JCST Joint Committee on Surgical Training

ISCP INTERCOLLEGIATE SURGICAL CURRICULUM PROGRAMME

CoPSS
Confederation of Postgraduate Schools of Surgery

Guidance for certification requirements on research

Changes to the surgical training curricula took effect in August 2021, in response to the GMC's new standards for postgraduate curricula Excellence by Design and the introduction of the Generic Professional Capabilities (GPC) framework.

The descriptors associated with domain 9 of the GPC framework (see Appendix 1) set out the capabilities trainees need to demonstrate research and scholarship. The descriptors are incorporated into the certification requirements of each specialty curriculum under 4 broad capabilities encompassing evidence-based practice, critical appraisal, research principles, governance and ethics (see section 5.4 of the curricula and Appendix 2 below).

This document provides examples that can be used to demonstrate domain 9 capabilities but does not represent an exhaustive list; other forms of evidence will be appropriate for providing evidence. Therefore, this guidance is not a rigid framework of tasks that must be fulfilled but is rather intended to illustrate the kind of evidence trainees can use to fulfil curriculum standards. Trainees are encouraged to show academic scholarship at a level commensurate with a day-one consultant, and draw evidence from multiple domains throughout their training to evidence these capabilities.

Please note the Vascular Surgery curriculum has specific requirements in addition to the generic capabilities and descriptors listed below.

GPC 9 Capabilities	GPC 9 Descriptors	Examples of evidence
1. The demonstration of evidence-based practice	• keep up to date with current research and best practice in the individual's specific area of practice, through appropriate continuing professional development activities and their own independent study and reflection	Regular participation in Journal Club with reflective notes Reflective notes on articles from specialty journals A (systematic) literature review / meta-analysis / Cochrane review (aim to publish and present findings) Attendance at national or international specialty meetings, with reflective notes Paper published in peer reviewed journal where your contribution is substantive Peer reviewed papers / case report / case series published in an indexed journal

GPC 9 Capabilities	GPC 9 Descriptors	Examples of evidence
1. The demonstration of evidence-based practice [Continued]	• practise in line with the latest evidence	CBD of critical and indicative cases with emphasis on latest research Self-audit around an evidence-based practice guideline Critical appraisal of own work (via CBD) Departmental audit / QI project (closed loop) to bring practice up to date AoA and presentation of an audit or quality improvement project CEX / CEXC in ward, clinic or MDT clinic with emphasis on research
	• understand the role of evidence in clinical practice and demonstrate shared decision making with patients	Production of an evidence-based patient information leaflet or decision-making aid
	• locate and use clinical guidelines appropriately	Reflective essay on National Registry outcomes (eg NJR) Review of local practice against national standards / NICE guidelines
	• understand and promote innovation in healthcare	CBD focused on new technologies in surgery Participation in innovation conferences (e.g. Future of Surgery) with reflective notes
	• communicate and interpret research evidence in a meaningful way for patients to support them making informed decisions about treatment and management	Reflective CBD on a challenging case with bibliography of evidence to support the treatment choices

GPC 9 Capabilities	GPC 9 Descriptors	Examples of evidence
2. Understanding how to critically appraise literature and conduct literature searches and reviews	• conduct literature searches and reviews to inform their professional practise	A (systematic) literature review / meta-analysis / Cochrane review (aim to publish and present findings) Present papers at departmental or regional journal clubs, including a literature review around the topic Present QI / audit topics at departmental / regional meetings, including an AoA Successful defence of a Higher Research Degree (MSc by Research, MD, PhD) Involvement in journal peer review Certification of attendance at journal club, with reflective notes Reflective essay on a journal article Literature search / critical appraisal course
	• critically appraise academic literature	
	• draw from public health epidemiology and other data sources and large scale reviews	CBD around public health / preventative medicine aspects of a key condition Reflective notes on an article from a journal dealing with big data / epidemiology / preventative medicine / health promotion relevant to the specialty A (systematic) literature review / meta-analysis / Cochrane review (aim to publish and present findings)

GPC 9 Capabilities	GPC 9 Descriptors	Examples of evidence
3. Understanding and applying basic research principles	• demonstrate appropriate knowledge of research methods, including qualitative and quantitative approaches in scientific enquiry	Research methodology course Good Clinical Practice course (current certificate) Research studies presented via podium or poster at Regional, National, and International meetings and published in peer-reviewed journals Scientific journal publication (peer reviewed) Submissions at the Specialty Association Annual Meetings, National Research Meeting, or International meetings Involvement in journal peer review Successful defence of a Higher Research Degree (MSc by Research, MD, PhD) Authorship of papers where contribution was substantive Membership of a research collaborative with demonstrable published outputs, where contribution was substantive. Contribution to a NIHR Research Study A (systematic) literature review / meta-analysis / Cochrane review (aim to publish and present findings)
	• understand and apply: ❖ informatics ❖ genomics ❖ stratified risk and personalised medicine	Audit or quality improvement project that uses informatics to improve efficiency of clinical practice or research Case presentations demonstrating understanding of types of cases appropriate for genomics assessment including patient history, investigations and risks CBD of challenging cases where treatment was customised to the patient

GPC 9 Capabilities	GPC 9 Descriptors	Examples of evidence
4. Understanding the basic principles of research governance and how to apply relevant ethical guidelines to research activities.	• demonstrate appropriate knowledge of research principles and concepts and the translation of research into practice, including: ❖ recruitment into trials and research programmes ❖ ethical implications of research governance	Good Clinical Practice course (current certificate) Research Methodologies Course Successful defence of a Higher Research Degree (MSc by Research, MD, PhD) Attendance / observation at a Research Ethics Committee (REC) Research Ethics Committee approval for a study Participation in a clinical trial, recruiting participants in the course of clinical work Acting as (Associate) Principal Investigator for a trial Recruit patients into a multicentre clinical trial or audit (especially NIHR trails, national registries, and audits).

Evidence gained in workplace training

Multiple Consultant Report (MCR)

The MCR is the cornerstone of assessment in the 2021 curriculum. GPC domain 9 in the MCR (see Appendix 3) can indicate that a trainee has demonstrated appropriate capability in research and scholarship for their current phase of training, or highlight areas for development. Phase 3 is commensurate with certification. In addition to the ratings and comments by Clinical Supervisors, the Assigned Educational Supervisor can add comments specifically about GPCs 6-9.

The trainee Self-Assessment can similarly provide evidence against domain 9. For added clarity, trainees should aim to state, where possible, what their contribution has been and explain how the elements of their portfolio satisfy the descriptors.

Case-Based Discussion (CBD)

The CBD assesses the performance of trainees in their management of a patient case to provide an indication of competence in areas such as clinical judgement, decision-making and application of medical knowledge in relation to patient care.

The CBD can show application of research and scholarship in the clinical workplace at relevant points in the management and treatment of patients.

Clinical Evaluation Exercise (CEX/C)

The CEX or CEX(C) assesses a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as communication, history taking, examination and clinical reasoning.

The CEX can show application of research and scholarship in the clinical workplace while interacting with patients.

Assessment of Audit (AoA)

The AoA reviews a trainee's competence in completing an audit or quality improvement project. It can be based on documentation or a presentation of a project. Trainees are assessed against the standard for the completion of their phase of training

Other evidence

The Other Evidence section of trainee portfolios can include uploaded evidence of projects, publications, certificates for:

- Audit
- Courses or e-learning related to Research and Scholarship
- External Conference/meeting
- Presentations
- Projects (not leading to publication)
- Publications (in scientific journals)
- Miscellaneous (for other items not included in the above categories)

Appendix 1: The GMC's GPC framework, domain 9

Domain 9: Capabilities in research and scholarship

Doctors in training must demonstrate that they can:

- keep up to date with current research and best practice in the individual's specific area of practice, through appropriate continuing professional development activities and their own independent study and reflection
- practise in line with the latest evidence
- conduct literature searches and reviews to inform their professional practise
- critically appraise academic literature
- understand the role of evidence in clinical practice and demonstrate shared decision making with patients
- locate and use clinical guidelines appropriately
- demonstrate appropriate knowledge of research methods, including qualitative and quantitative approaches in scientific enquiry
- demonstrate appropriate knowledge of research principles and concepts and the translation of research into practice, including:
  - recruitment into trials and research programmes
  - ethical implications of research governance
- understand and promote innovation in healthcare
- understand and apply:
  - informatics
  - genomics
  - stratified risk and personalised medicine
- draw from public health epidemiology and other data sources and large scale reviews
- communicate and interpret research evidence in a meaningful way for patients to support them making informed decisions about treatment and management.

Appendix 2: The generic certification requirements of specialty training

a) Generic requirements shared between surgical specialities

Research - Trainees must provide evidence of having met the relevant requirements for research and scholarship. For UK trainees, this can be found in the GMC's GPC framework. Broadly, this includes capabilities in 4 areas: 1. The demonstration of evidence-based practice. 2. Understanding how to critically appraise literature and conduct literature searches and reviews. 3. Understanding and applying basic research principles. 4. Understanding the basic principles of research governance and how to apply relevant ethical guidelines to research activities.	
Quality Improvement - evidence of an understanding of, and participation in, audit or service improvement as defined in the curriculum	Trainees must complete or supervise an indicative number of three audit or quality improvement projects during specialty training. In one or more of these, the cycle should be completed.
Medical Education and training - evidence of an understanding of, and participation in, medical education and training as defined in the curriculum	Trainees must provide evidence of being trained in the training of others and present written structured feedback on their teaching uploaded to the ISCP portfolio.
Management and leadership - evidence of an understanding of management structures and challenges of the health service in the training jurisdiction	Trainees must provide evidence of training in health service management and leadership and having taken part in a management related activity e.g. rota administration, trainee representative, membership of working party etc. or of having shadowed a management role within the hospital.

Appendix 3: Domain 9 of the MCR and Self-Assessment on ISCP