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LETTER TO THE EDITOR

Comment on "Is Dedicated Research Time During Surgery Residency Associated With Surgeons' Future Career Paths?: A National Study"

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To the Editor:

We read this study by Andriole et al with much interest. The authors demonstrated that involvement in research during general surgical residency was independently associated with positive academic career impact such as faculty appointments and research grant funding awards in the United States.¹

In England, opportunities for involvement in academic research during surgical training are facilitated through the Integrated Academic Training Pathway (IATP) supported by the National Institute for Health Research (NIHR).² The pathway was conceived after the revolutionary Walport report which highlighted the decline in academic clinicians.³ Unsurprisingly these trends were disproportionately higher within surgical specialties.³ Now in its 10th year, the IATP provides trainees with a structured opportunity to undertake research alongside their clinical training. The pathway uniquely offers successful applicants' run-through training in their chosen speciality so that trainees may focus their attention, develop the required surgical skills, and nurture a genuine academic interest.

Clinical academic surgical training can be divided into 2 distinct phases. The first phase is the Academic Clinical Fellowship (ACF) which facilitates junior surgical trainees/residents to obtain pilot data to compete for an external clinical research training fellowship. ACFs are typically 3 years in duration with the trainee being contracted to a teaching hospital in close proximity to a university with whom they have an honorary affiliation. Throughout this period, time is divided between clinical training (75%) and academic research (25%). After their ACF, trainees are permitted time out of training to undertake a full-time PhD (or UK MD) to develop high-quality research skills, disseminate research at national and international platforms, and publish in high-impact journals. Following the completion of a higher degree, trainees who want to continue a clinical academic career are eligible for the second

phase of the IATP, the Academic Clinical Lectureship (ACL). Here, trainees transition to academic independence, exploring their scientific area of enquiry in more depth and breadth. An ACL is a university employment with an honorary hospital contract and ACLs divide their time equally (50:50) between their clinical and academic training, allowing them to continue their higher surgical training while delivering high-quality research. Following the ACL program, there is the opportunity to compete for dedicated clinician scientist or intermediate fellowships to continue their clinical academic job plan.

The IATP has had a significant impact in developing clinical academic careers in the United Kingdom, delivering over 2200 ACFs since 2006 and almost half of these (43%) progressed to research programs or higher degrees.⁴ Furthermore, around a third of ACLs go on to hold senior academic posts such as clinician scientists and program grants.^{5,6} In addition to protected research time, the IATP gives trainees access to professional academic infrastructure through the NIHR Academy, awareness of research economics, highlights the importance of collaborative research, and helps establish local, national, and international networks.⁴ However, for many surgical trainees, the progression through the IATP poses some unique challenges, which include maintaining and achieving clinical competencies, ensuring the provision of protected academic time in a resource deplete NHS and prolonged training which can be financially and mentally burdensome.⁷ Therefore, it is unsurprising that there is currently less than half as many academics in surgical specialties compared with medical specialties.⁷

A UK review of early career clinical academics identified 4 key enablers to sustained involvement in academia and success as a clinical academic: mentorship, work environment, access to funding, and intrinsic motivation.⁶ Much of the underpinning research into retention and progression of academic clinicians comes from the United States; however, it seems that common barriers and enablers affect trainees across the Atlantic.⁸ Although both the United Kingdom and the United States have had success in developing academic surgeons, the significant disparity between the number of surgical and medical academics needs further research. By researching and bolstering academic surgical careers, we may retain and progress more academic surgeons and improve outcomes for surgical patients.

It was encouraging that Andriole et al demonstrate dedicated research time in the United States to promote academic surgical training. Aligning with these findings, current evidence suggests the IATP to be effective at enhancing academic surgical careers.⁶

We believe the US surgery residency training programs may benefit from aspects of the IATP. Challenges experienced by academic surgical trainees within the IATP requires further interrogation to build on the past successes achieved through the pathway. This will ensure the consistent high quality of research training and uptake of training posts comparable to physicians. Perhaps a collaborative network between the United Kingdom and the United States may help in defining an optimal academic surgical training program to make the most of the common opportunities, and address the common challenges highlighted in this letter.

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