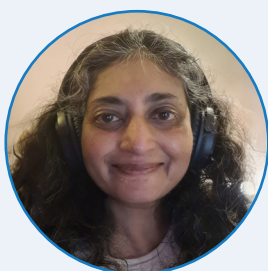


The day one orthopaedic consultant of the future

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The specialty of trauma and orthopaedics (T&O) has undergone substantial change over recent decades. Innovative technologies, advanced implant designs, changing patterns of pathology, and evolving patient expectations have all altered clinical practice. However, the way we work and train has remained remarkably similar. T&O surgeons are generalists in trauma but specialists in our elective work (not unlike the man who was Bruce Wayne by day but Batman by night!). By contrast, emergency and elective practices are more aligned in other surgical specialties. The Medical Training Review¹ has brought reform of training into sharper focus, making this an opportune moment for the specialty to consider whether we are preparing surgeons for current and future practice. What should a day one consultant look like today, and what will be required ten years from now?

To inform this discussion, the Specialist Advisory Committee (SAC) in T&O undertook a consultation exercise in 2025. The SAC developed a questionnaire with input from BOTAs and distributed it to training programme directors, clinical directors of orthopaedic departments, and the orthopaedic subspecialty associations. The aim was to gather views from trainers, those responsible for delivering training, and those employing consultants at the point of completion of training. The questionnaire explored the following domains; whether day one consultants should be generalists or subspecialists, which index procedures and critical conditions a day one consultant must be able to manage independently, and how training could better support operative exposure, clinical judgement, decision-making, and professional behaviours. It also asked how trainees with additional educational needs could be identified earlier in training.

Consultation findings

The consultation ran from May to July 2025. Twenty responses were received from approximately 175 people (it is difficult to be more accurate as the number of orthopaedic clinical directors is not a fixed number). Responses were collated and analysed by a psychologist and a health and social science researcher, both with

extensive experience of working with surgeons. Most respondents felt that day one consultants should retain broad generalist capability in trauma and emergency care, including the ability to manage the unselected take. Elective practice, however, was seen as more appropriately subspecialised and often consolidated through fellowship training. A smaller group argued that the traditional generalist model is increasingly outdated, and that modern consultants should develop greater subspecialisation from the outset while maintaining a general trauma background to meet patient and system demands.

Operative exposure and assessment

Many responses highlighted insufficient operative exposure and questioned whether logbook numbers alone provide a meaningful measure of readiness for consultant practice. There was some support for moving from numbers-based training towards competency-focused assessment. Suggested improvements included protected trainee operating time within job plans, greater flexibility to rotate across consultants rather than remaining in fixed pairings, and better use of physician associates and allied health professionals to reduce ward-based administrative burden.

Decision-making, feedback and professional development

Respondents also called for more deliberate teaching of non-technical skills, clinical judgement and decision-making. Proposed approaches included high-fidelity simulation, structured clinical case discussions, more effective feedback between trainees and supervisors, and greater accountability for trainers to deliver training in the workplace. Several respondents identified excessive ward administration as a barrier to training, suggesting that improved IT systems and AI-enabled support could reduce time spent on non-clinical work.

Training quality and accountability

Respondents recommended a more consistent approach to training quality and accountability. This should include withdrawing accreditation from training centres that persistently fail to meet expected standards as set out by the SAC.



Amy Grove is a Professor of Implementation Science and Director of the Centre for Evidence and Implementation Science (CEIS) at the University of Birmingham. As a Chartered Psychologist and experienced methodologist, her work focuses on evaluating and implementing health technologies and evidence-based interventions, including leading government and industry funded research and development.



Arabella Scantlebury is an Associate Professor at the University of Birmingham and Deputy Director of the Centre for Evidence and Implementation Science. Bella is a leader in implementation science specialising in surgery, urgent care and health policy. She leads complex, mixed methods evaluations for public sector and government-funded programmes, helping organisations understand how interventions can be effectively implemented, adopted and sustained in real-world settings.

They also supported the introduction of national employment contracts to improve stability and consistency across training programmes.

Implications for trainers

The consultation generated valuable and practical suggestions for improving training. However, delivering these changes will require significant time, energy and commitment from trainers, who are already under considerable pressure from patient-care responsibilities, while the educational work they undertake is often given limited recognition and little or no dedicated time in job plans.

Training the surgeons of the future

Balancing emergency readiness and subspecialist expertise

To train surgeons who are fit for future practice, we must change not only what we teach, but how training is delivered. Future consultants will need to be ready for independent emergency work while also developing competent practice in their chosen subspecialty. Achieving both aims requires careful thought about timing, exposure and progression through training. The move towards competency-based training is welcome, but competence cannot be assessed meaningfully without sufficient operative exposure². High-volume experience remains essential if trainees are to develop reliable judgement, technical confidence and readiness for independent practice.

Fellowships remain highly valued, but their quality is variable and access may be inequitable for trainees who are geographically or financially constrained, or have caring responsibilities. At the same time, subspecialisation too early in training risks narrowing experience before broad orthopaedic judgement has fully developed. As Felix Guyon Courty said, *"Specialization is the lowest degree of our art, when it is not fertilized by general knowledge; it is its perfection, when it is the crowning achievement of science. We must finish instead of starting with it"*.

Robotics and artificial intelligence

Robotic surgery is becoming increasingly established in arthroplasty and may become an integral part of future orthopaedic practice. Although access remains limited and subject to geographic variance, the specialty should consider how robotic surgery could be incorporated into the curriculum and made available to trainees in an equitable and evidence-based way.

Artificial intelligence (AI) also has considerable potential. By supporting routine administrative tasks, AI could free surgeons to spend more time with patients and create more space for developing clinical judgement, decision-making and technical expertise.

Change in the training landscape

The wider context for surgical training is changing rapidly. NHS England has now been incorporated into the Department of Health and Social Care, although it remains unclear how deaneries will operate within this new structure. Nonetheless, a structured training programme remains the easiest and most reliable way of obtaining entry onto the Specialist Register².

The BOA and BOTa were closely involved in phase one of the Medical Training Review, which was designed as a listening exercise¹. We contributed to sessions for procedure-heavy specialties and emphasised that surgical trainees require specific consideration, particularly in relation to operative exposure. This concern is compounded by the broader decline in theatre efficiency over the past decade, which has contributed to reduced operating numbers.

The BOA also sought a separate meeting with Professor Chris Whitty, one of the leaders of phase one, to highlight the challenges currently faced by orthopaedic trainees. These include access to training opportunities, the overall structure of training, and the way training is delivered. Concerns include the length of UK surgical training compared with other countries, limited surgical exposure in the early postgraduate years, the need to streamline rotations, the potential value of a lead employer model, and the importance of shifting appropriate tasks to the wider surgical team so that trainees can focus on direct patient care. We also called for greater transparency and accountability in how funds allocated to training are used.

The Medical Training Review is now entering phase two. The recent government offer to resident doctors includes the agreement that they will be closely involved in this phase³. The stated aim is to develop a long-term direction for reform of postgraduate medical education and training that aligns with wider NHS and health system reform across the four nations. As part of this endeavour, several working groups will be established, including one for procedure-heavy specialties. It is hoped that this group will focus on how best to structure and deliver training for the surgeons of the future.

Whether T&O is described as a craft specialty or a procedure-heavy specialty, the implication is the same: it is neither solely art nor solely science, but a discipline that draws on both and becomes greater than the sum of its parts. It requires judgement, technical skill, and professional commitment ('head, hand and heart')⁴. These same qualities should guide how we shape the orthopaedic surgeon of the future. ■

References

References can be found online at www.boa.ac.uk/publications/JTO.