The requirements of the examination

An introduction to Basic Surgical Training

Basic Surgical Training (BST) aims to provide a firm surgical and clinical foundation in the general principles of surgery that will equip a trainee surgeon to enter Higher Surgical Training in one of the surgical specialties. It comprises a minimum of 2 years of clinical practice in approved training posts within rotations that provide clinical training and adequate opportunities for education rather than routine service commitments alone. It is a totipotential period in which the trainee should participate in audit and be introduced to the practice and principles of research and medical ethics. Trainees should also acquire an adequate knowledge of the basic sciences relevant to surgery and, although the in-depth and specific examination of them as conducted in the former Primary or Part 1 was diminished in the old Collegiate MRCS examination, knowledge of clinically related anatomy, physiology and pathology will be assessed in the MCQ papers and in the viva voce examinations and should not be underestimated. Indeed in the new Intercollegiate MRCS the first MCQ paper will be given over almost entirely to applied basic sciences. Many trainees will acquire their knowledge of the basic sciences through private study or course attendance, while others may still take posts as demonstrators in university departments, although wherever possible these should be linked to formal basic surgical training programmes (these demonstrator posts cannot form part of the minimum 2-year period of clinical training). In the future, the introduction of Foundation Years and Seamless Training may change some of these guidelines but the principles will remain.

Eligibility for the Diploma of MRCS

It is important to note that the examination eligibility requirements for the new Intercollegiate regulations are different from those issued
under the current Collegiate regulations. All new Basic Surgical Trainees are therefore advised to obtain up-to-date regulations at the time of entry to Basic Surgical Training. All those who have already passed any part of the Collegiate examination by 31st December 2003 will be governed by existing Collegiate regulations. The new Intercollegiate regulations will apply to all candidates entering Parts 1 and/or 2 from 1st January 2004.

Old Collegiate regulations

To be eligible to be awarded the Diploma of MRCS, all candidates must not only have passed all sections of the appropriate examinations but also:

- Possess a primary medical qualification that is acceptable to the United Kingdom General Medical Council for full registration or for limited registration
- Have satisfactorily completed the prescribed minimum 2-year period of mandatory clinical training (see below)
- Have satisfactorily completed the mandatory Basic Surgical Skills course and received the appropriate certificate and number (see p. 10)
- Hold an authenticated log book of their training signed by their trainers (see p. 9)
- Have been engaged in acquiring professional knowledge and training for at least 36 months since obtaining the primary qualification required above
- Have complied with all the regulations and signed a declaration of compliance with all the ordinances of the appropriate college.

New Intercollegiate regulations

The only requirements under the new Intercollegiate regulations for entry to Parts 1 and 2 are:

- The candidate must have a primary medical qualification acceptable for UK GMC full or limited registration or IMC full or temporary registration (or overseas equivalent acceptable to the Councils of the four Surgical Royal Colleges)
- Have started Basic Surgical Training.

It should be noted that eligibility for entry to Higher Surgical Training in Great Britain and Ireland will be dependent on possession
of the Certificate of Completion of Basic Surgical Training (CCBST). To acquire this candidates must have passed the MRCS examination, completed 2 years in recognized training posts with completion of mandatory courses.

Mandatory clinical training

Training programmes

A minimum of 2 years of clinical training in approved posts, which may include:

- Posts inspected by the Hospital Recognition Committee (HRC) of the Royal College of Surgeons
- Posts in gynaecology (but not those combined with obstetrics) recognized by the Royal College of Obstetricians and Gynaecologists for the MRCOG Diploma
- Posts in intensive care recognized by the Royal College of Physicians or the Royal College of Anaesthetists
- Full-time supernumerary appointments at hospitals in the UK with recognized posts if it is certified that the duties are identical to those of a full-time paid recognized post, and are completed under full or limited registration and provided that educational approval has been confirmed by the HRC
- Posts in oral and maxillofacial surgery recognized under MRCS regulations by the Faculty of Dental Surgery (which may be undertaken after dental but before medical qualification)
- Posts in ophthalmology recognized by the Royal College of Ophthalmologists
- Posts in other countries that have been ‘inspected and approved’ for entry to the examination by:
  - The Royal College of Surgeons of England
  - The Royal College of Surgeons of Edinburgh
  - The Royal College of Physicians and Surgeons of Glasgow
  - The Royal College of Surgeons in Ireland.

Trainees must train in at least four separate surgical specialties.

In the past the BST posts were classified into Category 1 and Category 2 posts. From August 2003, the four Surgical Royal Colleges have ended the practice of dividing BST posts in this way and so candidates need no longer be concerned about the categorization of posts for the examination.
However, candidates will still have to train in four separate surgical posts but there will be no restrictions on any of the combinations of specialties. Suitable posts will include:

- General surgery or one of its subspecialties
- Trauma and orthopaedics or one of its subspecialties
- Accident and emergency medicine
- Cardiothoracic surgery
- Neurosurgery
- Oral and maxillofacial surgery*
- Otolaryngology
- Paediatric surgery
- Plastic surgery
- Urology.

Posts in the following specialties approved by the appropriate Royal College:

- Gynaecology
- Ophthalmology
- Posts in ICU as part of an approved surgical post or as part of a Royal College of Anaesthetists approved 6-month post in anaesthesia with intensive therapy.

Attachments to basic science departments such as being an anatomy demonstrator are very valuable, but these cannot form part of the 2-year minimum period of clinical training. However, candidates can take the MCQ part of the examination during such a post as long as they are on an approved BST rotation.

All trainees must present evidence of satisfactory completion of this training, which should comprise an authenticated certificate from the local surgical tutor or, if this is not possible, a statement signed by all the trainee’s consultant trainers.

**Timetable**

Every surgical trainee should be part of an identified surgical team and be directly responsible to one or more consultant surgeons who

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* Maxillofacial trainees (with a full or temporary registered dental qualification with the UK General Dental Council) may complete 12 months of oral and maxillofacial surgical training in a post approved by the Faculty of Dental Surgery, before medical qualification. They must also complete a minimum of 12 months made up of two other specialties in which a significant proportion of the work is with surgical emergencies requiring the general care of the patient and/or care of the critically ill.
supervise his or her training as Educational Supervisor. Trainees should have a clearly defined role within the clinical team and there must be a balance between training and service commitments. Their timetable should include:

- The diagnosis and treatment of elective and emergency admissions
- Outpatient clinics
- Assisting at operations (performing procedures as and when appropriate)
- Intensive care and postoperative management.

Routine service tasks, such as phlebotomy, should only form a very limited part of the workload. In order to assist in the balance of training and service commitments, the following model timetable has been suggested, but should be interpreted flexibly:

**Operating (2–3 sessions)**
All operations should be recorded in the logbook, and operations recorded should differentiate between emergency and elective procedures and as to whether they were performed with or without assistance. Unsupervised procedures should only be undertaken after adequate and appropriate experience with skilled assistance close at hand.

**Outpatients (2 sessions)**
Trainees should see both new and follow-up patients under the supervision of, and in consultation with, a consultant or higher surgical trainee.

**Ward work (2–3 sessions)**
There should be a daily business round to implement senior surgical staff’s instructions, with at least one formal round with the consultant trainer for teaching purposes. Routine clerking of patients should not trespass on the time in outpatients or in the operating theatre, and trainees should ideally be supported by pre-registration house officers in these duties.

**Administration (1 session)**
Discharge summaries and coding data for audit are an essential part of training and require appropriate secretarial and computer back-up.

**Personal study (1 session)**
Protected time must be set aside during the working week for personal study.
Teaching (1 session)
Each BST programme must have a regular schedule of teaching sessions that should include postgraduate meetings, audit, ward rounds and departmental and interdepartmental meetings. Experience at presenting cases at such meetings is an essential part of surgical education and opportunities should be afforded regularly.

Emergency and on-call duties
Emergency and on-call duties are an essential part of surgical training, and currently under the ‘New Deal’ arrangement, a 56-hour week is the maximum with not more than 13 hours on continuous duty, working towards a 48-hour working week with a maximum of 11 hours on duty by August 2009 as laid down by the European Working Time Directive. This means that in reality a full shift system is often required. All emergency work must always be supervised by a consultant or higher surgical trainee in the appropriate specialty.

Skills
Every basic surgical trainee should be given the opportunity to acquire the general and the specialty clinical and practical skills necessary. A comprehensive list of such skills cannot be provided in this context but the following are listed for guidance.

General skills
- Communication skills with patients, relatives, nursing staff, paramedics, general practitioners, other hospital departments (e.g. X-ray, laboratories)
- Maintenance of clinical and operating notes
- Supervision and support of pre-registration house officers and medical students
- Understanding the role of other departments in diagnosis such as X-ray, ultrasound, CT, MRI and radionuclide scanning, endoscopy, biopsy, histopathology, cytology, etc.
- The ability to elicit the symptoms and signs in patients with surgical disorders
- Pre-operative assessment of patients (e.g. cardiac, respiratory, renal status, diabetes, hypertension, malnutrition). The selection of patients for operative procedures
- Peri-operative management: antibiotics, prevention of DVT and pulmonary embolism
- Post-operative care: indications for intensive care, pain relief, use of antibiotics, care of venous lines and catheters, drains,

Preparation and revision for the MRCS
nasogastric tubes, fluid and electrolyte balance, blood gas analysis, management of common surgical complications, multiple organ failure, terminal care, etc.

- Follow-up: need for surveillance in appropriate patients
- Practical skills in safe operating theatre practice (sterility and sterilization), incisions, tissue handling, diathermy (use and safety), wound closure (sutures, needles, knotting technique, staples), simple skin grafting, drains and urinary catheters, life-saving manoeuvres (endotracheal intubation, cardiac massage, chest drains).

Specialty skills
Each specialty offers the opportunity to learn new skills and operative procedures appropriate to basic surgical training. All such procedures should be noted in the logbook. The Royal College of Surgeons of England is currently seeking to develop guidelines on a formal curriculum. It is not appropriate to list all such specialty skills here, but examples for two of the main specialties of general surgery and orthopaedics are listed for illustration purposes.

General surgery

Clinical skills
- Diagnosis and management of acute abdominal emergencies
- Total parenteral nutrition
- Initial assessment and resuscitation of head, chest and abdominal injuries.

Practical skills
- Endoscopy and laparoscopy
- Thoracic and peritoneal aspiration and drainage
- Draining abscesses
- Standard surgical approaches
- Laparotomy
- Removal of simple cutaneous and subcutaneous swellings
- Appendicectomy
- Strangulated hernia
- Bowel resection and anastomosis
- Hernioplasty
- Varicose veins
- Sigmoidoscopy and minor anal–rectal procedures
- Excision of breast lumps.
Orthopaedic surgery

Clinical skills
- Fracture and elective outpatient clinics
- Assessment and management of acute musculoskeletal trauma.

Practical skills
- Aspiration of joints and injection of steroids
- Surgical approach to major bones and joints
- Manipulative reduction of fractures
- Application of splints and plaster casts
- Skeletal traction and external fixation
- Internal fixation of common fractures, including the hip
- Hemi-arthroplasty of the hip joint
- Fusion of small joints of the toes
- Carpal tunnel decompression
- Excision of ganglia
- Common amputations
- Management of injuries to, and infections of, the hand.

Educational facilities
All basic surgical training posts should provide the trainee with the following educational facilities.

Books
There must be a well-supervised library with facilities for evening reading and a borrowing service. Appropriate books should also be available in the Department of Surgery and in the operating theatre.

Study leave
Paid study leave must be available in addition to the weekly sessions for personal study, according to a trainee’s entitlement. Leave should be granted for attendance at the mandatory Basic Surgical Skills course (see p. 10) and for other highly recommended courses such as the Advanced Trauma Life Support course (ATLS), as is appropriate.

Living accommodation
There must be suitable living-in accommodation for on-call purposes and adequate food available at all hours.

Facilities for audit
Secretarial services and computer facilities for discharge summaries, data collection and audit must be provided.
**Teaching programme**

Each BST programme should have regular sessions for postgraduate teaching with departmental and interdepartmental meetings, seminars, audit sessions and tutorials. All trainees should be registered with a postgraduate education programme and hours of attendance recorded. Trainees should also be encouraged to take part in teaching medical students, nurses and paramedical personnel.

**Logbooks**

All trainees must maintain a logbook throughout their mandatory period of training in which to record their clinical, surgical and educational experience. The logbook should contain details of each post undertaken, along with dates, as well as the clinical and operative experience gained during that period. Each operation logged should also provide information as to whether the trainee assisted at, was assisted during, or actually performed unsupervised, each procedure. Furthermore, it should be noted whether the procedure was an elective or emergency one, and whether there were any complications or death resulting. The contents of the logbook must be authenticated at regular intervals by the trainee’s consultant and his or her overall training supervisor or surgical tutor.

The logbook should also contain details of any educational courses attended, along with the dates, as well as the details of the mandatory Basic Surgical Skills course attended, with the certificate of completion and the trainee’s personalized certificated number. Approved logbooks are available from the respective colleges. The logbook should be taken to the viva section of the examination, where it may be scrutinized by the presiding examiner.

**Counselling**

**Surgical tutor**

The College surgical tutor and the regional postgraduate dean are both available for career advice and guidance. The regional BST Committee is responsible for monitoring the progress of each trainee, and it is recommended that the trainee be interviewed at regular intervals and a confidential report prepared for discussion with, and countersigning by, the trainee. Comments by the trainee regarding the training received should be sent to the surgical tutor so that action may be taken to remedy any deficiency.

**Appeals**

If a trainee considers that:
Preparation and revision for the MRCS

- He or she has been treated unfairly
- The clinical experience has not met expectations
- Routine service work has been disproportionate to the educational value
- A confidential report seems to be unfair,

then he or she should talk to the surgical tutor and the hospital clinical tutor. If the outcome of such discussion is not deemed satisfactory, the trainee has the right to seek help from the following successively:

- The College regional adviser and the regional postgraduate dean
- The chairman of the College Training Board
- The President of the appropriate Royal College of Surgeons.

Basic Surgical Skills: a mandatory training course

All trainees must satisfactorily complete the Intercollegiate Basic Surgical Skills course before receiving their Certificate of Completion of Basic Surgical Training (CCBST). This is a 3-day course that consists of three modules:

1. Open surgery (1 1/2 days)
2. Orthopaedics and trauma (1 day)
3. Minimal access surgery (1 day).

It is a highly practical course with ‘hands-on’ experience and a high tutor-to-participant ratio. The presentation is uniform throughout the UK and overseas, and the standard is maintained by means of regular assessments by all the four Surgical Royal Colleges. The content is also standardized by means of the course materials, which include the course video and both participant and faculty handbooks. Each exercise in the course is demonstrated by means of the course video, and then the participants perform that exercise under the guidance and tutorship of the faculty members. There is a form of continuous assessment which is appraised by the appropriate faculty member. At the end of the course all participants who have satisfactorily completed all the modules will receive a signed certificate containing their own specific number, which is maintained on a database at the appropriate College, and the number should be entered into the logbook. This Intercollegiate course is recognized by all four Colleges, regardless of where it is actually undertaken.
Trainees are also advised to attend other educational courses such as the Advanced Trauma Life Support course (ATLS) and the Care of the Critically Ill Surgical Patient (CCrISP), both of which are highly recommended but not mandatory. Other courses as and when developed, such as Distance Learning courses, are also recommended.

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