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Editorial

Academic requirements for Certificate of Completion of Training in surgical training: Consensus recommendations from the Association of Surgeons in Training/National Research Collaborative Consensus Group

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A B S T R A C T

Background: Surgical trainees are expected to demonstrate academic achievement in order to obtain their certificate of completion of training (CCT). These standards are set by the Joint Committee on Surgical Training (JCST) and specialty advisory committees (SAC). The standards are not equivalent across all surgical specialties and recognise different achievements as evidence. They do not recognise changes in models of research and focus on outcomes rather than process. The Association of Surgeons in Training (ASiT) and National Research Collaborative (NRC) set out to develop progressive, consistent and flexible evidence set for academic requirements at CCT.

Methods: A modified-Delphi approach was used. An expert group consisting of representatives from the ASiT and the NRC undertook iterative review of a document proposing changes to requirements. This was circulated amongst wider stakeholders. After ten iterations, an open meeting was held to discuss these proposals. Voting on statements was performed using a 5-point Likert Scale. Each statement was voted on twice, with ≥80% of votes in agreement meaning the statement was approved. The results of this vote were used to propose core and optional academic requirements for CCT.

Results: Online discussion concluded after ten rounds. At the consensus meeting, statements were voted on by 25 delegates from across surgical specialties and training-grades. The group strongly favoured acquisition of 'Good Clinical Practice' training and research methodology training as CCT requirements. The group agreed that higher degrees, publications in any author position (including collaborative authorship), recruiting patients to a study or multicentre audit and presentation at a national or international meeting could be used as evidence for the purpose of CCT. The group agreed on two essential 'core' requirements (GCP and methodology training) and two of a menu of four 'additional' requirements (publication with any authorship position, presentation, recruitment of patients to a multicentre study and completion of a higher degree), which should be completed in order to attain CCT.

Conclusion: This approach has engaged stakeholders to produce a progressive set of academic requirements for CCT, which are applicable across surgical specialties. Flexibility in requirements whilst retaining a high standard of evidence is desirable.

Abbreviations: ASiT, Association of Surgeons in Training; CCT, Certificate of completion of training; GCP, Good Clinical Practice; JCST, Joint Committee on Surgical Training; LETB, Local Education and Training Board; NIHR, National Institute of Health Research; NRC, National Research Collaborative; RCT, randomised controlled trial; RCSEng, Royal College of Surgeons of England; SAC, Specialty Advisory Committee; SSL, Surgical Specialty Leads.

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1. About ASiT

The Association of Surgeons in Training (ASiT) is a professional body and registered charity working to promote excellence in surgical training for the benefit of junior doctors and patients alike (http://www.asit.org). With a membership of over 2700 surgical trainees from all 10 surgical specialities, the Association provides support at both regional and national levels throughout the United Kingdom and Republic of Ireland. Originally founded in 1976, ASiT is independent of the National Health Service (NHS), Surgical Royal Colleges, and specialty associations.

2. About the NRC

The National Research Collaborative (NRC) is a conglomeration of all trainee research collaboratives in the United Kingdom and Ireland (http://nationalresearch.org.uk). The NRC co-ordinate nationally to bring high impact multicentre research, which is delivered by trainees. Each year we deliver a national project and run a national conference. Other multi-centre projects are also disseminated through the NRC. Fig. 1 provides an overview of the active surgical collaboratives.

3. Introduction

Surgical training in the UK culminates in the award of a certificate of completion of training (CCT), allowing the trainee to seek employment as a consultant surgeon. As well as operative skills, award of CCT requires evidence of management, educational and research achievements. The latter stems from requirements set out by the General Medical Council to 'provide effective treatments based on the best available evidence' and 'apply scientific method and approaches to medical research' [1]. CCT requirements relating to research may be particularly important in surgery, given that the quality of research studies in this field has been criticised and lags behind other medical specialties [2].

At present, CCT requirements vary across surgical specialties (Table 1). Exact levels of evidence required are set at national levels, however in some specialties guidance states that they can be set locally [3]. This has the potential to lead to imbalance of academic competence across specialities. Moreover, the current limited scope of evidence lends itself to a 'tick box' mentality, where completion of three first-author peer-reviewed papers is more important than the quality of research or process of research. To overcome this, the academic requirements for CCT in Trauma and Orthopaedic surgery have recently been revised by the Specialty Advisory Committee (SAC) for Trauma and Orthopaedics, allowing a wider scope of activity to be recognised [3]. This includes evidence of completion of Good Clinical Practice (GCP) training, as well as critical appraisal skills, clinical trial activity and publications.

In May 2015, medical students and representatives from surgical trainee research collaboratives highlighted a desire to participate in clinical trials and called for research training to be embedded into surgical training programmes [4,5]. Following this, the Association of Surgeons in Training and the National Research Collaborative worked together to propose a new framework for academic achievement for CCT.

The aim was to develop a flexible framework, inclusive of several aspects of academic practice for recommendation to the surgical SACs.

4. Method

A working group from the NRC and representatives from ASiT prepared a discussion document using a modified Delphi process. This process is summarised in Fig. 2.

Current academic CCT requirements were collated from the JCST website into a single document. The relevance of each of these to current surgical research was discussed in an online group over a two-month period. This discussion identified positive and negative aspects of current requirement, and highlighted the variation in current CCT requirements.

The synthesis stage (stages 2) took feedback on these requirements, and generated a list of activities, which could show academic achievement for the purpose of CCT. The frame of reference for this stage included current requirements and changes to surgical research including collaborative models and clinical trials. Online discussion over four weeks facilitated iterative proposals, which were entered into a document after ten cycles. At the outset, fifteen objectives were proposed. These were refined to ten objectives at the end of the stage.

Subsequent discussion of proposed objectives suggested grouping into 'mandatory' and 'supplementary' groups of evidence. This was driven by the aim of a high standard of achievement associated with flexibility in evidence. These were circulated amongst stakeholders at the NRC including regional collaborative groups. The document was also shared with the Research Lead for the Royal College of Surgeons of England, the Chair of the Joint Committee on Surgical Training (JCST) and the Chair of the JCST Quality Assurance Group.

Following written and verbal feedback on these proposals, a set of sixteen statements was produced. These were designed to capture current thoughts on training and aspirations around evidence and implementation of new research metrics for CCT. Five of these statements addressed the current state of academic education in higher surgical training, and the academic aspirations of CCT holders. Nine statements addressed forms of achievement relevant to obtaining CCT and two statements addressed implementation of new standards.

The consensus session was held at the ASiT 2016 conference in Liverpool on Saturday 19th March 2016. The attendance at the session was limited to 25 delegates, but registration was open to all conference delegates. Invitation was extended to members of ASiT and those registered on the NRC mailing list, including trainees in all surgical specialties.

Following initial introduction and representations from JCST and RCSEng representatives, consensus voting was undertaken. Each statement was presented to the group and voted upon anonymously and without discussion. There was then room for discussion and, if necessary, rewording of the statement prior to a second vote. Voting was undertaken using a 5-point Likert-scale from strongly agree to strongly disagree. In order for a statement to be accepted or rejected by the group, an agreement (or disagreement) of $\geq$80% was required in the final vote.

Following voting, there was discussion about how results could be used to form a framework of CCT requirements. This was subsequently formally approved by the consensus group.

5. Results

Twenty-five delegates attended the session. There was representation across the surgical specialties, including general surgery, paediatric surgery, vascular surgery, urology, orthopaedic surgery and neurosurgery. Participants ranged from medical student to