The changing face of surgical research in the UK

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Emma Reay is a Consultant Hand and Wrist Surgeon working at James Cook University Hospital in Middlesbrough. She is the Surgical Specialty Lead for Hand Surgery for the UK for the BSSH and the RCS. She is currently Co-Chief Investigator for two NIHR funded RCTs in Hand surgery and is a member of the BSSH Research Committee. Alongside her role in promoting research in Hand Surgery she has recently led the Orthopaedic Department at South Tees as Clinical Director and during that time completed an MBA. She has a keen interest surgical training and has been Training programme Director for Orthopaedic Core Trainees in the Northern Region, is a member of the Trauma and Orthopaedic SAC and is an invited speaker and faculty member on a number of surgical training courses.

Over the past three decades, surgical research in the UK has undergone a remarkable transformation. Historically, surgery lagged behind medical specialties in both the volume and methodological rigor of its research output, with studies often limited in design and variable in quality[1]. Today, however, the UK is internationally recognised as a leader in high-quality, clinically relevant surgical research that shapes practice far beyond its borders[2]. This shift has not occurred by chance. It reflects a growing recognition that research directly improves patient care, and that research-active institutions consistently achieve better clinical outcomes.

At the same time, the way surgical research is conducted has evolved. Innovations in study design, digital data collection, remote collaboration, and the emergence of trainee-led research collaboratives have expanded participation, allowing a much broader group of clinicians to contribute to research activity. Yet despite this progress, disparities remain – particularly the underrepresentation of women in senior leadership positions and senior authorship roles within surgical research[3]. This raises an important question: do these figures truly reflect what is happening in practice, and are they changing over time?

Surgical research delivery – national policy

In the last decade, both the volume and quality of surgical research in the UK have increased substantially. Government policy and initiatives from the surgical royal colleges have played a crucial role in enabling this expansion, most notably through the Surgical Trials Initiative[4].

Launched in 2013, the Surgical Trials Initiative represents a partnership between the Royal College of Surgeons, specialist surgical societies across multiple disciplines, and surgical trials units throughout the UK. Its creation followed recognition of the relative scarcity of high-quality surgical trials compared with other medical specialties. Since then, the initiative has gone from strength to strength. One of its key developments was the introduction of Surgical Specialty Leads (SSLs), appointed representatives responsible for promoting and facilitating research within their respective specialties. Notably, around a quarter of these roles are now held by women, reflecting gradual progress toward greater diversity in research leadership. >>



Surgical research delivery – collaborative research

Alongside increased focus on trials, the structure of surgical research delivery has shifted significantly. Where single-centre studies once predominated, multicentre collaborative research is now the norm, frequently coordinated by resident-led collaboratives. These projects are delivered locally but organised nationally, often with substantial remote coordination.

This collaborative model has fostered greater interest in research among medical students and surgical residents and has helped facilitate increased participation by women. It has also transformed academic authorship. Many publications now recognise collaborative authorship models that contribute toward training portfolios and consultant applications across specialties, particularly in fields such as trauma and orthopaedics. As a result, a more diverse range of contributors is represented in surgical research outputs although representation of women on editorial boards of scientific journals remains low.



SCOOTT (Surgery versus Conservative OsteOarthritis of Thumb Trial) team at the recent BSSH meeting in Birmingham.

The collaborative approach has opened doors for previously under-represented groups across all professional levels. Remote data collection and flexible project structures have further reduced barriers to participation. However, disparities remain evident at senior levels. A study examining general surgery journal authorship found that women accounted for approximately 21% of last authors and 24% of corresponding authors[5].

While last authorship is an imperfect proxy, it often reflects research leadership. Encouragingly, the proportion of female first authors has increased over time, mirroring the rise in women entering surgical training. Importantly, studies also show that papers with female senior authors tend to include a higher proportion of female co-authors, reinforcing the value of visible role models in shaping participation[6].



Research leadership and role modelling

Role modelling has long been recognised as a powerful influence in craft specialties such as surgery, and it is equally important in the development of surgical research within the NHS. Over the past decade, the number of women occupying visible senior research roles has increased, and their impact extends beyond individual achievements.

In my own specialty of hand surgery, there is a particularly compelling example of how leadership can mobilise an entire professional community. Emma Bamford, a hand therapist and first-time Chief Investigator, successfully led a team to secure funding for a multicentre randomised controlled trial (FIRST) examining splint management following surgical repair of flexor tendon injuries. Together with her local collaborators and hand therapists across the UK, she delivered the study successfully – an impressive achievement in the current NHS climate.

Perhaps more importantly, the trial inspired a previously under-represented research workforce: hand therapists. The activation of this community has already influenced research activity across the specialty, including my own work investigating treatments for thumb base arthritis. Recruiting therapists to deliver a newly designed non-operative care package would have been extremely difficult without the enthusiasm generated by the therapist-led FIRST trial. The level of engagement from the hand therapy community was remarkable

and, I believe, directly linked to seeing peers successfully lead and deliver research.

Sustaining progress

Just as exceptional surgical trainers inspire residents to pursue particular surgical careers, visible surgical researchers can inspire new investigators to ask, and answer, the questions that matter most to them. Continuing to build supportive networks and creating opportunities for under-represented groups, including women, will be essential to maintaining the upward trajectory of female participation in surgical research.

The UK already benefits from an exceptional research infrastructure. This provides a unique opportunity to address clinically important questions that matter to both surgical teams and patients. Ensuring equitable access to this infrastructure is the next critical step.

Final thoughts

Every patient receiving care within the NHS should have the opportunity to participate in research – a study for every patient. Normalising research participation as part of routine care will allow us to build on the strong foundations already established in surgical research.

The evolution of surgical research over the past 30 years demonstrates that surgical teams can adapt successfully. The next challenge is to engage the entire workforce while continuing to support those who remain under-represented. In my current trial team, 90% of members are women – a powerful reminder of how quickly change can occur when opportunity and inspiration align.

We cannot choose who inspires us. But the greater the diversity of people we see leading research, the more likely each of us is to find someone who does. ■

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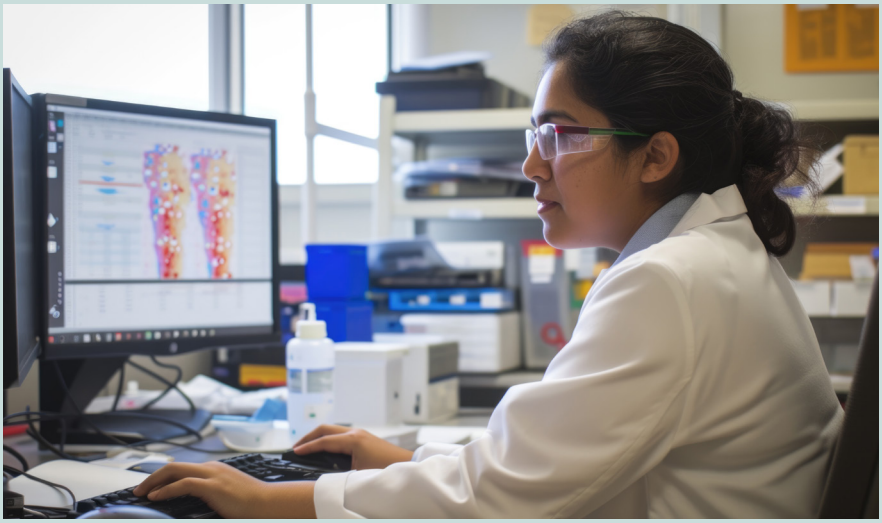

The Surgical Specialty Leads (SSLs) programme, delivered jointly by the Royal College of Surgeons of England and the British Orthopaedic Association, continues to demonstrate the power of coordinated, specialty-led research leadership.

Over the past three years, our Orthopaedic SSLs have built national clinical research networks spanning Adult Trauma, Adult Elective and Paediatric surgery. They have opened and delivered major multicentre trials, supported NIHR portfolio studies, and strengthened collaboration between consultants, trainees and allied health professionals. The programme has successfully normalised trainee chief and principal investigators, supported over 500 Associate PIs, and embedded research development within BOA, BOTA and BSCOS structures.

The impact is tangible: multiple funded NIHR studies, international collaborations across Europe, Australasia and North America, national research days attracting hundreds of delegates, and strong engagement with NHS England, MHRA and industry partners. Orthopaedics is now regarded as the College's strongest example of how the SSL model develops future research leaders while delivering high-quality, multicentre trials that directly benefit patients.

With a vacancy in Adult Trauma and succession planning underway in Paediatrics, recruitment to the next cycle presents an exciting opportunity. We are seeking motivated, research-active surgeons who want to shape national research strategy, mentor the next generation, and build sustainable clinical trial networks.

If you are passionate about collaborative research and developing others, this is your opportunity to make a lasting impact. Join us in strengthening orthopaedic research leadership and ensuring our specialty continues to lead from the front. For more information about becoming an SSL - www.boa.ac.uk/surgical-specialty-leads-for-clinical-trials. ■