



Introduction

1.1 Overview of Core Surgical Training Applications

Core surgical training (CST) is a critical step in the journey to becoming a surgeon in the UK. This two-year training programme should equip trainees with the skills required to step up to speciality training. It is a highly selective process which appears to only be getting more competitive. Data from NHS England shows that competition ratios have been increasing steadily for the last decade, from 1.92:1 in 2013 to 4:17 in 2023 (Figure 1.1) [1].

This is because while applicants have effectively doubled in this time (1,296 applicants in 2013 compared to 2,539 applicants in 2023) the number of CST posts has, remarkably, fallen (676 posts in 2013 compared to 609 posts in 2023).

The recent introduction of the MSRA (Multi-Speciality Recruitment Assessment) as part of the application requirements may make the process of getting an interview even more competitive, and it is noteworthy that there was an increase of around 10% in the number of CST applicants in 2023 (the year the MSRA was introduced). Candidates who have been required to sit the MSRA for another specialty are incentivised to also apply for CST – having already done the examination, why not? While a higher volume of applicants will make getting an interview more difficult, this same logic follows that once you have secured an interview the field should be slightly weaker, as it will contain applicants for whom CST is not their first-choice training pathway.

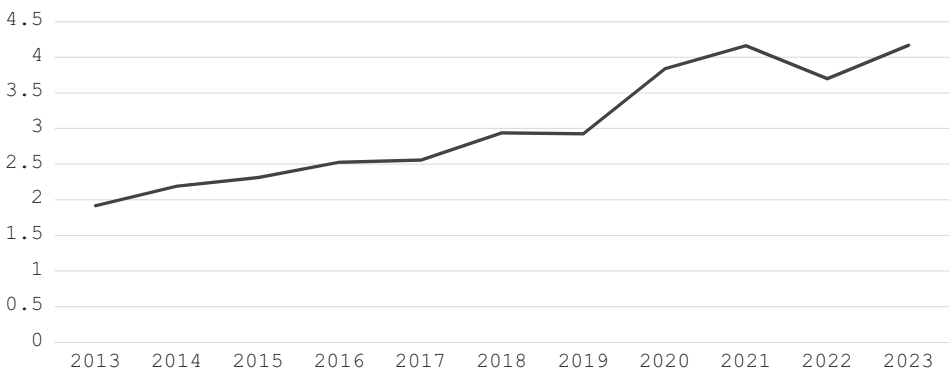


Figure 1.1 Change in competition ratios (y-axis) over time (x-axis) from 2013 to 2023.

Data obtained from NHS England: medical.hee.nhs.uk/medical-training-recruitment/medical-specialty-training/competition-ratios © Crown copyright, reproduced under the Open Government Licence.

Given these competition ratios, getting any CST post is an achievement. Unfortunately, getting specific specialty rotations is particularly important for core surgical trainees as when applicants finish CST and apply for ST3 (the first year of specialty training), core operative procedures form a sizeable chunk of an applicant's portfolio. Different specialties have different procedures that you score on. How difficult these are to achieve vary by specialty; at the time of writing, orthopaedics currently only scores for 'operations for fracture of neck of femur', with top marks available for completing 12 or more of these. By comparison, plastic surgery ST3 applications score on a vast range of burns, skin cancer, and hand trauma procedures, requiring a high level of operative proficiency to score well in. It is highly unlikely you will achieve these requirements without sufficient time in your chosen speciality, which will make applying for ST3 more difficult. More to the point, life as an ST3 will be very difficult if you are not confident in these core procedures. Therefore, getting a CST rank high enough to get any job is laudable, but ideally you want to be able to pick a job that has your chosen specialty as at least one of the rotations (assuming you know what specialty you are keen on pursuing). Of the roughly 600 jobs available, around 400 are 'themed' around a particular specialty, which provide trainees with good exposure to that specialty and the allied specialties related to it. It goes without saying that your CST ranking will also determine where in the country you will be carrying out your training, which for many people is even more important than what rotations they are given.

This is not meant to cause anxiety, but to highlight how essential it is to give your best possible performance in your interview. Of course, there will always be scope to complete clinical fellowships before or after CST to gain the required experience, swapping jobs is possible within some deaneries, and indeed many candidates are not sure what specialty they want to pursue until they have already started CST. Regardless, you should put yourself in a position where you can achieve the highest ranking possible, so that you are the one making the choices about your career.

1.2 How to Use This Book

This book is designed to be read in order, and each chapter is designed with progression in mind. The introduction to the clinical and ethical cases are essential reading, which demonstrate the basic approach we subsequently use for all cases. Cases are initially written out verbatim *in italics* to highlight this structure. However, as a chapter progresses, cases are answered using bullet points to allow candidates to practise generating their own longform answers. At this point, we stop repeating many of the basic points of the approach, which we expect readers to have picked up. It is therefore vital that the introduction and early cases are read, and candidates are confident in this structure, before progressing to the later cases. We revert to verbatim answers intermittently throughout the textbook to remind candidates of the structure and flow of a full model answer.

There is also progression within each case. A strong A–E clinical assessment, or I-SPIES-DR ethical scenario approach is essential in almost all cases. This will take up most of the time in the station and be responsible for most of the marks available. The follow-up questions are there to stretch candidates. In many scenarios it would be impossible in five minutes to complete an A–E assessment as well as answering all of the questions. Some of the follow-up questions are difficult, and may be beyond what is

expected at the interview, but have been chosen to highlight clinically important areas and provide a depth of knowledge that would allow you to stand out as an exceptional candidate. You should avoid the temptation of practising in-depth follow-up questions (which may or may not come up) before you can list your basic approach to any scenario confidently and smoothly. The interviewers are looking for prospective surgical trainees who can safely manage patients out of hours, not people who understand the intricacies of a Whipple's procedure!

Please note that we have aimed to ensure all the clinical information provided is uncontroversial and found in reputable sources such as BOASTs (British Orthopaedic Association standards for Trauma and Orthopaedics) or NICE guidelines. Moreover, all clinical stations have been checked by specialty doctors. However, this book is not a clinical resource, and you should not be using it to manage patients in your day job. This is a text specifically to help you approach the CST interviews and should not be used to guide the clinical management of patients in real-world settings.

1.3 How to Prepare for the Interview

We recommend preparing for the interview in a small group. Ideally, practise with people who want to put in a similar amount of time over a similar timescale as you, who will push you to improve, and from whom you think you can learn. Identify one or two other candidates to practise with regularly. Regular practice with the same partner will allow you to be more honest with each other about areas that need improvement and allow you to see one another's progression more clearly. Closer to the interview it is helpful to practise with a wider variety of colleagues to help you finesse your technique.

Before you start, make a list of all the possible interview scenarios that you think could reasonably come up (this book will serve as a good guide for this), which you can add to over time as you think of other potential cases. It might feel repetitive, but when going through cases make sure you are doing a full A–E approach (or I-SPIES-DR workup for management cases) each time, making the small changes necessary to fit your template to the scenario at hand. Whilst practising, avoid the temptation to skip straight to the management or follow-up questions – every time you complete your A–E approach you will help embed this to memory, while also picking up small points where you might be able to shave off a few seconds or sound a bit slicker in future cases.

When you practise follow-up questions, get into the habit of structuring your answers. For example, postoperative complications can be listed as 'immediate, early, and late', risk factors as 'modifiable and non-modifiable', aetiology as 'infective, neoplastic, vascular, inflammatory, traumatic etc'. Having a logical structure will give you something to fall back on, buying you time to consolidate your thoughts, while also giving you prompts to jog your memory. You will come across as significantly more confident than if trying to list things off the top of your head.

As you continue to practise, do not stick too rigorously to the listed scenario – you will quickly rote learn this. Instead, vary the scenarios as you go through. For example, interrupt the other person during their A–E by presenting them with an unexpected complication during their resuscitation, vary how acutely unwell the patient is, add an important comorbidity into the stem, or throw in an angry family member to complicate things. While the scenarios given in the book may be similar to what you would expect in an interview, they won't be identical. It's important you develop the ability to think on

your feet and are able to change direction in the middle of a scenario if needed. Embedding the fundamentals to memory will free up thinking space for you to adapt during the interview. Similarly with some management scenarios we have given examples of ways the cases could be altered to slightly change the scenario – this will allow you to practise cases in multiple ways.

Reference

1. Health Education England (n.d). 'Competition ratios'. NHS, Website, accessed 19 Feb. 2024,

<https://medical.hee.nhs.uk/medical-training-recruitment/medical-specialty-training/competition-ratios>.



The MSRA

2.1 Overview of the MSRA

100% of Shortlisting for Interview & 10% of Overall Score

The Multi-Specialty Recruitment Assessment (MSRA) is a computer-based exam used to test clinical problem-solving skills and professional behaviour. The examination is free and is taken in a two-week window during the application process (January for the 2022/2023 cycle). It is carried out at Pearson Vue centres in the UK.

During the 2022/2023 cycle, this examination was introduced as a new method of shortlisting candidates for interview. It was introduced predominantly to deal with the problem of portfolio verification. Prior to 2022 candidates were shortlisted for interviews based on their portfolio scores. This required examiners to assess each portfolio in turn to verify that the score the candidate had assigned to their portfolio was correct. This labour-intensive process could not keep up with the rise in CST applicants. As justification for introducing the examination, the Joint Committee for Surgical Training (JCST) noted that of those CST applicants who had taken the MSRA over the preceding three years for other training programmes, there was a statistically significant difference in the mean score for those invited to interview compared to those who were not.

There was a strong backlash from several trainee bodies at the time, but it looks like the examination is here to stay, and as such, this general medical examination will determine if you get an interview or not. In 2022–2023, it whittled a field of 2,539 applicants down to just 1,075 candidates invited to interview. Scoring a good mark is vital, else your hard work on your portfolio and interview preparation will be for nothing. A strong showing will also help prop up your overall ranking as this examination contributes 10% to your total score. There will be fantastic surgical candidates who underestimate this exam and find themselves without an interview. Dedicate regular time to this exam for at least three months, take study leave near the exam, and treat this as a priority.

The examination consists of two parts – Professional Dilemmas (PD) and Clinical Problem Solving (CPS). The PD paper consists of 50 questions in 90 minutes and places the candidate in the context of an F2 doctor approaching various workplace scenarios. The candidate must rank the appropriateness of the provided responses between 1 and 5. This is a ‘situational judgement test’ style approach which tests a candidate’s professional integrity, their ability to cope with pressure, and their empathy and sensitivity. The CPS paper involves 97 questions delivered over 75 minutes. The questions are either extended

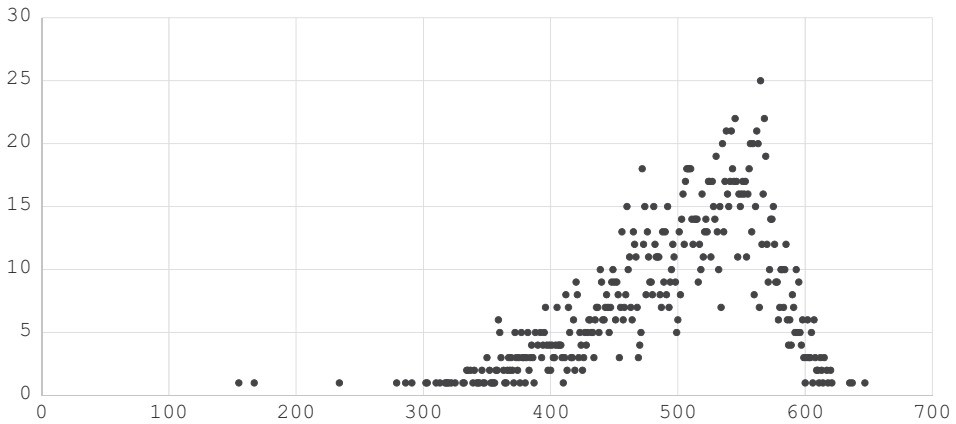


Figure 2.1 Number of candidates (y-axis) achieving a given MSRA score (x-axis) for the 2022–2023 application cycle.
Data obtained via Freedom of Information Act request to Health Education England 24 July 2022, FOI-2307-2006479 NHSE:0176379. © Crown copyright, reproduced under the Open Government Licence.

matching questions or single best answer questions. Note that around 10% of the questions are ‘pilot’ questions being tested for future examinations, and do not count towards a candidate’s final score. This paper tests your broad medical knowledge, and there is minimal surgical knowledge tested in the paper.

2.2 Preparing for the MSRA

We would strongly recommend subscribing to one or more online question banks. Examples of online resources include PassTest, PassMedicine, MediBuddy, eMedica, and MCQBank. Use the resources you feel are most reasonably priced, have the level of depth you desire, and have the interface you prefer. In our experience and through discussion with colleagues, we feel MCQBank is most like the exam and PassMedicine is the easiest format to learn content from, but they all have their advantages and disadvantages. We would recommend using more than one and having completed each question bank more than once.

Nationally, MSRA scores fit a normal distribution around a mean of 500. A freedom of information request obtained the MSRA scores of all candidates for 2022–2023, shown in Figure 2.1.

The average score for CST applicants was 505.15. The cut-off for the 2022–2023 cycle was approximately 513. Preliminary data suggests the cut-off for the 2023–2024 cycle has increased to around 530, although at the time of writing this book this has not been formally verified.



The Portfolio

3.1 Overview of the Portfolio

Currently 30% of Overall Marks

The portfolio is a collection of evidence demonstrating the applicant's skills, experiences, and achievements as deemed relevant to a surgical career. The portfolio scoring often changes year on year – sometimes substantially. As such, we will not go into great depth about the portfolio, for fear of it becoming out-dated quickly. Instead, information about this can be readily obtained online. All changes are announced on the Health Education England (HEE) website. It will be covered here as a brief overview.

The typical domains include demonstrating a commitment to surgery, teaching and teaching training, research (presentations and posters), and audit and quality improvement projects. While daunting to look at, most marks are achievable in a 6–12 month timeframe if you are motivated and efficient.

Each year the portfolio causes a great deal of stress for candidates – we know it certainly did for us. Do not fall into the trap of thinking you must work non-stop to max out your score. These are unhealthy aspirations and can get in the way of you enjoying your foundation training as well as your life outside of work. If you are sensible and savvy you can reliably secure a strong portfolio score. We list a few tips for the portfolio below.

3.2 General Advice for the Portfolio

Points:Time Ratio

The most important concept to be aware of is the idea of a points:time ratio. Organising a teaching course can be done in around three months with a couple of hours work each week. That would get you the maximum score of 10 points for that section of your portfolio (for the 2022–2023 cycle). On the other hand, completing a PG Cert in medical education will take you anywhere between 6 and 12 months, dedicating roughly 10 hours of work per week (not to mention typically costing many thousands of pounds), all for an additional two points on top of what is achievable in a two-day teaching course. Similarly, for the 2022–2023 cycle, you get the same (full) marks for a two-cycle audit ensuring that venous thromboembolism prophylaxis assessments are performed on your ward as you do for a five-cycle multisite audit on warfarin prescriptions across 2,000 patients. Unless you have a particular interest in warfarin prescriptions, or the project

will get you something else like a publication, from a CST application perspective there is no benefit to the more onerous project.

Your time is valuable, and pursuing the most 'high yield' of the portfolio options should be your top priority, where the most points are available for the least number of hours of work. When taking on a project for your portfolio, take a moment to really think about if it's the right thing for you to do. Do you really have the time to commit to this right now? Are there better things you could be spending your time on? Starting a project is a lot easier than finishing one.

Improve your points:time ratio by 'doubling up' projects. For example, run a teaching course with an alternative spin on it – maybe the way you are delivering it is unique, or it is covering a topic that is rarely covered. Write up your teaching course and submit it to a medical education conference – if you can get an oral presentation out of it, then you have nearly maxed out your presentations and publications section as well. The less time spent jumping through hoops for the portfolio the better.

Make a Group

Hopefully you will know at least a couple of people who are going through the application process at the same time as you. Most likely they will need similar things to you. Make a team and split the work. Running a teaching course with two colleagues will massively reduce your workload. Work on three audits, with each of you leading on one of them. Each audit will take one-third the time, and by the end of it you will be the first author on an audit, and a secondary author on two further audits. Your colleagues will bring different skills to the table which will potentially make the projects go further than if you were doing them by yourself.

Bit by Bit

Little and often is the key. Most projects fail because momentum runs out before you can get them across the line. Taking things step by step and committing to doing a few hours a week on portfolio projects will help keep things ticking along until completion. Having said that, if you can't manage a few hours a week, that's fine. It can be difficult to make time for these things, so don't beat yourself up if you're not hitting your self-imposed targets. Keep perspective and keep trucking.

Proof

Each year points are lost by candidates not having the correct proof of their achievements. The HEE website clearly specifies what is required as proof. Read this meticulously and draft a letter for your supervisors to sign off which includes exactly what is required. These letters may look contrived, but you must not put yourself at risk of not getting the full points score you deserve.

Portfolio Scores

What score do you need to be competitive? Naturally, this will vary year on year. Whereas previously there was a 'cut-off' that candidates needed to achieve to get an interview, the MSRA is now used for shortlisting, so the portfolio is simply used to gain additional marks for your ranking.

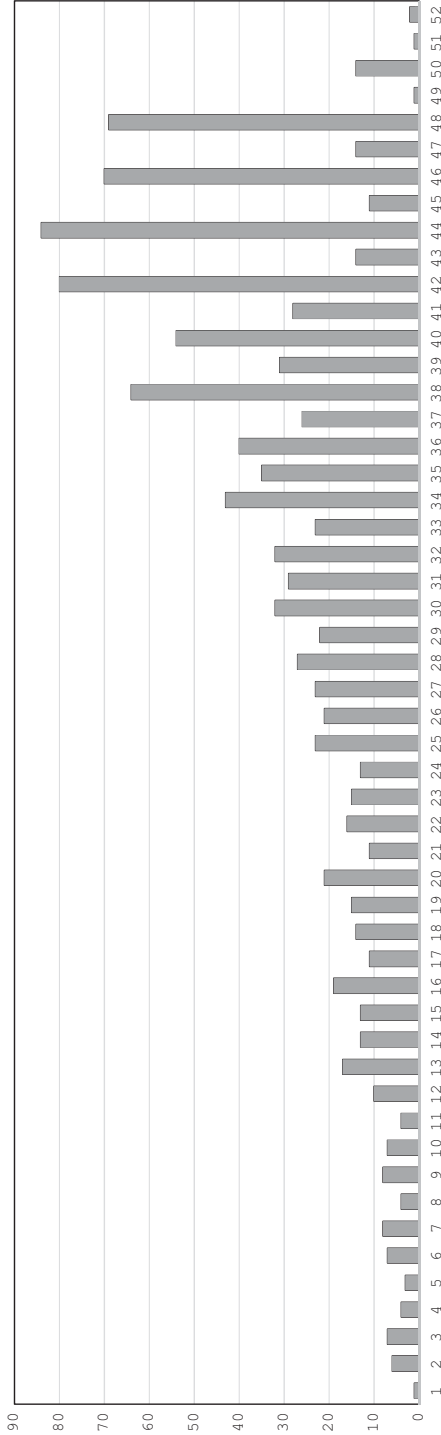


Figure 3.1 Distribution of number of interview candidates (y-axis) with a given verified portfolio scores (x-axis) for the 2022–2023 CST application cycle. Data obtained via Freedom of Information Act request to Health Education England 24 July 2022, FOI-2307-2006479 NHSE0176379. © Crown copyright, reproduced under the Open Government Licence.

Data obtained by a Freedom of Information Act request to HEE show that the average verified portfolio score was 33.49/52 in the 2022–2023 cycle. Only around 10–15 candidates scored $>48/52$. What is interesting to note when looking at the 2022–2023 portfolio score distribution, is that while there is some bunching in the region of 34–48/52, almost 500 candidates scored under 34, with around 90 candidates scoring $<10/52$ (Figure 3.1). This may be partly due to an influx of candidates who are applying for CST as a second-choice specialty after already completing the MSRA for their first-choice specialty.