

Title: Anticipating, experiencing, and overcoming challenges in clinical academic training.

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Abstract

Background

This paper builds on studies that have reported on the challenges of pursuing a clinical academic career.

Aims

This study aims to explore the perceived challenges clinical academic trainees experience, and the ways in which they overcome them.

Methods

Data collected from clinical academic trainees via an online survey and semi-structured interviews were analysed using thematic analysis.

Findings

Trainees experience challenges relating to balancing and progressing a clinical academic career and seek to overcome these through self-efficacy and by drawing upon the support of peers, supervisors and mentors.

Conclusion

Clinical academic trainees experience significant challenges as they strive to develop careers in academic medicine. They draw on their own resources and the support of others to help them to overcome these. Relatedly they often act to advocate, advise and support aspiring clinical academics.

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The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

Keywords:

Clinical academic training, clinical academic careers, overcoming challenges, interpersonal support, advocacy

Key points:

- Reports on challenges experienced and anticipated by clinical academic trainees
- There are suggestions as to how those challenges might be addressed
- The importance of interpersonal support is emphasised
- Trainees advocate clinical academic careers

Reflective questions:

- How can clinical academic trainees best be supported?
- What are the benefits of advocating a clinical academic pathway?
- Who would be a good mentor for a clinical academic trainee?

Introduction

The benefits of combining clinical and academic posts for patient care and NHS organisations are well-recognised. In addition, academic training offers personal and professional benefits (Holloway et al, 2020). The Integrated Academic Trainee (IAT) pathway supports medical trainees in becoming 'highly skilled and competent clinicians...deliver[ing] cutting-edge research; [and becoming] inspirational teachers and role models' (NIHR,2017:9). However, research has also reported on the difficulties of

combining roles, including balancing clinical training and academic work, and gaining organisational support (Clough et al, 2017). Postdoctoral clinical academic career progression is often further hindered by challenges including finding appropriate mentorship and securing funding (Ranieri et al, 2016).

Studies of clinical academic trainees' experiences in the UK are rare and, with a few exceptions, generally focus on singular aspects of the clinical academic pathway (Clough et al, 2017; Goldacre et al, 2017). This study reports on the experiences of trainees at various stages of their clinical academic training and focuses on underexplored aspects of the clinical academic experience including perceptions of trainees' 'future trajectory into academic medicine' (Ranieri et al, 2016:6) and ways that challenges might be overcome.

Methods

A mixed methods approach, combining survey and interviews, enabled breadth and depth of data to be collected, utilising the strengths of different methods (Bryman, 2012). This paper reports on the qualitative data collected and analysed.

Survey

A link to a Bristol Online Survey was emailed to 263 clinical academic trainees in the East Midlands of England (from two major health trusts and two universities) with a prize draw incentive for participants. The

survey included closed questions (e.g. demographic information) and open questions which allowed free text responses (Bryman, 2012). 73 respondents (41 men and 32 women) completed the survey. 48 (65.8%) were aged between 20-30 years of age; 24 (32.9%) were 31-40 years old; one was aged between 41 and 50 years old. Survey participants described their training stages respectively: academic foundation programme (AFP) (35), academic clinical fellowship (ACF) (21), clinical lecturer (CL) (10), PhD (4), not stated (3).

Interviews

34 of the 73 survey respondents offered to participate in further qualitative research. A sample of 16 participants at various stages of training were selected for individual, semi-structured interviews, ensuring diversity and geographical spread.

Author A, an experienced researcher with no prior relationship to the participants, conducted all of the interviews, mostly in clinical or university settings.

After giving verbal consent to participate, interviewees were asked to describe their clinical academic experiences in their own words. An interview guide facilitated comparison between cases, whilst retaining flexibility (Bryman, 2012). Interviews were digitally recorded with the participants' permissions, and professionally transcribed.

Ethical considerations

Ethical permission was not needed for this study (per Health Research Authority guidelines), because participants were recruited via a trainee network, rather than their NHS role. Confidentiality and anonymity were assured by removing identifying information from the transcripts and assigning respective participants survey response (SR) or case study (MCA) numbers.

Analysis

Qualitative data from the free-text survey responses and interview transcripts were combined and analysed using thematic analysis (Braun and Clarke, 2006). Multiple readings enabled recurrent themes to be identified. These were agreed by the authors and are incorporated in the discussion of the survey responses in the following section.

Results: Anticipating, experiencing, and overcoming challenges

The challenge of balancing clinical and academic work (Table 1)

Table 1 here

Respondents felt pressure to prioritise clinical duties, and similarly to participants in Green *et al's* (2018) study, reported feeling 'guilty for not being on the shop floor':

There's that pressure there...you find yourself working overtime and at the weekends, literally showing your peers that you're pulling your weight. (MCA6-AFP)

This pressure to fulfil the requirements of two organisations simultaneously seemed to be eased by the flexibility afforded by the IAT programme (NIHR, 2017). Trainees could organise their academic time (e.g. one day per week/one week per month/one-month blocks etc.), to ensure protected time for research:

Other people had advised me that one of the biggest problems was being pulled back into clinical work constantly...If you're on a ward, they might be contacting you whereas if you just aren't there for a block of time, then you're not there (MCA12-CL).

The challenging impact on career progression (Table 2)

Table 2 here

One of the main reported challenges was slower career progression compared to colleagues who had followed a purely medical training pathway; the financial repercussions of which are discussed elsewhere (Authors). However, participants were also aware of advantages when compared to their clinical peers:

My CV is very different from a bog-standard NHS trainee CV, particularly with regard to the research (MCA14-CL).

Like previous research (Holloway *et al*, 2020), participants described career-enhancing professional benefits gained through academic training. These included opportunities to present their research both nationally and internationally (providing valuable networking opportunities) and successful grant applications:

Having something extra [on your CV] increases your chances of being seen worldwide, not just in your hospital (MCA4-ACF).

Nevertheless, concerns were raised by some participants who had followed a non-traditional route such as having a PhD before embarking on the Academic Clinical Fellowship (ACF) programme. Although one participant considered this beneficial for avoiding the pressure of preparing a PhD application, another ACF with a PhD described her situation as:

Having the next rung of the ladder missing...you've got a giant gap to jump up (MCA16-ACF).

A survey respondent expressed a different concern:

It will be challenging to find an appropriate academic job having not completed my PhD in this area (SR37)

These findings support recommendations of the Academy of Medical Science (2020) for greater flexibility in the clinical academic route.

The challenging impact on career goals (Table 3)

Table 3 here

Most (76.2%) survey respondents said that their career goals had not changed during their training: they still wanted to pursue a career where they were meaningfully engaged in both clinical practice and academic research. However, where goals had changed, although most reasons were positive, other reported experiences indicate that advice is needed at all stages of the clinical academic pathway, including for trainees who choose to leave early and not continue onto formal academia.

The challenge of career breaks.

Additional challenges anticipated or experienced by respondents were related to taking parental leave and/or working part-time either currently or in the future. Unfortunately, there is insufficient room here to adequately discuss these concerns; instead they will be pursued in another paper.

Overcoming challenges through interpersonal support (Table 4)

Table 4 here

Despite describing the self-efficacy and personal qualities that were deemed necessary to overcome challenges, participants were also keen to

acknowledge the importance of interpersonal support. As one interviewee said, 'You can only encourage yourself so much' (MCA2-CL).

Peer support was described as particularly important where constantly changing rotations made it difficult to sustain relationships in clinical settings. One participant said, 'I think you need other ACFs around you, just for an informal chat' (MCA1-ACF). Another ACF described how his peers had set up a 'WhatsApp' group 'just [for] the ACFs because we feel like we're a little bit different... so we need to stick together to keep one another updated' (MCA4-ACF).

However, some participants reported feeling isolated:

I'm the only [clinical lecturer] in my department...literally I don't even know who the other clinical lecturers within the university are...I find it frustrating because...if we don't know who we are we can't help each other (MCA10-CL).

This suggests that clinical academics at all stages need opportunities for sharing experiences and advice. Additionally, although the importance of having positive role models was emphasised, they were not always available. Recognising her own need for a clinical academic role model, a female participant from a BAME background felt motivated to improve diversity:

What I'm really passionate about, and want to do when I finish my training, is to create shadowing opportunities for women who look like me (MCA2-CL).

This is important because a lack of role models for women pursuing clinical academic careers generally (Lambert et al, 2015), and women from ethnic minorities particularly, may result in an unwelcoming environment such that trainees leave the clinical academic pathway (Ranieri et al, 2016).

Several participants also described adopting formal roles (e.g. 'Clinical Champion') and informal roles to encourage, support and mentor others contemplating clinical academic careers.

The medical students always want more details about [the ACF] and when I start telling them [about] the research output, the benefits etc., I've had a good number interested. I would say I've been a very good advocate (MCA4-ACF).

Such advocacy is crucial for reversing the declining number of clinical academics 'operating at the interface between academia and the NHS' (Academy of Medical Sciences 2020:6).

Advice for aspiring clinical academics (Table 5)

Table 5 here

Discussion

This mixed methods study explored the challenges which were experienced and/or anticipated by trainees' as they pursued clinical

academic careers. Rather than focussing on barriers to progression which are already well-documented, this study explored how challenges faced by clinical academic trainees could be mitigated and overcome through self-efficacy and support, enabling them to continue along their pathways. Data highlighted a need for trainees to be proactive in organising their time effectively and developing individual qualities such as resilience and persistence. However, specific anxieties around fulfilling expectations of two organisations simultaneously reinforce recommendations for implementing dedicated research time for research-active staff (Lambert et al, 2015). Other areas for improvement were highlighted, supporting calls for more flexibility in postgraduate training to combat the often deterring 'complexity and rigidity of current pathways' (Ranieri et al, 2016). Findings also support suggestions that the value of research experience should be emphasised for trainees who leave the pathway early who 'do so with a greater understanding of research and new skills' (Clough *et al.*, 2017:4) and may be encouraged to return to academic training at a later point. In addition, supervisors should be trained to offer advice about available options (Green *et al*, 2018), particularly when senior clinical academic posts are scarce (Medical Research Council, 2017).

Peer support was found to be important for sharing knowledge and encouragement, but was not always available, particularly at later stages of career progression. The research therefore identified a need for a

network similar to one developed for nurses, midwives and allied health professionals in the East Midlands (EMCAPN) to ensure that trainees have opportunities to give and receive help and advice from clinical academic peers.

Echoing previous research, the importance of having enthusiastic, supportive supervisors was highlighted, as was having appropriate role models and mentors (Ranieri *et al*, 2016). In turn, participants described being advocates for the clinical academic route which is crucial for developing the next generation of research leaders (NIHR2017). Some participants aspired to become role models themselves. This is important for increasing diversity, particularly at higher levels of clinical academia (Academy of Medical Sciences, 2020, Medical Research Council, 2017).

Conclusion

This study has shown that while clinical academic trainees anticipate and experience challenges in a deeply personal way, they typically find ways to overcome them by utilising personal and professional resources and individual support mechanisms. Some also adapt their career goals to fit changed circumstances. Trainees are keen to encourage others to pursue a clinical academic pathway. Further research is needed to identify ways of smoothing the clinical academic training pathway as well as increasing diversity in clinical academic careers.

References

The Academy of Medical Sciences. 2020. Transforming Health through innovation: Integrating the NHS and Academia. [cited July 2020].

Available from <https://acmedsci.ac.uk/file-download/23932583>

Braun V, Clarke V. 2006. Using thematic analysis in psychology.

Qual.Res.in Psychology. 3(2):77-101

Bristol Online Survey <https://www.onlinesurveys.ac.uk>

Bryman A. *Social Research Methods, 4th edition*. 2012. Oxford: Oxford University Press

Clough S, Fenton J, Harris-Joseph H, et al. 2017. What impact has the NIHR Academic Clinical Fellowship (ACF) scheme had on clinical academic careers in England over the last 10 years? A retrospective study. *BMJ Open*. 7(6):e015722.

East Midlands Clinical Academic Practitioner Network <http://www.clahrc-em.nihr.ac.uk/about/east-midlands-clinical-academic-practitioner-network>

Goldacre MJ, Lambert TW, Goldacre R, et al. 2011. Career plans and views of trainees in the Academic Clinical Fellowship Programme in England. *Med. teacher* 33(11):e637-e643.

Green RH, Evans V, MacLeod S, Barratt, J. 2018. A qualitative study of the perspectives of key stakeholders on the delivery of clinical academic training in the East Midlands. *JRSM open*. Jan;9(2):2054270417741843.

Health Research Authority. 2017 UK-Wide Survey of Clinical and Health Research Fellowships; [cited July 2020]. Available from <https://www.hra.nhs.uk/>

Holloway S, Taylor A, Tombs M. 2020. Impact of postgraduate study on healthcare professionals' academic and clinical practice. *BJHCM*. 2;26(7):171-8.

Lambert TW, Smith F, Goldacre MJ. 2015. Making clinical academic careers more attractive: views from questionnaire surveys of senior UK doctors. *JRSM open*. Aug 19;6(8):2054270415602644.

Medical Research Council. 2017. Clinical and health research survey; [cited July 2020]. Available from

<https://mrc.ukri.org/publications/browse/clinical-and-health-research-fellowships-survey-2017/>

NIHR Guide to National Institute for Health Research Integrated Academic Training [cited July 2020]. Available from:

https://www.qmul.ac.uk/smd/media/smd/integratedacademictrainingprogramme/integratedacademictrainingprogramme-documents/NIHR_TCC-NIHR-IAT-GUIDE_2017.pdf

Ranieri V, Barratt H, Fulop N, Rees G. 2016. Factors that influence career progression among postdoctoral clinical academics: a scoping review of the literature. *BMJ Open*. Oct 1;6(10):e013523.