

Curriculum – Assessment Blueprinting Surgical Specialties (pending GMC approval)

Background

- This document describes the general layout of the curriculum for surgical training and how trainees are assessed against its content.

The Curriculum

- This contains the requirements which trainees must achieve in order to be awarded a Certificate of Completion of Training (CCT) or CESR (CP) in one of the ten surgical specialties..
- It is broadly composed of a single, common Core Surgical Training component (covering the first two indicative years of training) and one of ten Specialty Training components (covering the years from ST3 to CCT).
- Between them, these components describe surgical training from CT1/ST1 through to CCT.
- Some specialties (neurosurgery and, in pilot form, cardiothoracic surgery and oral and maxillofacial surgery) employ run through training from ST1 to CCT, which means there is no intermediate selection hurdle. All other specialties are “de-coupled” and have a separate competitive selection process at the end of Core training and before Specialty training.
- In both types of training, trainees must pass the Membership of the Royal Colleges of Surgeons (MRCS) examination to enter ST3.
- Both types of arrangement, however, should be viewed as a continuum of training from ST1 to CCT.

Contents of the Curriculum

- The curriculum contains a comprehensive syllabus, a teaching and learning framework and an assessment system
- The Core Surgical Training component of the curriculum details the knowledge, clinical skills, technical skills and professional behaviour that trainees are expected to achieve in order to successfully complete Core Surgical Training.
- The Specialty Training components of the curriculum detail the knowledge, the clinical skills and judgement and the technical skills that trainees are expected to achieve prior to the award of a CCT in one of the ten surgical specialties.
- The Specialty training component also includes details of the Professional Behaviour and Leadership Skills expected by CCT.
- The Specialty Training components of the curriculum describe the levels that trainees are expected to reach by the key intermediate waypoints of ST4 and ST6 as well as what is expected by CCT.

Assessment System

- The assessment system uses a combination of workplace based formative assessment, workplace based summative assessment and external summative assessment.

- The role of the workplace based formative assessments - Case Based Discussion (CBD), Clinical Evaluation Exercise (CEX), Direct Observation of Procedural Skills (DOPS), Procedure Based Assessment (PBA), Assessment of Audit (AoA), Observation of Teaching (OoT), Multisource Feedback (MSF) - is to help drive the learning cycle by informing the trainee of the progress being made and identifying areas for further development.
- The workplace based summative assessments (AES report, ARCP) assess trainees' progress against the key waypoints of the curriculum in order to ensure that satisfactory and timely progress is being made and to determine whether any extension to training is required.
- The external summative assessments (MRCS and FRCS) are formal examinations which sample the full breadth of the relevant components of the curriculum.
- Between them, these assessments test trainees' knowledge and abilities across the breadth of the curriculum.

Workplace Based Assessment

- The formative workplace based assessments are largely driven by trainees, who should choose suitable cases to be assessed on following guidance agreed with their AES at their Learning Agreement and from the curriculum.
- The CBD tests clinical judgement, decision making, aspects of professional behaviour, the application of knowledge and higher order thinking. They can also test the ethical and legal background to practice.
- The CEX assesses clinical skills, judgement, professionalism, communication, organisation and overall clinical care.
- The PBA tests technical skills in operative procedures and some aspects of professional skills.
- The DOPS tests technical and professional skills in basic practical procedures. It can also be used to test skills in parts of more complex procedures.
- The MSF is a key method of assessing the full range of professional and leadership skills in a multi-disciplinary environment.
- The AoA and OoT are designed to give feedback to trainees on these aspects of practice.
- Knowledge in its pure form is required for all WBAs. Considering Bloom's Taxonomy, WBA involves a degree of pure knowledge but they are all designed to test higher order thinking at the level of comprehension and above. This allows clinical correlations, treatment options, system performance and service improvement all to be tested.

Formal Examinations

MRCS

- The MRCS is required by all surgical trainees. ENT is a special case. Trainees can either sit MRCS Part A followed by the DOHNS exam, leading to the award of MRCS (ENT) or they can sit MRCS Part A and Part B followed by the DOHNS exam. Both routes are equivalent for entry into Specialty Training.
- The MRCS covers the Core Surgery component of the curriculum, which is common to all specialties within surgery.

- MRCS is generally sat during Core Training, but can be taken by any medical practitioner with a primary medical qualification acceptable to the GMC for Full or Temporary Registration.
- Success in MRCS is a requirement to enter ST3 in all surgical specialties
- Details of the MRCS examination can be found on the Intercollegiate MRCS Exams website (link?).
- The examination consists of two Parts
- Part A is a computer marked multiple choice question examination consisting of 2 papers
- Part B is an Objective Structured Clinical Examination (OSCE)
- Both sections test knowledge and the application of that knowledge in clinical situations covering the 10 domains of the curriculum
- The OSCE examination has two marks (for knowledge and for clinical and technical skills), both of which need to be passed in order to pass the examination. There is no transfer of marks between these two broad content areas.
- Detailed methods of standard setting and psychometric analysis underpin the quality assurance of Parts A and B. For part B a standard error of the measurement (SEM) of 0.84 is applied to both sections, giving the GMC and public reassurance around the borderline candidates.

FRCS

- The FRCS is a specialty specific summative assessment that can be applied for after successful completion of the ARCP (outcome 1) in ST6 (ST5 for OMFS and Urology).
- Success in gaining the FRCS is a requirement for CCT for all those holding National Training Numbers or equivalent in the UK and Ireland.
- Details of the examination and application processes, including for those outside training programmes, can be found on the JCIE web-site - [here](#)
- The examination consists of two sections.
- Section 1 is computer marked, using single best answer (SBA) and extended matching item (EMI) multiple choice questions.
- The format of Section 2 varies between specialties but consists of clinicals with patients (except Urology) and oral scenario based questions.
- Both Sections aim to test knowledge, interpretation of data, analysis and synthesis in complex and uncertain situations – to replicate day to day surgical practice.
- Detailed methods of standard setting and psychometric analysis underpin the quality assurance of Sections 1 and 2.
- The standard of the examination is that of a day one consultant in the generality of their specialty.

Blueprinting Assessment to the Curriculum

- All aspects of the curriculum are assessed using one or more of the described components of the assessment system.
- Some curriculum content can be assessed in more than one component but the emphasis will differ between assessments so that testing is not excessive in any one area.
- The following two tables show:

- how assessments map to curriculum content
- how assessments map to Good Medical Practice
- the weighting applied within each assessment:
 - ++ indicates that the assessment method covers that component, or part of that component, in full
 - + indicates that the assessment method partly covers that component, or part of that component
 - indicates that the assessment method does not cover any part of that that component
- CBD, CEX, DOPS, MSF, AES report and ARCP all assess trainees against the level expected for their stage in training
- PBA assesses trainees against the standard required for CCT
- MRCS
 - The MRCS examination samples across the breadth of the Core Surgery component of the curriculum including knowledge, clinical skills and judgment, and professional skills and leadership
 - The questions for Section 1 and Section 2 are coded and blueprinted against the detailed content of the syllabus
 - Questions are selected for each diet of the examination to sample across the syllabus
- FRCS
 - The FRCS examination samples across the breadth of the specialty curriculum including knowledge, clinical skills and judgment, and professional skills and leadership
 - The questions for Section 1 and Section 2 are coded and blueprinted against the detailed content of the syllabus at the level of Key Topics (ISCP).
 - Questions are selected for each diet of the examination to sample across the syllabus.

Curriculum Content

	Knowledge	Clinical Skill and Judgement	Technical Skill	Professional Skills and Leadership
CBD	++	++	-	+
CEX	+	++	-	+
DOPS	+	+	++	+
PBA	+	+	++	+
MSF	+	+	+	++
AoA	+	-	-	++
OoT	+	-	-	++
AES Report	++	++	++	++
ARCP	++	++	++	++
MRCS	++	++	+	++
FRCS	++	++	-	+

Good Medical Practice

	Knowledge, skills and performance	Safety and Quality	Communication, partnership and teamwork	Maintaining Trust
CBD	++	+	+	+
CEX	++	+	+	++
DOPS	++	+	-	+
PBA	++	+	-	+
MSF	++	++	++	++
AoA	+	++	+	-
OoT	+	-	++	-
AES Report	++	++	++	++
ARCP	++	++	++	++
MRCS	++	+	++	++
FRCS	++	++	++	+

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