Section 13: Training

Edited by Dr Edward Wilson

13.1 Consultant supervision of trainees in operating lists

Dr J Clarke, Dr P Keeling, Dr G Sridhar

Why do this audit?

To ensure compliance with Royal College of Anaesthetists (RCoA) guidelines[1,2] and that all trainees are receiving this most fundamental aspect of training.

Best practice: research evidence or authoritative opinion

The RCoA has issued guidance on the appropriate supervision of trainees.[1] To ensure patient safety, trainees new to the specialty must, at all times, be directly supervised until they have passed the Initial Assessment of Competence.

Suggested indicators

- % trainees with the correct proportion of actual accompanied lists, as stated in the RCoA guidelines.

Proposed standard or target for best practice

- 100% novice trainees in their first 12 weeks of anaesthesia should have all timetabled lists directly supervised by a consultant or post fellowship senior trainee.
- 100% all other trainees to have at least three operating sessions per week supervised by a consultant.

Suggested data to be collected

A survey can be carried out over a minimum one month period. This should be done using departmental records and trainee logbooks. Trainee logbooks should give an accurate source of information as to actual supervision. Departmental rotas will show planned training sessions. The supervisor should be present throughout the session and not doing another list at the same time. An out-of-theatre session such as on labour ward counts as a list. Apart from consultants, clinical supervision can be provided by approved staff, associate specialist (SAS) grades and senior trainees.

A comparison of the two will show:

- actual supervision levels
- number of planned sessions to ensure the department is correctly planning for training
- number of planned supervision sessions against actual sessions which will give a percentage of the number of last minute changes and thus give a measure of crisis levels in department.

Common reasons for failure to meet standard

- Service commitments over-riding training needs.
- Absence amongst colleagues
- Departmental staffing inadequate for required service delivery.
- Poor departmental planning.

CPD and Curriculum mapping

CPD matrix codes: **1H01**

Training curriculum competences: **Annex A, Domains 3–5 and 8, Annex G**

References

1 Curriculum for a CCT in Anaesthetics, Edition 2: Section 2 and 6. *RCoA*, London August 2010 (http://www.rcoa.ac.uk/node/1462).

2 Curriculum for a CCT in Anaesthetics, Edition 2: Appendix. *RCoA*, London August 2010 (http://www.rcoa.ac.uk/node/1462).

13.2 Trainee logbooks – are they up to date?

Dr J Clarke, Dr P Keeling, Dr G Sridhar

Why do this audit?

To ensure that all trainees keep an up-to-date logbook as recommended by RCoA.[1,2]

This will highlight those trainees who are failing to keep an adequate logbook, which is an essential requirement for progression up the career ladder.

Best practice: research evidence or authoritative opinion

The Royal College of Anaesthetists (RCoA) states it is mandatory for all trainees to maintain an up-to-date logbook, except for those in their final two years of training.[1]

Suggested indicators

Review of trainee logbooks looking at essential information as defined by RCoA.

Proposed standard or target for best practice

- 100% trainees should have logbooks in a format that contains the minimum recommended data set.[2] Patients must not be individually identifiable from the patient ID used. If trainees are relying solely on computerised theatre records, they should ensure ASA grade and supervision level are also recorded.

Suggested data to be collected

- % of trainees whose logbook is up to date on the day of the audit.
- % of trainees with completed records no more than 7 days prior to the date of the audit.
- % of cases that included the ASA grade.
- % of cases that included supervision levels.
- % of cases that included patient's age or date of birth.
- % of trainees that included a record of critical incidents. This can then be cross referenced with the actual number reported to the Department.

Common reasons for failure to meet standard

- Lack of engagement in training process by trainee.
- Lack of understanding of importance of logbook.
- Overworked or stressed trainee who defers filling in details.
- Lack of adequate supervision by College Tutor or Educational Supervisor.

CPD and Curriculum mapping

CPD matrix: **Level 1 evidence**

References

1 Curriculum for a CCT in Anaesthetics, Edition 2: Section 9. *RCoA*, London August 2010 (http://www.rcoa.ac.uk/node/1462).

2 Royal College of Anaesthetists Electronic logbook (http://www.logbook.org.uk/).

13.3 Study leave for trainees, including attendance at FRCA courses

Dr J Clarke, Dr P Keeling, Dr G Sridhar

Why do this audit?

It is important that trainees have study leave[1,2,3] including, where appropriate, access to a recognised FRCA course. Factors that prevent trainees from taking appropriate study leave should be identified and corrected at an early stage.

Best practice: research evidence or authoritative opinion

The NHS terms and conditions of service handbook[2] outlines the recommended study leave for trainees.

Suggested indicators

- % trainees who have taken at least 75% of their study leave entitlement in the year prior to the date of the audit.
- % candidates for the primary and final FRCA who have attended a recognised course prior to taking the examination.

Proposed standard or target for best practice

- 75% of trainees should have used at least 75% of their study leave entitlement in the year prior to the date of the audit.
- 100% candidates for the primary or final FRCA should have attended a recognised course before their first attempt at the exam.

Suggested data to be collected

This data could be collected at the Annual Review of Competence Progression (ARCP)/Record of In-training Assessment (RITA), or the audit could be undertaken within a department. The following could be collected.

- The number of days of study leave taken within one year against entitlement.
- Whether the trainee has attended a recognised course within 6 months of their first attempt at an exam.
- A detailed analysis of the specific reasons for failure to take appropriate study leave.
- Ask trainees to grade all their study leave as a %. In relation to exams identify courses and exam outcomes to identify good and less good courses for other trainees.
- Names of courses attended as well as cost and length of course, to help build up a data set on courses available.

Common reasons for failure to meet standard

- Lack of knowledge of study leave entitlement.
- Service commitment does not allow for full entitlement.
- Trainee not fully engaged with training programme.
- Not enough training places on local course.
- Hospital unable to release all trainees at same time.

CPD and Curriculum mapping

Training curriculum competence: **CC_D7_01**

References

1 Conference of Postgraduate Medical Deans of the United Kingdom. Study Leave policy. *COPMED*, 2006 (http://www.copmed.org.uk/page.php?page_id=8).

2 NHS terms and conditions of service handbook. *NHS Employers*, Amendment 26 2012 (http://www.nhsemployers.org/SiteCollectionDocuments/AfC_tc_of_service_handbook_fb.pdf).

3 The Trainee Doctor. Foundation and specialty, including GP training. *GMC*, London 2011 (http://www.gmc-uk.org/Trainee_Doctor.pdf_39274940.pdf).

13.4 Continuing Professional Development (CPD)

Dr J Clarke, Dr P Keeling, Dr G Sridhar

Why do this audit?

It is a General Medical Council (GMC) requirement that career grade anaesthetists (including consultants, associate specialists, staff and trust grade and specialty doctors) participate in CPD.[1] Anaesthetists will be required to present evidence of their participation in CPD for their annual appraisal.[2] An output of the annual appraisal, which will feed into revalidation, will be confirmation that an anaesthetist has engaged in CPD to a satisfactory level, in keeping up to date across the scope of their professional practice and meeting the objectives in their personal development plan.[3]

An audit will provide feedback that anaesthetists in the department are meeting these GMC requirements and if not, the possible reasons why.

Best practice: research evidence or authoritative opinion

The GMC do not require doctors to be a member of a college CPD scheme but suggest that doctors may find participation in such a scheme as helpful in keeping up to date and being able to show adherence to the appropriate standards in the specialty.

The RCoA maintains a credit based CPD scheme, accredits educational activities having met defined quality criteria, provides guidance through a matrix of knowledge and skill areas to be covered in CPD and has developed an online CPD system allowing anaesthetists to record their participation in CPD.[4]

Suggested indicators

- % of career grade anaesthetists who achieved the RCoA recommendation of obtaining a minimum of 50 CPD credits per year. Of these 50 credits, a minimum of 20 internal (of which at least 10 credits should be derived from local clinical governance meetings) and 20 external credits should be obtained. The other 10 credits allow a degree of flexibility in practice.
- % of career grade anaesthetists who had an appraisal and it was agreed by their appraiser that they have presented appropriate supporting information on CPD reflecting the nature and scope of their professional practice and work.
- % of career grade anaesthetists who had an appraisal and it was agreed by their appraiser that progress was being made against last year's personal development plan has taken place.

Proposed standard or target for best practice

- 100% of career grade anaesthetists should achieve the RCoA minimum CPD credits requirement and agreement from their appraisers that their CPD is of an adequate and satisfactory level.

Suggested data to be collected

- End of year CPD report for the annual appraisal from each individual anaesthetist summarising the CPD credits obtained across internal and external activities. Registered users of the RCoA online CPD system can automatically generate this summary report. Reports should be anonymised when submitted to the local/departmental co-ordinator carrying out the audit.
- Appraisal output statement indicating agreement from the appraiser that appropriate supporting information on CPD has been presented and progress has been made against the personal development plan. The statement should be anonymised when submitted to the local/departmental co-ordinator carrying out the audit.
- Reasons should be collected as to why, if an anaesthetist fails to obtain the minimum number of CPD credits (including internal and external) recommended by the RCoA, or if the appraisal output statement fails to indicate an agreement on CPD or progress has been made against the personal development plan.

Common reasons for failure to meet standard

- Failure of the individual anaesthetist to appreciate the importance of CPD
- Service commitments over-riding CPD.
- In some specialist areas, such as obstetrics or cardiothoracic, it will not be possible for all members of staff to attend key meetings or CPD events.
- Lack of funding, resource allocation or support from employers, including limited study leave funding and insufficient SPA time.[5,6]

CPD and Curriculum mapping

Training curriculum competence: **CC_D7_01, 13 Training**

References

1 Continuing professional development: guidance for all doctors. GMC, London 2012 (http://www.gmc-uk.org/CPD_guidance_June_12.pdf_48970799.pdf).

2 Supporting information for appraisal and revalidation. GMC, London 2012 (http://www.gmc-uk.org/Supporting_information100212.pdf_47783371.pdf).

3 Medical appraisal guide: a guide to medical appraisal for revalidation in England. NHS Revalidation Support Team 2012 (http://www.revalidationsupport.nhs.uk/CubeCore/.uploads/RSTMAGforReval0312.pdf).

4 RCoA CPD guidance, matrix and online system (http://www.rcoa.ac.uk/cpd).

5 Advice on supporting professional activities in consultant job planning. AMRC, London 2010 (http://www.rcoa.ac.uk/node/1440).

6 AAGBI and RCoA view of time for supporting professional activities (SPAs). AAGBI Anaesthesia News 2010, Issue 271 (http://www.rcoa.ac.uk/node/1439).

13.5 ICU training

Dr J Clarke, Dr P Keeling, Dr G Sridhar

Why do this audit?

To ensure that proper training occurs during ICU modules.[1,2]

Best practice: research evidence or authoritative opinion

The Faculty of Intensive Care Medicine (FICM) and the Royal College of Anaesthetists (RCoA) have produced required standards for training during ICU modules.[1,2] Clinical training in ICU should be in blocks of three months for all basic, intermediate and higher trainees. All trainees are required to keep a logbook and during the intermediate training complete a minimum of 10 expanded case summaries.

Suggested indicators

- % appropriately timed blocks of training during basic and intermediate training.
- % trainees keeping a logbook and case summaries.
- % weeks when a trainee has attended at least one teaching session with an ICU consultant

Proposed standard or target for best practice

- 100% training blocks should meet above stipulations.
- 100% of trainees should keep ICM log book
- 100% trainees on the ICU module should attend at least one teaching session with an ICU consultant each week.

Suggested data to be collected

Trainee portfolios, programme director's records on ICU training and anaesthesia rotations should be examined.

- Asking TPD to supply all ICU training data to ensure each trainee is programmed to receive correct amount of training.
- Ask anaesthetic secretaries to collate how much time each trainee was allocated to ICU over a set period, e.g. 6 months.
- Carry out a postal or email survey of all trainees in your school or department to ascertain if each trainee:
  1. kept a logbook
  2. spent a minimum of three months on ICU
  3. prepared 10 cases if in intermediate training
  4. received (on average) one teaching session per week from an ICU consultant.

Common reasons for failure to meet standard

- Need for service provision.
- Trainees not aware of logbook requirement.
- Difficulties with timing of a session to enable all trainees to attend teaching session.
- ICU emergencies taking priority over teaching.

CPD and Curriculum mapping

CPD matrix: code: **3C00**

References

1 Curriculum for a CCT in Anaesthetics, Edition 2: Section 10–12. *RCoA*, London August 2010 (http://www.rcoa.ac.uk/node/1462).

2 Curriculum for a CCT in ICM. *Faculty of Intensive Care Medicine*, London 2010 (http://www.ficm.ac.uk/icm-cct-curriculum).

13.6 Airway management training for novice anaesthetists

Dr C Whymark

Why do this audit?

Airway management is a fundamental skill in anaesthetic practice. Airway management techniques include use of the facemask, laryngeal mask airway (LMA) and tracheal intubation.

In the initial three months of training it is important that new-start anaesthetists gain adequate experience in all these techniques as these skills will form the basis of all airway management, whether routine or difficult, expected or unexpected. These three aspects are not specifically assessed during the initial assessment of competency (2010 curriculum) and there are currently no recommended minimum case numbers.

Concerns about reduced competence in basic airway management have persisted as training time and caseload continue to fall.

Best practice: research evidence or authoritative opinion

There is evidence that for practical procedures, 50 attempts will confer a degree of competence.[1,2] This number is also achievable in the context of early training in anaesthesia.

Suggested indicators

The emphasis of this audit is on the ability of a training rotation to deliver a satisfactory volume of airway management experience to the novice trainee, rather than to determine airway competency in individual trainees *per se*.

- % novice trainees with logbook documentation of all cases including a record of airway management during the initial 3-month period of training.
- % trainees achieving experience of 50 cases of each of three categories of basic airway management, i.e. facemask, LMA, tracheal intubation.

Proposed standard or target for best practice

- 100% of new-start trainees should have a complete record of the airway management technique used for every case carried out in the first 3 months.
- 100% should have achieved 50 cases in each category.

Suggested data to be collected

- The number of cases carried out using:
  - facemask alone or with oropharyngeal airway
  - LMA
  - tracheal intubation.

Common reasons for failure to meet standard

- Case mix: trainees may not be exposed to a sufficient number or appropriate balance of cases to achieve the broad range of experience necessary. This should be taken into account when compiling weekly departmental rotas.
- Trainers need to monitor the progress of trainees on a month by month basis to address such deficiencies as soon as possible.
- Trainees should be discouraged from taking leave during this initial period of intensive training.
- Poor compliance with completion of logbooks.

CPD and Curriculum mapping

CPD matrix codes: **1C01, 1C02**

Training curriculum competences: **Annex B**

References

1 Konrad C et al. Learning manual skills in anesthesiology: is there a recommended number of cases for anesthetic procedures. *Anesthesiology* 1998;**86**:635–639.

2 Mulcaster JT et al. Laryngoscopic intubation. Learning and performance. *Anesthesiology* 2005;**98**:23–27.

13.7 Airway management training for higher trainees (ST 5–7)

Dr V Oshan

Why do this audit?

Airway management skills are a core component in the training of any anaesthetist and are an essential unit of training within higher level training in the 2010 CCT curriculum.[1] The ability to perform elective fibreoptic intubation in awake or anaesthetised patients under distant supervision and to manage patients with complex airway disorders under local supervision are the core learning outcomes of this module.

However, there are concerns that some hospitals are ill equipped to provide adequate training in this field and the competencies achieved by trainees may be less than satisfactory.[2,3]

Best practice: research evidence or authoritative opinion

The Royal College of Anaesthetists has outlined the competencies for higher training in airway management in the manual for CCT in Anaesthetics (2010 Curriculum).[1] This higher unit is one of the two mandatory units of higher training which all trainees are expected to complete satisfactorily during their general duties training block. Although the RCoA syllabus does not define the number of cases required to achieve competence in advanced airway skills, there is evidence in literature to suggest that 18–20 fibreoptic intubations confer a degree of expertise.[4,5]

Suggested indicators

The audit can look into the quality and duration of higher training in airway management; the ability of the training module to provide adequate exposure to the trainee in acquiring complex airway management skills as outlined in the RCoA curriculum.

Proposed standard or target for best practice

- 100% of the higher trainees should have logbook evidence of the complex airway cases managed during the module.
- 100% of the higher trainees should have evidence of required competence in fibreoptic intubation in patients without serious intra-oral or laryngeal pathology (core learning outcome).
- 100% of the trainees should have evidence of competence in managing patients with complex airway disorders in all situations under local supervision (core learning outcome).
- 100% of the higher trainees should have experience of and be familiar with the use of advanced airway techniques and airway adjuncts including HFJV, Video laryngoscopes, Aintree intubation catheters, etc.

Suggested data to be collected

- Duration of training block in higher airway management module.
- Training courses/tutorials attended in advanced airway management during the module.
- Number of cases carried out with and without direct supervision:
  - total number of complex airway cases
  - awake fibreoptic intubations
  - asleep fibreoptic intubations.
- Evidence of competence in fibreoptic intubations and the use of other advanced airway adjuncts (e.g. DOPS).
- Confidence level of the trainees in managing complex airway cases and performing fibreoptic intubations.

Common reasons for failure to meet standard

- The trainees may not be exposed to the adequate number of cases required to achieve desired skills. This may be potentiated by the problems of reduced working hours and pressure to complete other essential modules of training within a limited time frame.
- Inadequate record keeping in logbook.
- Unavailability of expensive equipment for training purpose.

CPD and Curriculum mapping

RCoA CPD Matrix: **1C02, 2A01**

Training curriculum competences: **Annex D 12–13**

References

1 CCT in Anaesthetics – Higher level training (Annex D) Edition 2. *RCoA*, August 2010 (http://www.rcoa.ac.uk/CCT/AnnexD).

2 Stringer KR, Bajenov S, Yentis SM. Training in airway management. *Anaesthesia* 2002;**57**:967–983.

3 McNarry AF et al. Perception of training needs and opportunities in advanced airway skills: a survey of British and Irish trainees. *Eur J Anaesthesiol* 2007;**24(6)**:498–504.

4 Johnson C, Roberts JT. Clinical competence in the performance of fiberoptic laryngoscopy and endotracheal intubation: a study of resident instruction. *J Clin Anesth* 1989;**1**:344–349.

5 Ovassapian A, Yelich SJ. Learning fiberoptic intubation. *Anesthesiol Clin NA* 1991;**9**:175–185.

13.8 Delivery, timing and quality of pain medicine training for anaesthetic trainees

Dr J Hughes, Dr S Mohammed

Why do this audit?

The RCoA has defined guidelines on pain medicine training within its curriculum. This audit attempts to assess the quality of pain medicine training for the anaesthetist at Basic and Intermediate levels of curricular training and thereby improve practice and quality of training. Logistics may make it difficult for the anaesthetic trainee to be exposed to all fields in pain medicine, as guided by the curriculum. The audit is aimed at reviewing pain medicine training and modifying it in order to fulfil the requirements of the curriculum.

Best practice: research evidence or authoritative opinion

Refer to the pain medicine sections of 'Curriculum for a CCT in Anaesthetics'.[1]

Suggested indicators

Knowledge:

Number of tutorials/teaching sessions in:

- history taking, physical examination, psychological assessment and interpretation of investigations.
- treatment options for acute (surgical and non-surgical patient), chronic and cancer pain.

Access to clinical practice:

Number and proportion of sessions dedicated to:

- Out-patient clinics
- Acute pain rounds
- Neural blockade and other interventions for chronic and cancer type pain.

Evidence of spiral learning and attendance at in-patient (acute) pain management sessions over all the training years.

Evidence of understanding of

- palliative medicine
- pain management programme
- multidisciplinary team working.

Evidence of access to audit in pain medicine.

Proposed standard or target for best practice

Refer to the pain medicine sections of 'Curriculum for a CCT in Anaesthetics'.[1]

Suggested data to be collected

Data should be collected per Deanery regarding the training, which the anaesthetic trainee undergoes. In all cases the pain trainee should have had significant exposure to these indicators including dedicated clinical sessions.

Common reasons for failure to meet standard

- Service provision.
- Difficulty in organising dedicated tutorials in a hospital where there are only 1–2 trainees in a dedicated pain medicine module at any one time. Didactic training may therefore have to be done at a regional level where on-call commitments limit trainees' attendance.

Related audits

13.9 – Delivery, timing and quality of pain training for the higher and advanced pain trainee

CPD and Curriculum mapping

RCoA CPD Matrix: **1D01, 1D02, 2E01, 2E02, 2E03**

Training curriculum: **Annex B 61–62, Annex C C54–55**

References

1 Curriculum for a CCT in Anaesthetics, Edition 2: *RCoA*, London August 2010 (http://www.rcoa.ac.uk/node/1462).

13.9 Delivery, timing and quality of pain training for the higher and advanced pain trainee

Dr J Hughes, Dr S Mohammed

Why do this audit?

The RCoA has defined guidelines on pain medicine training within its curriculum and in FPM guidance.[1,2] This audit attempts to assess the quality of pain medicine training for the anaesthetist at higher and advanced levels of curricular training and thereby improve practice and quality of training. Logistics may make it difficult for the anaesthetic trainee to be exposed to all fields in pain medicine, as guided by the curriculum. The audit is aimed at reviewing pain medicine training and modifying it in order to fulfil the requirements of the curriculum.

Best practice: research evidence or authoritative opinion

The pain medicine sections of the RCoA' s 'Curriculum for a CCT in Anaesthetics' are the template for training at each level.[1]

Suggested indicators

Knowledge:

Number of tutorials in:

- history taking, physical examination, psychological assessment and interpretation of investigations
- treatment options for acute (surgical and non surgical) chronic and cancer pain.

Access and training in the safe and competent use of imaging techniques in pain medicine.

Access to clinical practice:

Advanced pain training of at least 12 months whole-time or equivalent (excluding anaesthetic on-call commitments).

Number and proportion of sessions dedicated to:

- out-patient clinics
- acute pain rounds and in-patient rounds
- neural blockade and other interventions for chronic and cancer type pain
- expressed as numbers of clinics per month/of pain sessions per month.

No sessions, exposure to:

- palliative medicine
- paediatric pain medicine
- spinal cord stimulation
- implanted (epidural/intrathecal) drug delivery systems
- pain management programmes
- multidisciplinary team meetings in chronic pain
- neurosurgical techniques in pain medicine.

Access to education, research and audit

- Participation in audit for pain medicine.
- Teaching and participation with regards to research in pain medicine.
- Participation and delivery of education in pain medicine.

Management exposure

- Tutorial reviewing the business management principles for pain services.
- Attendance at pain unit business meetings.

Proposed standard or target for best practice	Those set by the RCoA in the Curriculum for a CCT in Anaesthetics.[1]
Suggested data to be collected	Data should be collected per Deanery regarding the training that the higher and advanced pain trainee undergoes. In all cases the pain trainee should have had significant exposure to these indicators including dedicated clinical sessions.
Common reasons for failure to meet standard	• Service provision. • Availability of individual elements of training in any given unit. • Difficulty in organising dedicated tutorials in a region where there are only 1-2 trainees at any one time.
Related audits	13.8 – Delivery, timing and quality of pain medicine training for anaesthetic trainees
CPD and Curriculum mapping	RCoA CPD Matrix: **3E00** Training curriculum: **Annex D40–41, Annex E59–64**
References	1 Curriculum for a CCT in Anaesthetics, Edition 2: *RCoA*, London August 2010 (http://www.rcoa.ac.uk/node/1462). 2 Assessment of Advanced Pain Medicine Trainees for FFPMRCA. (FPM website: http://www.rcoa.ac.uk/node/1523). 3 Providing Advanced Training in Pain Medicine for Anaesthetists – Guide for Regional Advisors, Trainers and Trainees. *FPM RCoA*, London 2010 (http://www.rcoa.ac.uk/node/2175). (Where should this be cited in the text?)