes cause offence
Social behaviour	Social life occasionally impinges on professional life causing lateness, tiredness at work, and difficulty with studies.	Social life repeatedly affects professional performance, is likely to be causing problems with self-directed learning and affects patient care.
Conscientiousness in safe practice	Usually satisfactory but has occasional lapses (e.g. doesn't sign for drugs ordered, forgets to tidy up own sharps).	More frequent or serious errors, such as failing to check donor blood against transfusion form, errors in prescription, relaxed approach to errors. Doesn't record critical incidents
Initiative	Rather passive. Tends to need pushing when things have to be done. Slower than he/she should be to take responsibility.	Actively avoids taking up challenges and very slow in adopting responsibility as and when problems arise

Over or under assertiveness	(I) May undertake inappropriate procedures because of pressure from others. (II) On occasions insists on a course of action in the face of reasonable advice to the detriment of patients and/or colleagues	(I) Fails to be assertive even when necessary for the patient's well-being. Unable to control any situation. (II) Frequently causes problems and offends patients and/or colleagues by insisting on a course of action in the face of reasoned argument.
Over-confidence	Occasionally takes on cases that are beyond level of competence. Occasional clinical crises occur because of lack of proper planning and assessment.	Frequently exhibits lack of care in planning and execution of tasks. Works without concern beyond his/her level of training, knowledge or experience.
Under-confidence	Reluctant to extend clinical experience. Anxious when working alone on clinical cases that should be within his/her competence.	Frequently demonstrates and transmits anxiety to the theatre environment. Is sufficiently stressed by work that symptoms of stress become an issue and affect performance.
Departmental involvement	Participation below the usual expected. Tends not to attend meetings unless he/she has to. Reluctant to take part in social activities related to the department.	Rarely participates in any departmental activity. Rather isolated socially from other members of the department.
Team working	Doesn't always consider the needs of others. Tends to press ahead with his/her own plan and expects others to adapt around it.	Careless of the needs of others. Often arrogant and thoughtless. Sufficient lack of insight that his/her behaviour frequently causes problems.
Personal organisation	Can be unprepared for the task in hand: sometimes forgets to bring essential items to meetings etc. Can be slow to implement agreed policy changes.	Frequently poorly prepared and disorganised. Unreliable to the extent that other staff are affected. Appears unaware of the impact their behaviour has on the working environment.
Honesty and trustworthiness	Has been found to manipulate the truth to prevent criticism; blames others for own errors and shortcomings	Deliberately misleads staff, patients or trainers by miss-information e.g. fills in logbook with non-existent cases; does not report serious adverse event; alters records after a problem has occurred. Fails to answer patient's / relative's queries honestly
Enthusiasm	Usual response to new opportunities is rather flat. Gives the appearance that work is an onerous duty rather than something to give satisfaction	Negative response to new opportunities. Always places personal convenience before that of patients or colleagues. Never volunteers and is unco-operative in solving departmental problems
Record keeping	Occasionally fails to keep a good record or is rather economical with basic information. Needs reminding to retrieve and document laboratory investigations.	Case notes review demonstrates frequent poor record keeping; key items of information missing, or incorrectly documented. Training record poorly maintained, possibility of falsification of entries

Assessment of communication skills, attitudes and behaviour

Please put a tick in the appropriate box. Any 'cause for concern' must be qualified with information. This form should be completed annually or whenever a trainee leaves a hospital or module. If difficulties arise, it can be used more frequently.

Attitude or behaviour	Satisfactory	Cause for concern	Please give examples of cause for concern, noting date. Expand on a separate sheet if necessary	Initials of assessors (with dates)
Communication Skills (with patients & relatives)				
Communication Skills (with staff)				
Communication Skills (sensitivity to another's needs)				
Reliability and time-keeping				
Control of moods and emotions				
Personal presentation				
Social behaviour				
Conscientiousness in checking				
Initiative				
Over or under assertiveness				
Over-confidence				
Under-confidence				
Departmental involvement				

Team working				
Personal organisation				
Honesty and trustworthiness				
Enthusiasm				
Record keeping (training record, case notes)				

I confirm that any 'causes for concern' have been discussed with the trainee. The outcome of these discussions was as follows:

.....

Signed..... Name (print)..... Date.....

Appendix 3

ATTITUDES TO PATIENTS AND BEHAVIOUR IN THE WORKPLACE

Professional practice implies the possession of attitudes and behaviour that ensure continued, safe clinical practice together with a respect for the wishes and sensitivities of patients and other members of staff. The confirmation that a trainee has such attributes is part of the 'Workplace Assessment'. Many Schools of Anaesthesia already make an assessment of attitudes and behaviour and are doing it well. Because of this, each School is free to assess attitudes and behaviour in the workplace as it chooses, but such an assessment must be done.

What follows below is a method suggested by the RCA that could be used. It first lists desirable qualities and then gives an example of an assessment form. It is anticipated that most trainees will be satisfactory: for those who are not, the enclosed forms allow patterns of persistent or isolated instances of attitudinal or behavioural difficulty to be identified. These forms are not intended to be purely negative. They are also meant to help positively to allow trainees to modify their approach as they themselves develop e.g. increased assertiveness with increasing knowledge. An underlying principle is that whenever the satisfactory box is not ticked and comments are made, these must be discussed with the trainee.

It is recommended that attitudes and behaviour are assessed at least annually or whenever a trainee leaves a hospital. They can be assessed more frequently if problems are occurring. There are some examples of what might be considered sub-optimal attitudes and behaviour given in the table that follows, but these are meant to be neither comprehensive nor exclusive.

Desirable qualities of medical staff

- To comply with the GMC's guidance on Good Medical Practice ¹⁵ and Good Practice ¹⁶
- To demonstrate satisfactory levels of communication with patients, relatives and staff
- To be aware of and respect others' needs
- To be reliable and punctual
- To control moods and anger which might adversely affect patient care
- To visit patients in a way they find appropriate and not to allow events outside work to affect the patient's care
- To be conscientious in making safety checks
- To show initiative and assertiveness when appropriate
- To be neither over or under confident
- To become involved in the department, recognise the importance of team working and plan ahead
- To be honest and trustworthy and keep good records
- To maintain a logbook of clinical work undertaken

¹⁵ *Good medical practice*, GMC 1998, *Maintaining good medical practice*, GMC 1999; *The doctor as teacher*, GMC 1999, *Recommendations on the Training of Specialists*, GMC 1987, *Good Practice*, The Royal College of Anaesthetists and the Association of Anaesthetists of Great Britain and Ireland, 1998: *Guidelines for the Provision of Anaesthetic Services*, Royal College of Anaesthetists, 1999.

¹⁶ , *Good Practice*, The Royal College of Anaesthetists and the Association of Anaesthetists of Great Britain and Ireland, 1998: *Guidelines for the Provision of Anaesthetic Services*, Royal College of Anaesthetists, 1999.

Examples of attitudes & workplace behaviour that might cause concern

The table below gives examples of the types of behaviour pattern, which may cause concern. The descriptions in the vignettes of possible adverse occurrences: they are not intended to be either prescriptive or exclusive.

Attitude or behavioural pattern	Example of minor problem	Example of s
Communication Skills (I: with patients and relatives)	Occasional communication difficulties with patients or relatives have been noticed	Repeated communication difficulties with Others have commented on them.
Communication Skills (II: with staff)	Occasional communication difficulties with staff have been noticed	Repeated communication difficulties with commented on them.
Communication Skills (III: sensitivity to another's needs)	On occasions fails to listen to patients or relatives or to respect their wishes	Appears oblivious of what patients and his/her own cultural and ethical referenc relatives
Reliability and time-keeping	Isolated episodes of lateness, sometimes fails to warn of problems, tends to need reminding to get things done.	Repeated episodes of lateness, often fa reminding to get things done
Control of moods and emotions	Occasionally shows irritability or bad temper with no apparent cause. Although other staff are aware of it, work continues normally.	Is well known for being moody, irritable behaviour to accommodate them. The
Personal presentation	When seeing patients, occasionally dresses in an unprofessional way. Occasionally wears inappropriate accessories.	Frequently dresses in an unprofessional accessories which patients may find dis hygiene sometimes cause offence
Social behaviour	Social life occasionally impinges on professional life causing lateness, tiredness at work, and difficulty with studies.	Social life repeatedly affects profession problems with self-directed learning and
Conscientiousness in checking	Usually satisfactory but has occasional lapses (e.g. doesn't sign controlled drugs book, forgets to switch alarms on). If running late may omit routine checks.	Frequently observed not to carry out rou 'near misses' for comfort. Theatre staff record critical incidents
Initiative	Rather passive. Tends to need pushing when things have to be done. Slower than he/she should be to take responsibility.	Actively avoids taking up challenges an and when problems arise
Over or under assertiveness	(I) On occasions undertakes inappropriate procedures because of pressure from others. Known to be someone who usually 'won't argue'. (II) On occasions insists on a course of action in the face of reasonable advice to the detriment of patients and/or colleagues	(I) Rarely presses their argument, even assertive when necessary even to the p situation. (II) Frequently causes problems and off on a course of action in the face of reas
Over-confidence	Occasionally takes on cases which are beyond level of competence. Occasional clinical crises occur because of lack of proper planning and assessment.	Frequently exhibits lack of care in plann concern beyond his/her level of training
Under-confidence	Reluctant to extend clinical experience. Anxious when working alone on clinical cases that should be within his/her competence.	Frequently demonstrates and transmits sufficiently stressed by work that sympt performance.
Departmental involvement	Participation below the usual expected. Tends not to attend meetings unless he/she has to. Reluctant to take part in social activities related to the department.	Rarely participates in any departmental members of the department.

Team working	Doesn't always consider the needs of others. Tends to press ahead with his/her own plan and expects others to adapt around it.	Careless of the needs of others. Often lacks insight that his/her behaviour frequently affects others.
Personal organisation	Can be unprepared for the task in hand: sometimes forgets to bring essential items to meetings etc. Can be slow to implement agreed policy changes.	Frequently poorly prepared and disorganised. Staff are affected. Appears unaware of the impact on the working environment.
Honesty and trustworthiness	Has been found to tell lies to prevent criticism e.g. says a premed was not given when it was never actually written up; blames others for his/her own shortcomings	Deliberately misleads staff, patients or the public. Entries in logbook with non-existent cases; does not always record after a problem has occurred. Inadequate risk assessment (e.g. risks of a procedure)
Enthusiasm	Usual response to new opportunities is rather flat. Gives the appearance that work is an onerous duty rather than something to give satisfaction	Negative response to new opportunities. Always has a black cloud. Never volunteers and is unhelpful in solving problems
Record keeping	Occasionally fails to keep a good record or is rather economical with basic information. Always has to be asked to sign the controlled drugs' book.	A review of anaesthetic charts shows frequent omissions of physiological and monitoring information

Appendix 4

RCA RECOMMENDATIONS FOR TRAINEE LOGBOOKS

The Royal College of Anaesthetists strongly recommends that trainees should maintain a portfolio of training activity. A generic summary sheet has been produced of portfolio and continuing professional development information, which can be used by Schools of Anaesthesia for assessment. (Appendix 5)

1. That the details of anaesthetics given by trainees should be recorded by them in a suitable paper or electronic format. This is mandatory. The only exception being that those in the final 2 years of training may keep abbreviated details of short, repetitive cases.
2. Anaesthetic trainees attached to critical care should maintain a diary of sessions spent in the ICU and a record of procedures learnt and performed. Any trainee with a specific interest in this field should adopt the Intercollegiate Board's record of training at an early stage.
3. Anaesthetic trainees attached to acute or chronic pain should maintain a diary of sessions spent in these activities and a record of procedures learnt and performed. Any trainee with a specific interest in this field should keep more detailed records from an early stage.
4. A record of obstetric cases and procedures should be kept in a format similar to the Logbook.

Appendix 5
EXAMPLE OF TRAINING SUMMARY

Period of Report	From				To						
Name											
Grade <i>(Please tick appropriate box)</i>	SHO 1	SHO 2	SHO 3	SpR 1	SpR 2	SpR 3	SpR 4	SpR 5	FTTA	LAT	
	Other (specify)										
NTN <i>(if appropriate)</i>					College Reference Number						
Deanery											
School of Anaesthesia											
Rotation or Hospital (s)											

LOGBOOK DATA

Summary for period

Total number of anaesthetics given in this period	
Total sessions in acute and chronic pain	
Total sessions in ICU	

Urgency and level of supervision

Supervision	Immediately available	Local	Distant
Routine			
Urgent			
Emergency			
Total			

ASA Grade

ASA	I	II	III	IV	V
Directly Supervised					
Other levels of supervision					
Total Cases					

Time of day

Time	08:00 - 17:00	17:00 - 00:00	00:00 - 08:00
No. Cases (Totals for period)			

Supervising / Teaching

Grade	Nurse	Med stdnt	SHO1	SHO2/3	SpR
No.Cases					

Specialty / Age

Age	<6m	6m - 2yr	3 - 7yr	8 - 16yr	17 - 79yr	>80yr	Total by Spec/ity
General surgery							
Ortho-paedics							
ENT/Max Facial							
Eyes							
Urology							
Gynae							
Day surgery							
Obstet-rics							
Neuro							
Renal							
Cardiac							
Vascular							
Thoracic							
Plastic							
Acute & Chronic Pain							
ICU							
Other (specify)							
Total by age:							

Procedures

Description	No.cases
Spinal	
Epidural	
Combined Spinal & Epidural	
Regional block	
Central line	
Arterial line	
PA catheter	
Vascath	
Fibreoptic intubation	
Percutaneous tracheostomy	
Double lumen tube	
Chest drain	
Other (<i>specify</i>)	

OTHER PROFESSIONAL DEVELOPMENT

Examinations	
Meetings Attended	
Course Attended	
Research	
Audit	
Publications	
Presentations	
Teaching	
Positions of Responsibility	
Management	
Administration	
Other Productive Training Experience	
Out of Programme Experience	