Core Surgery Curriculum Highlights for IST Pilot

Curriculum structure

In order to satisfy the many diverse requirements and stakeholders laid out above in a single document, this curriculum has adopted the flexibility of a truly modular structure. At its heart are the 4 educational principles, assessment tools and supervisory framework of the current intercollegiate surgical curriculum which are here applied to the specific requirements of core surgical training. In addition to the professional behaviour and leadership skills module common to all ISCP curricula, there are three types of module:

1. **Common content**
   Those items of knowledge and clinical and technical skills which represent the generic competence required of all future surgeons are represented in a module to be undertaken by all CT1 & ST1 surgical trainees. The MRCS examination aligns to this module which serves to define the "CT1 competencies" required by the OMFS ST3 person specification. It is here that those competencies transferable to other training programmes are to be found.

2. **Core specialty**
   As they rotate from specialty to specialty in years 1 & 2, trainees will take on the relevant core specialty modules, which will specify the knowledge and skills that all surgical trainees in such a placement should acquire, regardless of their surgical specialty of choice. These modules align with the quality indicators suggested by the SACs for core training posts in their specialties. Most trainees will wish to complete at least three of these modules, one of which will be in the same specialty as their ST3 preparation module.

3. **ST3 preparation**
   By the start of their CT2 year, trainees in uncoupled programmes should have made a choice regarding the specialty in which they wish the rest of their career to develop. Run-through trainees will already be bound to a specialty. Starting in their second year, trainees will work towards completion of the ST3 preparation module in their chosen specialty. These modules align with the entry expectations of the higher surgical training programmes and with the essential criteria of the person specifications of the ST3 national recruitment panels.

The minimum requirements for this curriculum are completion of the common content module, the core specialty module for each specialty through which the trainees rotate (which may be as few as one) and one ST3 preparation module (which may be in any specialty of the trainee's choice).

Roles

The role of the AES is to:

- Have overall educational and supervisory responsibility for the trainee in a given placement. Usually a core trainee will have the same AES as they rotate between placements in the same trust to provide a degree of continuity
- Ensure that an induction to the unit (where appropriate) has been carried out
- Ensure that the trainee is familiar with the curriculum and assessment system relevant to the level/stage of training and undertakes it according to requirements

- Ensure that the trainee has appropriate day-to-day supervision appropriate to their stage of training
- Act as a mentor to the trainee and help with both professional and personal development
- Agree a learning agreement; setting, agreeing, recording and monitoring the content and educational objectives of each placement using the appropriate tool within ISCP
- Discuss the trainee's progress with each trainer with whom a trainee spends a period of training and involve them in the formal report to the annual review process
- Undertake regular formative/supportive appraisals with the trainee (typically one at the beginning, middle and end of a placement) and ensure that both parties agree to the outcome of these sessions and keep a record within ISCP
- Regularly inspect the trainee's ISCP portfolio and ensure that the trainee is making the necessary clinical and educational progress
- Ensure patient safety in relation to trainee performance by the early recognition and management of those doctors in distress or difficulty
- Inform trainees of their progress and encourage trainees to discuss any deficiencies in the training programme, ensuring that records of such discussions are kept
- Keep the PD informed of any significant problems that may affect the trainee's training
- Provide an end of placement AES report for the ARCP

The role of the Clinical supervisor is to:
Clinical supervision is vital to ensuring patient safety and the high quality service of trainees. CSs are responsible for delivering teaching and training under the delegated authority of the AES. They:

- Carry out assessments as requested by the AES or the trainee. This will include delivering feedback to the trainee and validating assessments
- Ensure patient safety in relation to trainee performance
- Liaise closely with other colleagues, including the AES, regarding the progress and performance of the trainee with whom they are working during the placement
- Keep the AES informed of any significant problems that may affect the trainee's training
- Provide an end of placement report which will form part of the AES report which, in turn, informs the ARCP process

While CSs require training and must undertake continuous personal development as educators, the requirements for GMC recognition and approval are less stringent than for a named AES.

The role of the Trainee is to:
The trainee is required to take responsibility for his/her learning and to be proactive in initiating appointments to plan, undertake and receive feedback on learning opportunities. The trainee is responsible for ensuring that:

- They fulfil the requirements made of them by Good Medical Practice10 and Good Surgical Practice
- They register as a trainee with the JCST and sign up to both eLogbook and ISCP
- They ensure that their eLogbook is linked to their ISCP portfolio and undertake to become familiar with the full functionality of both of these web based training tools
- A learning agreement is put in place with the AES
- Opportunities to discuss progress are identified

- Assessments are undertaken, according to the requirements of the curriculum
- Operative cases are recorded in the eLogbook contemporaneously and that other evidence is recorded in the ISCP portfolio in good time
- They keep the competencies they acquired during the Foundation programme up to date

Learning partnership

Establishing a learning partnership creates the professional relationship between trainer (AES, CS) and trainee (learner) that is essential to the success of the teaching and learning programme. The learning partnership is enhanced when:

- The trainer understands:
  - Educational principles, values and practices and has been appropriately trained
  - The role of professional behaviour, judgement, leadership and team-working in the trainee's learning process
  - The specialty component of the curriculum
  - Assessment theory and methods
- The learner:
  - Understands how to learn in the clinical practice setting, recognising that everything they see and do is educational
  - Recognises that although observation has a key role to play in learning, action (doing) is essential;
  - Is able to translate theoretical knowledge into surgical practice and link surgical practice with the relevant theoretical context
  - Uses reflection to improve and develop practice
- There is on-going dialogue in the clinical setting between teacher and the learner

Workplace-based Assessments (WBAs)

The primary purpose of WBA is to provide short loop feedback between trainers and their trainees – a formative assessment to support learning. They are designed to be mainly trainee driven but may be triggered or guided by the trainer. The number of types and intensity of each type of WBA in any one assessment cycle will be initially determined by the learning agreement fashioned at the beginning of a training placement and regularly reviewed. The intensity may be altered to reflect progression and trainee need. For example, a trainee in difficulty would undertake more frequent assessments above an agreed baseline for all trainees. In that sense WBAs meet the criterion of being adaptive.

WBAs are designed to:

- ***Provide feedback to trainers and trainees as part of the learning cycle***
  The most important use of the workplace-based assessments is in providing trainees with feedback that informs and develops their practice (formative). Each assessment is completed only for the purpose of providing meaningful feedback on one encounter. The assessments should be viewed as part of a process throughout training, enabling trainees to build on assessor feedback and chart their own progress. Trainees should complete more than the minimum number identified.

- ***Provide formative guidance on practice***
  Surgical trainees can use different methods to assess themselves against important criteria (especially that of clinical reasoning and decision-making) as they learn and

perform practical tasks. The methods also encourage dialogue between the trainee and AES and other clinical supervisors.

- ***Encompass the assessment of skills, knowledge, behaviour and attitudes during day-to-day surgical practice***

  WBA is usually trainee led; the trainee chooses the timing, the case and assessor under the guidance of the AES via the learning agreement. Although is the trainee's responsibility to ensure completion of the required number of the agreed type of assessments by the end of each placement, it is recognised that some training environments can make this an excessive challenge. Trainees should contact their training programme director or local School of Surgery for support in such circumstances. Supervising trainers may on occasion initiate the capture of a valuable learning experience in a WBA.

- ***Provide a reference point on which current levels of competence can be compared with those at the end of a particular stage of training***

  The primary aim is for trainees to use assessments throughout their training programmes to demonstrate their learning and development. At the start of a level it would be normal for trainees to have some assessments which are less than satisfactory because their performance is not yet at the standard for the completion of that level. In cases where assessments are less than satisfactory, trainees should repeat assessments as often as required to show progress. A consistent level of performance in a WBA, especially if repeated on multiple occasions and by multiple assessors, provides good evidence of attainment by the trainee of that level of competence.

- ***Inform the (summative) assessment of the AES at the completion of each placement***

  Although the principal role of each individual WBA is formative, the summary evidence provided by a large number of them can be used to contribute towards the summative assessment of a trainee's performance over a period of time, and of levels of competence attained. WBAs will be used to inform the AES report submitted to the annual review process and will contribute to the decision made as to how well the trainee is progressing.

- ***Contribute towards a body of evidence held in the web-based learning portfolio and made available for the Annual Review of Competence Progression (ARCP) panel and planned educational reviews***

  At the end of a period of training, the trainee's whole portfolio will be reviewed. The accumulation of formative assessments will be one of a range of indicators that inform the decision as to satisfactory completion of training at the annual review of competence progression.

Practical use of WBAs

In order for WBAs to fulfil the role expected of them and act as a body of evidence on which high stakes decisions about progression can be based they need to be completed with care and diligence and not become a "tick box" exercise. While their completion and presentation to the ARCP panel remains the responsibility of the trainee, trainers and supervisors have a duty to make themselves available to complete WBAs and, particularly at the beginning of surgical training, to encourage good practice in their collection.

Broadly speaking, there are two methods of completing WBAs; real time completion and completion by ticketed request. Most clinical environments in 2017 have a desktop computer

on every corner and most trainees and trainers have access to a web enabled mobile device and this makes real time completion of WBAs immediately following training interactions in theatre and clinic and on the ward a real possibility. This method has the advantage of capturing feedback and assessment of performance as accurately as possible but trainee reflection on the events is less easy to capture. Where necessary a matching journal entry can be recorded.

Ticketed requests are often preferred in highly time pressured situations where even the few minutes needed to complete a WBA form is not available. Textual comments are often completed by the trainee and reviewed by the trainer before the WBA is modified if necessary and either validated or rejected. This method allows greater time for trainee reflection on their performance. However, any more than a brief delay between event and WBA completion by the trainer risks a time dependent delay on fine recall of both performance and ideas for development. There is also a probity risk involved in the trainee describing their own performance, unless checking of the text is carefully conducted by the trainer prior to validation. In core training it is recommended that trainees and trainers become adept at both methods and use them as circumstance dictates.

The workplace based assessment methods used are:

- CBD (Case Based Discussion)
- CEX (Clinical Evaluation Exercise)
- PBA (Procedure-based Assessment)
- DOPS (Direct Observation of Procedural Skills in Surgery)
- Multi Source Feedback (360° Assessment Tool)
- Assessment of Audit

Mandatory WBAs

This curriculum picks out some fundamental competencies within the common content module which are required to be evidenced using a specified WBA. These are indicated in the syllabus but compiled here for convenience.

Competency	**Form to use**	**Number required**	**Level of performance required**
Take a tailored history and perform a relevant examination in an outpatient clinic	CEX (Clinic; history & exam)	3	2
Take a tailored history and perform a relevant examination for an acutely unwell patient	CEX (A&E/ward; history & exam)	3	2
Effective hand washing, gloving and gowning	DOPS (Surgeon preparation)	3	4
Accurate, effective and safe administration of local anaesthetic	DOPS (Administration of local anaesthetic)	3	3
Preparation and maintenance of an aseptic field	DOPS (Preparation of aseptic field)	3	3
Incision of skin and subcutaneous tissue	DOPS (Incision)	3	3
Closure of skin and subcutaneous tissue	DOPS (Closure)	3	3
Completion of WHO check list (time out and sign out)	DOPS (WHO checklist completion)	3	3

Mandatory DOPS

DOPS type: Surgeon preparation
Guidance notes:

1. Bare below the elbow
2. Use of nail brush
3. Effective antibacterial washing of hands and forearms
4. Use of sterile towels without contamination of hands
5. Donning of gown and gloves assuring surface sterility
6. Professional engagement with gown tying assistant

DOPS type: Administration of local anaesthetic
Guidance notes:

1. Reasoned and appropriate choice of agent, concentration and dose
2. Appropriate choice of block
3. Accurate needle placement
4. Aspiration prior to injection

DOPS type: Preparation of aseptic field
Guidance notes:

1. Checks for absence of relevant allergies
2. Selects appropriate solution
3. Protects mucosa/cornea from exposure to alcohol
4. Thorough, adequate & systematic skin coverage
5. Appropriate choice, placement and fixation of drapes
6. Maintains own sterility throughout

DOPS type: Incision
Guidance notes:

1. Incision planned and marked with appropriate consideration of cosmesis, vascularity and access
2. Checks that team is ready
3. Perpendicular linear incision of dermis with scalpel
4. Continuation through subcutaneous layers using scissors and/or diathermy as appropriate
5. Control of superficial bleeding with diathermy and/or ligation
6. Maintenance of aseptic field throughout

DOPS type: Closure
Guidance notes:

1. Appropriate choice of needle type, suture material and suture method
2. Careful placement of needle with minimal trauma to tissue
3. Appropriate bite and spacing
4. Secure know tying
5. End result satisfactory; layer apposed accurately and without tension

DOPS type: WHO checklist completion
Guidance notes:

1. Ensures sign in completed in anaesthetic room
2. Initiates and leads time out
3. Insists on engagement from whole team if necessary
4. Initiates and leads sign out
5. Takes responsibility for completion of each component

6. Documents process appropriately

Description of the levels expected for clinical and technical skills
The practical application of knowledge is evidenced through clinical and technical skills. Each topic within a stage has a competence level ascribed to it in the areas of clinical and technical skills ranging from 1 to 4:
1. Has observed. At this level the trainee:

- Has adequate knowledge of the steps through direct observation
- Demonstrates that he/she can handle instruments relevant to the procedure appropriately and safely
- Can perform some parts of the procedure with reasonable fluency

2. Can do with assistance. At this level the trainee:

- Knows all the steps - and the reasons that lie behind the methodology
- Can carry out a straightforward procedure fluently from start to finish
- Knows and demonstrates when to call for assistance/advice from the supervisor (knows personal limitations)

3. Can do whole but may need assistance. At this level the trainee:

- Can adapt to well- known variations in the procedure encountered, without direct input from the trainer
- Recognises and makes a correct assessment of common problems that are encountered
- Is able to deal with most of the common problems
- Knows and demonstrates when he/she needs help
- Requires advice rather than help that requires the trainer to scrub

4. Competent to do without assistance, including complications. At this level the trainee:

- With regard to the common clinical situations in the specialty, can deal with straightforward and difficult cases to a satisfactory level and without the requirement for external input
- Is at the level at which one would expect a UK consultant surgeon to function
- Is capable of supervising trainees

Levels of supervision

Trainees are required to keep a surgical logbook, using eLogbook, to record their acquisition of procedural experience. Trainees should ensure that they record all cases, those in undertaken in an operating theatre as well as those performed in out-patient clinics, wards, critical care units, emergency departments and procedural suites. The following descriptors of the level of supervision received should be used:
Assisting (A):

- The trainer completes the procedure from start to finish
- The trainee is scrubbed throughout but their role is purely to assist the trainer, who performs all of the key components of the procedure
- The trainee should be sufficiently engaged to learn about the procedure
- Supervised - trainer scrubbed (**S-TS**):
- The trainee performs components of the procedure (as defined in the relevant PBA) with the trainer scrubbed. In core surgical training, completing the access component or closing the wound under supervision represent a useful training episode and should be distinguished from assisting.

- The trainee should record the component of the procedure for which they were the principle operator in the free text element of the eLogbook entry

Supervised - trainer unscrubbed (**S-TU**):

- The trainee completes the procedure from start to finish
- The trainer is unscrubbed and is either in the operating theatre throughout or in the operating theatre suite and regularly enters the operating theatre during the procedure, being present for >70% of the duration of the procedure

Performed (P):

- The trainee completes the procedure from start to finish
- The trainer is either present for <70% of the duration of the procedure or is not in the operating theatre. The supervising consultant may be scrubbed in the adjacent operating theatre or elsewhere in the hospital
- This level of supervision should be unusual in core surgical training

Training more junior trainee (T):

- The trainee uses the case to train a junior trainee
- This level of supervision should be unusual in core surgical training

Observed (O):

- The trainee is unscrubbed and simply observes the procedure

Modules

The common content module is to be completed by all core surgical trainees, for most, in their first year of training. The core specialty modules in eleven specialties (including intensive care medicine) should be included in the learning agreement of all trainees assigned to posts in those specialties with at least 3 to be completed by the majority of trainees over the course of their core surgical training programme. There are 9 ST3 preparation modules (excluding neurosurgery in which a route from CST to ST3 does not exist). Each trainee will complete only one of these in their chosen specialty, largely during their second year of training. The professional behaviour and leadership skills module, required of all surgical trainees at all stages in training, is scheduled for major revision in light of the GMC/AoMRC work “developing a framework for generic professional capabilities”. Completion of this curriculum has necessitated retaining the existing professional/leadership skills module but it should be noted that on completion of the GMC/AoMRC work cited above, an early revision is likely to be required.

Common Content Modules

- Basic Science
- The clinical method in surgical practice
- Peri-operative care
- Basic surgical skills
- Critical care
- Surgical care of the paediatric patient
- Management of the dying patient
- Health promotion
- Core Specialty Modules
- ST3 Preparation Modules