

## Survey of current and former academic clinical fellows in emergency medicine in the UK

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Academic emergency medicine (EM) is relatively young in the UK with a small critical mass of clinical academics who have protected time to conduct research [1]. There are different approaches to academic training for EM physicians globally. Across Europe, it is often varied and mostly unstructured based on discussions with EM colleagues across several European countries. This research letter provides an example of how the academic EM pathway works in the UK and presents experiences of the Academic Clinical Fellowship (ACF) in EM, which is often the first (but not the only) step towards a formal clinical academic career.

This might be of particular interest of those in the rest of Europe as they develop their own approaches to academic careers in EM. The UK offers a national structured integrated academic training pathway from medical school to higher specialist training and beyond, unlike many other countries worldwide [2]. The National Institute for Health Research (NIHR) runs an Integrated Academic Training pathway, which recommends that the ACF has a standard duration of 3 years with 75% of the time to be spent undertaking specialist clinical training and 25% research training [3].

The Royal College of Emergency Medicine research strategy promotes flexibility to complete the ACF in 3 or 4 years [4]. ACF allows medical trainees to develop skills and experience in research. Measures of success include attainment of PhD funding or postdoctoral fellowships for those who have already completed a PhD before ACF completion. Other measures of success include publications, conference presentations and perhaps most importantly, inspiring future participation in research via a variety of routes. To date, there is little known about the experience of EM physicians who have secured one of these fellowships. We designed a survey to capture information on the prior experience of EM ACFs, as well as how the programmes were structured and what the fellows did after the scheme.

The survey is part of a larger piece of work looking at how to improve early career academic training for EM physicians in the UK. To identify EM academic clinical fellows who are currently in year 2, 3 or 4 or had completed the programme in the last 5 years we sent an initial survey to the EM ACF programme leads in the UK on 24 January 2021. They were identified via the NIHR incubator for emergency care, which provides training opportunities and mentorship to inspire those currently working or aspire to pursue a clinical academic career [5].

A 10-question online survey was sent to all eligible participants and completed between 18 February 2021 and 25 March 2021. Due to being a survey ethical approval was not required [6]. In total 34 academic clinical fellows in EM were identified. There were no ACFs in EM in Northern Ireland or Scotland. The survey achieved a 91% (n=31) response rate. Eleven locations had EM ACFs Bristol (n=2), Cambridge (n=3), Exeter (n=1), Leicester (n=2), Hull and York (n=1), Manchester (n=5), Plymouth (n=5), Oxford (n=2), Sheffield (n=5), London (n=4) and Wales (n=1). NIHR funded the majority (n=24), alongside Welsh Government (n=1), Defence Deanery (n=3) and local organisations (n=3). Totally 58% had exposure to science and research experience while at medical school (via intercalated degrees) and 29% during their first and second year as a doctor via the academic foundation programme. However, 59% (n=10, seven locations) of those who had already completed the scheme reported that their ACF was longer than 3 years.

There was wide variation in how the research time was structured with the most common allocation being a 9-month block 22.5% (n=7). Other options included: shorter blocks; a constant 20% of the time or more ad hoc arrangements. In total 84% took part in postgraduate qualifications (up to masters level) as part of the scheme. Also, 74% received structured research and academic development training during the ACF. Of the 18 who had completed the ACF one-third of respondents were undertaking a PhD (n=6), one was applying for a PhD, one is a postdoctoral clinical lecturer and seven are continuing with full-time clinical training. Of the four who were consultants, three did not have formal research time and one did not respond. There is a national approach to academic training in the UK compared to other countries globally. However, our survey found a wide variation in how the EM speciality structures and implements the ACF programme. A majority (59%) of those already having completed the ACF reported that it resulted in longer clinical training than their clinical peers within EM. Whether the length of the programme was predetermined before commencing an ACF, whether there was flexibility during the programme or whether extended training time was required to meet clinical competencies, needs further exploration.

The UK EM training pathway requires trainees to gain important specific skills through rotations in anaesthetics, intensive care, acute medicine and paediatrics. This might explain why there is reservation in having reduced clinical training, as time is needed to develop these core competencies. The survey has limitations. The study team relied on prior knowledge of the academic EM community and the recollection of the academic leads to identify ACFs. This may have introduced an element of selection bias with the potential that programmes (especially those locally funded rather than by the NIHR or with dual specialities) could have been missed. However, the high response rate provides good external validity. There is a clear and urgent need to foster the growth of academic EM. This survey provides a first step in understanding the current pathway in the UK, which is important, to best support current and future trainees to be able to access further academic careers, and increase the capacity in the speciality to support research engagement more broadly. We found variation in how the schemes are implemented in particular to the length of training for this level of clinical academic in EM. Understanding how different countries structure academic training is important to not only learn what does and does not work but also to foster and strengthen collaboration across Europe in this area.

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