

## **Primary FRCA Guide**

Deciding to undertake the Primary FRCA examinations is not a decision to take lightly, particularly as notoriously the anaesthetic exams are the hardest of the postgraduate medical exams. The amount of knowledge required is extensive and often encompasses many topics not covered in medical school and that may ring only vague bells (i.e. from physics GCSE).

The Primary FRCA is an exam that in part tests your ability to be an anaesthetic registrar, but more than this, the RCOA want a person who is a 'scientist practicing the art of anaesthesia'. In other words you are a clinician, but recognise the science behind everything and can explain this eloquently and succinctly with the correct language.

The Imperial School of Anaesthesia (ISA) has written this guide to specifically help Imperial trainees study and pass the exam. It is based on Imperial anaesthetic trainee and consultants' personal experiences on how best to approach and plan revision. It aims to be an overview of the primary FRCA exam format, include useful resources, textbooks, courses and finally add some more personal words of wisdom to aid preparation. It is certainly not exhaustive, but hopefully will help start revision, which can often be the hardest bit! As well as this guide, the ISA have set up both Viva/SOE and OSCE courses to help in-house candidates pass and provide them with the best chance of returning as Imperial registrars.

Whilst different people approach the exam in various ways, with some advocating concentrating only on practice MCQ's to pass the MCQ exam, a combination of general reading with MCQ practice allows a better grasp of fundamental basic science principles. This not only aids tackling difficult or unfamiliar questions in the MCQ but also allow adequate preparation for the SOE and OSCE portion of the exam, as well as final FRCA revision. The Single Best Answer (SBA) component of the MCQ paper is notoriously difficult and often, in our experience, can bring down the overall pass rates for the MCQ. Getting specific practice on this style of question is particularly beneficial for both the primary and the final written papers.

For the practical components of the exam (SOE/OSCE) practice is the key rather than purely book work – i.e. taking histories / discussing difficult communication topics / performing system examinations / talking through resuscitation scenarios and practice vivas. There are likely to be others revising for the exam in your hospital, therefore working in pairs or small groups to practice will allow for better understanding, highlight gaps in each other's knowledge, appreciate your level of knowledge in comparison to peers and strengthen your viva technique. On an almost daily basis trainees work with a consultant or senior trainee. This time can be used to talk through topics so the trainee is not scared about talking when the viva exam comes along. Every consultant has a favourite topic or area of interest (and if they don't then taking a textbook in to aid discussions can help). Most conversations can then be used to help with WPBAs and topics can be reinforced with some book work.

The basic curriculum "Blueprint of Primary FRCA Exam Mapped Against Basic Level Units of Training" lists the topics examined in each of the exam components. By working through the main textbooks most of the curriculum can be covered, however it is useful to map to the above document thus ensuring no topics are missed.

Broadly topics can be split into five main headings:

1. Physiology
2. Pharmacology
3. Physics, Clinical Measurement and Statistics
4. Anaesthetic equipment
5. Clinical

Ultimately investing heavily in primary revision will help with the final FRCA as many concepts are revisited; there is so much to learn for the final that if you do not learn the primary syllabus at the time of the primary, you will hamper your final revision. Overall with the FRCA (by the time of the final) you should be able to understand the anaesthetic, pain and critical care implications of any patient with any condition having any procedure in any location!

### **EXAM FORMAT**

An overview of the exam format is summarised below from the examinations section on the RCOA website (<http://www.rcoa.ac.uk/examinations>) and “The RCOA guide to the FRCA examination – The Primary” publication. More detailed information can be found in both these references with regards to exact eligibility criteria, application forms, deadlines, payment and exam statistics (percentage pass rates) from previous sittings.

Application is paper based and can be downloaded from the RCOA website. They should be submitted with a cheque or postal order for the examination fee made payable to “The Royal College of Anaesthetists”. It is worthwhile submitting the application form in plenty of time of the deadline, as this lengthy form requires signatures from your college tutor and attached evidence of your Initial Assessment of Competency (for the OSCE/SOE application). You will receive an email to confirm receipt of your application, so it is useful to chase up your application with the RCOA Exams Department if no email is received.

Since 2011 the RCOA have published “The Candidate” newsletter which is specifically designed to keep FRCA examination candidates informed of updates to exam processes, procedures, and regulations; plus advice on exam timings, statistics and general information regarding exam sittings. The RCOA also uses Twitter to post information on exam dates, application closing dates and where and when results will be published.

### **PLANNING FOR THE EXAM**

Historically the number of attempts at both the MCQ and SOE/OSCE are part of the shortlisting criteria for ST3 registrar applications, therefore it is worth trying to pass first time. This involves much planning, factoring in study leave, revision courses, finances, syllabus, application form, online resources and textbooks. Being organised and applying for courses and study leave early can reduce potential stress as popular courses can get booked up fast.

## **WHEN TO DO THE EXAM**

Trainees cannot apply for an ST3 post until they have completed the Primary FRCA. As a consequence, trainees are attempting the primary exams earlier into their anaesthetic careers than previously was the case. Taking the exam with a lot less clinical experience undoubtedly means the exam is perceived as harder, but gaining a pass is still achievable. Anaesthesia is a postgraduate specialty and like with the FRCOphth and FRCR, it requires a long time to understand all of the concepts. Therefore revision should ideally commence at least 6 months prior to the MCQ part of the exam with intensity of revision increasing as the exam draws closer.

After passing the MCQ it is useful to attempt the OSCE/SOE at the next possible sitting, as much of the knowledge from the MCQ will be fresh and easily accessible. This will allow you to build on this baseline, rather than potentially forgetting large amounts and having to start again from scratch. This does mean the whole process takes approximately 8-9 months of revision which can be mentally and physically draining, therefore booking a holiday/taking a break for a week after the MCQ and prior to starting revision for the SOE/OSCE can be beneficial.

## **PRIMARY FRCA MCQ EXAM:**

### **Structure of the Exam:**

90 Multiple Choice Questions in 3 hours completed on a standard Optical Mark Reader answer sheet:

- 60 x Multiple True/False (MTF) questions (five stems in each question), comprising approximately of:
  - 20 MTF question in pharmacology
  - 20 MTF questions in physiology, including related biochemistry and anatomy
  - 20 questions in physics, clinical measurement and data interpretation (including statistics)
- 30 x Single Best Answer Questions (SBA) in any of the categories listed above. The SBA questions were introduced in September 2011. They consist of a paragraph of information followed by a single-lead in question with 5 responses, of which the single best response should be chosen. Usually all options could be possible answers with no answer being obviously incorrect.

### **Marking System:**

- One mark for each correct answer in MTF section (60 x 5 = 300 marks)
- Four marks for each correct question in SBA section (30 x 4 = 120 marks)
- Marks for each section combined to give total mark out of 420
- No marks are deducted for incorrect answers
- The pass mark is set by the examiners using Angoff Referencing. To allow for the examination's reliability this mark is then reduced by one standard error of measurement to give the pass mark. An exact % required to pass is not specified by the RCOA but it is

normally greater than 70%

- Pass marks and scores are given in raw score and percentages

#### **Fee and Dates:**

- Fees vary each year – see RCOA website for up to date details.
- Examinations are currently held in September, November and March of each year, to coincide better with the Primary SOE/OSCE dates
- There are examination centres throughout the UK - London, Cardiff, Birmingham, Manchester, Belfast, Sheffield and Edinburgh. The exam runs simultaneously in these centres from 2.00 pm to 5.00 pm with candidate briefing at 1.45 pm.

#### **Attempts and Validity:**

- A maximum of six attempts in this exam (increased in August 2013 from 5 attempts)
- A pass in the Primary MCQ is valid for three years measured to the published start date of the examination being applied for
- Guidance is not offered by the College to candidates unsuccessful in this examination

#### **PRIMARY FRCA OSCE/SOE EXAM:**

##### **Structure of the OSCE Exam:**

- 17 stations completed over 1 hour 42 minutes (each station 5 minutes long, with 1 minute turnaround between stations), plus one rest station.
- Currently stations comprise of:
  - Interactive resuscitation x 1
  - Resuscitation skills x 1
  - Technical skills x 2
  - Anatomy x 2 (general procedure)
  - History-taking x 2
  - Physical examination x 1
  - Communication skills x 1
  - Interpretation of X-ray x 2
  - Monitoring equipment x 1
  - Measuring equipment x 1
  - Anaesthetic hazards x 1
  - Anaesthetic equipment x 1
  - Simulation x 1
- One or more of the stations may involve the use of a medium fidelity simulator
- Resuscitation stations are based on the 2010 Resuscitation Guidelines
- Of the 17 stations one will be a test station, which does not count towards the overall mark. You will not be aware which one this is. New questions go through at least two trial runs to demonstrate satisfactory performance before being adopted into the question bank
- See RCOA website under examinations to access a PDF file created by the College with more information on the OSCE exam structure

**Marking System for the OSCE Exam:**

- Each OSCE station is marked out of 20. The pass mark for each station is determined by the examiners using the Angoff method. The pass mark for each station is summed to obtain the examination pass mark
- The total marks available are 320 (16 x 20 marks)

**Structure of the SOE Exam:**

There are two sub-sections to the SOE section comprising:

- 30 minutes; consisting of three questions in pharmacology and three questions in physiology and biochemistry
- 30 minutes; consisting of three questions in physics, clinical measurement, equipment and safety and three questions on clinical topics (including a critical incident)

**Marking System for the SOE Exam:**

- Two examiners mark each part of the SOE. Both mark independently. There are 12 questions, 2 marks are given for a pass, 1 mark for a borderline and 0 marks for a fail, giving a maximum score of 48. The pass mark is 37 which has been calculated using a modified Rothman system and historic data reference

**Fee and Dates:**

- Both the OSCE and SOE must be sat at the same time at the first sitting
- If one part is passed during the first sitting, this does not need resitting on the next attempt
- Fees vary each year – see RCOA website for up to date details.
- The Primary FRCA OSCE/SOE is only held at the Royal College of Anaesthetists, Churchill House, 35 Red Lion Square, London WC1R 4SG
- The exam normally runs for one week (Monday to Friday) with candidates allowed to rank a preferred order of days to sit the exam when completing the application form – the RCOA aim to give one of the top 3 choices
- Examinations are now being held in November, January and May of each year, to coincide better with the Primary FRCA MCQ dates
- Results from the Primary FRCA SOE/OSCE are normally displayed from 2.00 pm on the next working day following each Primary exam day
- To check exam allocations and results you will need to know your Candidate Number (three figures, exam specific) and/or College Reference Number (six figures, person specific). Names are not used

**Attempts and Validity:**

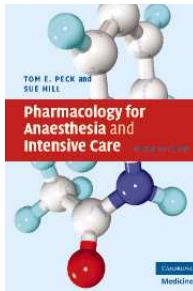
- You must have passed the Primary FRCA MCQ within THREE years before the published starting date of the Primary FRCA OSCE/SOE sitting you are applying for
- You must be registered with the RCOA
- You must have been awarded the Initial Assessment of Competency In Anaesthesia (or overseas equivalent)

- You are allowed six attempts at the Primary FRCA OSCE and/or SOE examination

## **RECOMMENDED TEXTBOOKS FOR THE PRIMARY FRCA:**

### **PHARMACOLOGY:**

- Pharmacology for Anaesthesia and Intensive Care (Cambridge Medicine); Tom E. Peck, Sue Hill. ISBN: 978-0521704632. RRP: £51.

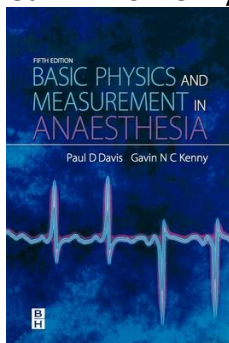


- Drugs in Anaesthesia and Intensive Care (Oxford University Press); Susan Smith, Edward Scarth, Martin Sasada. ISBN: 978-0199599387. RRP: £32.99.

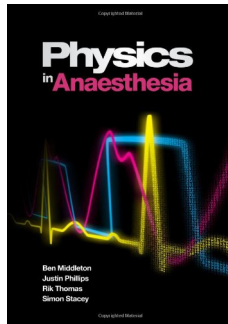


### **PHYSICS:**

- Basic Physics & Measurement in Anaesthesia (Butterworth-Heinemann); Paul D. Davis, Gavin N. C. Kenny. ISBN: 978-0750648288. RRP: £54.99.



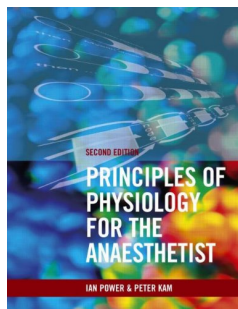
- Physics in Anaesthesia: for FRCA candidates, ODPs and nurse anaesthetists (Scion Publishing Ltd); Ben Middleton, Simon Stacey, Rik Thomas, Justin Phillips. ISBN: 978-1904842989. RRP: £29.99.



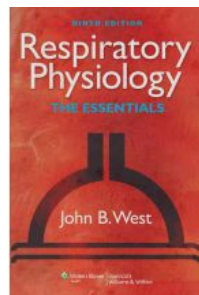
## PHYSIOLOGY:

**NB. See general reference textbooks section also, as majority of these encompass physiology**

- Principles of Physiology for the Anaesthetist, Second edition (Hodder education); Peter Kam and Ian Power. ISBN: 978-034088799B. RRP: £47.99

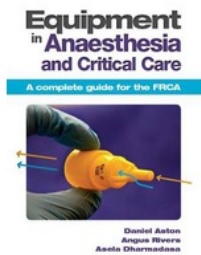


- Respiratory Physiology: The Essentials (Lippincott Williams and Wilkins); John B. West. ISBN: 978-1609136406. RRP: £25.50.

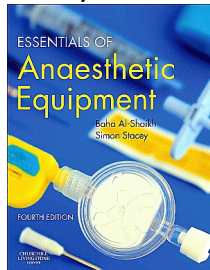


## ANAESTHETIC EQUIPMENT:

- Equipment in Anaesthesia and Critical Care: A complete guide for the FRCA (Scion Publishing Ltd); Daniel Aston, Angus Rivers, Asela Dharmadasa. ISBN: 978-1907904059. RRP: £37.50. Written by three Imperial School of Anaesthesia registrars and published by Scion, who have offered Imperial trainees a 25% discount on the retail price. Enter discount code: Anaes1314 at <http://www.scionpublishing.com/9781907904059>

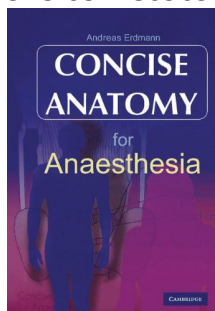


- Essentials of Anaesthetic Equipment (Churchill Livingstone), 4e; Baha Al-Shaikh, Simon Stacey ISBN: 978-0702049545. RRP: £44.99.



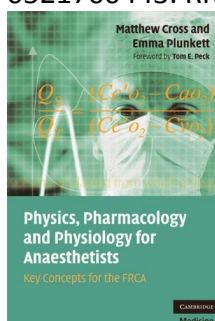
## ANATOMY:

- Concise Anatomy for Anaesthesia (Cambridge University Press); Andreas G Erdmann. ISBN: 978-0521869096. RRP: £59.99



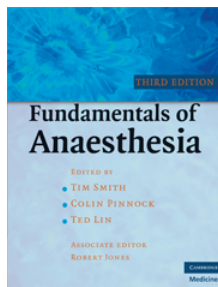
## GENERAL REFERENCE TEXTBOOKS:

- Physics, Pharmacology and Physiology for Anaesthetists: Key Concepts for the FRCA (Cambridge University Press); Matthew E. Cross, Emma V. E. Plunkett. ISBN: 978-0521700443. RRP: £36.99.

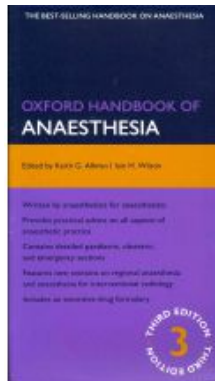


- Fundamentals of Anaesthesia (Cambridge Medicine); Tim Smith, Colin Pinnock, Ted Lin, Robert Jones. ISBN: 978-0521692496. RRP: £96.

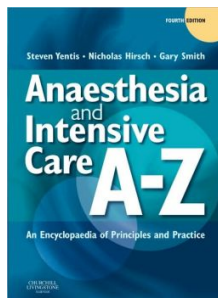




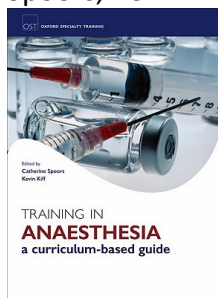
- Oxford Handbook of Anaesthesia (Oxford University Press); Keith Allman, Iain Wilson. ISBN: 978-0199584048. RRP: £34.99.



- Anaesthesia and Intensive Care A-Z: An Encyclopedia of Principles and Practice (Churchill Livingstone); James Ip, Steven M. Yentis, Nicholas P. Hirsch, Gary B. Smith. ISBN: 978-0443067853. RRP: £77.99.



- Training In Anaesthesia – The essential curriculum (Oxford University Press); Catherine Spoors, Kevin Kiff. ISBN: 978-0199227266. RRP: £69.99.

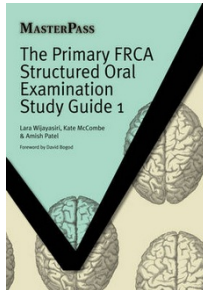


- Primary FRCA in a Box (The Royal Society of Medicine); Barry Clifton, Lionel Davis, Sarah Armstrong; ISBN: 9781853156274. RRP: £35.99

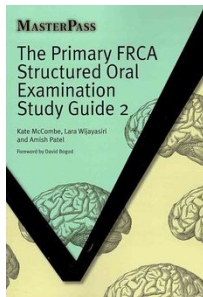


## PRIMARY FRCA SOE BOOKS:

- The Primary FRCA Structured Oral Examination Study Guide 1 (MasterPass Series - Radcliffe Publishing Ltd); Lara Wijayasiri, Kate McCombe, Amish Patel. ISBN: 978-1846192708. RRP: £29.99.

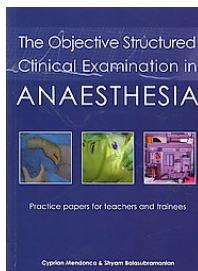


- The Primary FRCA Structured Oral Examination Study Guide 2 (MasterPass Series – Radcliffe Publishing Ltd); Kate McCombe, Lara Wijayasiri, Amish Patel. ISBN: 978-1846194344. RRP: £29.99.

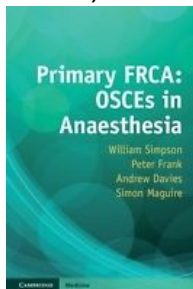


## PRIMARY FRCA OSCE BOOKS:

- The Objective Structured Clinical Examination in Anaesthesia: Practice Papers for Teachers and Trainees (TFM Publishing Ltd); Cyprian Mendonca, Shyam Balasubramanian. ISBN: 978-1903378564. RRP: £35.



- Primary FRCA: OSCEs in Anaesthesia (Cambridge University Press); William Simpson, Andrew Davies, Peter Frank, Simon Maguire. ISBN: 978-1107652231. RRP: £29.99.



## **RCOA BOOK:**

- **Guide to the FRCA Examination: The Primary** (Royal College of Anaesthetists)  
<http://www.rcoa.ac.uk/resources-candidates/the-primary-candidate-resources>



This is a very useful book. The practice MCQ, SOE and OSCE stations in this book often come up in the actual exams. It is therefore recommended you cover this entire book and be able to answer all the questions.

## **ONLINE PRACTICE QUESTIONS FOR THE PRIMARY FRCA MCQ:**

Free:

[www.e-lfh.org.uk](http://www.e-lfh.org.uk)

[www.frca.co.uk](http://www.frca.co.uk)

AAGBI Anaesthesia Tutorial of the Week [www.aagbi.org/education/educational-resources/tutorial-week](http://www.aagbi.org/education/educational-resources/tutorial-week)

Require payment:

[www.frcaq.com](http://www.frcaq.com)

[www.onexamination.com](http://www.onexamination.com)

[www.pastest.co.uk](http://www.pastest.co.uk)

## **PRACTICE MCQ BOOKS:**

There is a vast array of MCQ books out there, and with the free online resources there is plenty to keep you busy. As mentioned above it is important to go through the MCQs in the RCOA “Guide to the FRCA Examination: The Primary” book as these are written by the College and have been known to crop up in the exam. The same applies to the MCQs on e-Learning for Healthcare ([www.e-lfh.org.uk](http://www.e-lfh.org.uk)).

## **USEFUL WEBSITES:**

Anaesthetic modules on [www.e-lfh.org.uk](http://www.e-lfh.org.uk)

Examination section of [www.rcoa.ac.uk](http://www.rcoa.ac.uk)

As well as questions also has plenty of other information <http://www.frca.co.uk>

## **IMPERIAL SCHOOL OF ANAESTHESIA COURSES:**

In terms of revision courses, they are generally more relevant for the OSCE/SOE rather than for the MCQ. Imperial has both a SOE/Viva course and an OSCE course set up by a group of Imperial Registrars. For the SOE/Viva course it is possible to be an observer, which can provide motivation and an understanding of what is required in addition to the book work.

- **NWT Primary Viva Course**

A free course for Imperial trainees taking the primary FRCA SOE. It comprises of structured oral viva sessions run by Imperial School of Anaesthesia Consultants and post-FRCA registrars, in the 5-6 weeks running up to each exam and takes place at Charing Cross Hospital.

- **ISA Primary OSCE Course**

A one day course run by post-FRCA Imperial registrars at Chelsea and Westminster Hospital. Consists of small group tutorials on difficult topics (e.g. electricity, communication, practice simulation on SimMan, resuscitation) and a full 16 station OSCE in the afternoon with feedback and marks.

## **OTHER COURSES:**

- Royal College of Anaesthetists - The Primary FRCA Masterclass course. 4 day course costing £305 at the RCOA. It is intended for those studying for the Primary FRCA exam and will only cover the key areas in Pharmacology, Physics, Statistics and Clinical Measurement that candidates have difficulty with in the examination. Course combines MCQ practice covering these difficult subject areas with lectures. Related e-Learning resources are available on e-Learning Anaesthesia.
- Mersey School of Anaesthesia courses <http://www.msoa.org.uk/courses/>
- Coventry courses <http://www.mededcoventry.com/courses/anaesthesia/frca/>
- SCIP course <http://www.scipcourse.co.uk> N.B. BIP [www.bipcourse.co.uk](http://www.bipcourse.co.uk) and SCIPY [www.scipy.org.uk](http://www.scipy.org.uk) courses are the same course but different locations
- Guy's and St Thomas' Hospital 16 weeks day release Primary FRCA course (every Friday for 16 weeks)
- Many new courses out there cropping up all the time. The FRCA website has a fairly extensive list of other courses <http://www.frca.co.uk/courses.aspx>

## **WHY CANDIDATES FAIL**

Whilst everyone aims to pass, occasionally candidates fail and the commonest reasons are listed below.

- Poor revision planning and not allowing adequate time to acquire the knowledge needed to pass
- Lack of confidence in your own abilities – again this can come from late realization that not enough time has been dedicated to revision

- If candidates fail once then this can lead to further loss of confidence and a downward spiral of further failures
- Not enough viva/OSCE practice. Having the knowledge in your head and being able to verbalise this out loud and explain it in an eloquent methodical way requires very different skills from those required to pass a written exam. Whilst viva practice can feel embarrassing and uncomfortable, making mistakes in front of colleagues is far more worthwhile than when sat in the actual exam.

### **TIPS FOR PASSING THE EXAM FIRST TIME**

- Understand the fundamental basic science principles first by reading reference textbooks. This can be done as soon as you start anaesthetics whilst you are achieving your basic competencies in the first 3 months. This period with no time pressures is ideal for acquiring the baseline knowledge that will be needed throughout the FRCA exam and later on in your teaching career
- Be organized with booking revision courses and study leave
- Decide when to sit the Primary FRCA MCQ and subsequently make plans for the Primary FRCA OSCE/SOE. Often advised after passing the MCQ, to attempt the OSCE/SOE at the next possible sitting
- Get a copy of the RCOA “Guide to the FRCA Examination: The Primary” – be able to answer all of these questions
- Be proactive on using learning opportunities with consultants and senior trainees at work
- Attend as an observer on the NWT Primary Viva course when revising for the MCQ to gauge the breadth and level of knowledge required, as well as the skill of delivering this information to an examiner
- Set up a revision group/pair in your hospital and practice practice practice!

### **MENTORING AND SUPPORT**

There are many different avenues of support if you are struggling with the primary FRCA exam and it is good to involve someone early. In the first instance your Educational Supervisor or College Tutor at your hospital can be of great help. Alternatively you may wish to get directly in contact with Terri Stewart (ISA School Office Manager), your ISA rep (see ISA website for relevant trainee reps) or your Trainee Programme Director (Dr Phil Peel for Core Anaesthetic/ACCS trainees) for signposting/access to advice and support.

The RCOA have their own college support system for examination candidates who fail the Primary OSCE/SOE examinations, but guidance is not provided for the Primary MCQ. For the Primary OSCE/SOE candidates can request a guidance interview with local trainers and FRCA examiners in order to review previous examination attempts and gain advice on how to best prepare for future attempts. Applicants must apply for guidance within one calendar month of the last failed component. Guidance is not a compulsory requirement and not attending an interview will not affect eligibility for the next attempt. The Examinations Administrator (exams@rcoa.ac.uk) should be contacted to arrange a guidance interview.

**Written by Dr Zara Edwards, ACCS Anaesthetics CT2b**  
**Reviewed by the ISA Primary OSCE and NWT Primary Viva teams**  
**Written February 2014**