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## What are the main aims and outcomes of clinical academic training? Please explain why

Clinical academic training is vital to the UK's efforts to nurture a strong clinical academic workforce that provides expert leadership. This academic leadership should be in addition to and supported by equipping all clinical trainees with the professional judgement to interpret, apply, embed and evaluate innovation and research across the NHS.

We have seen significant improvements in the structure of postgraduate clinical academic training as a result of important efforts by the NIHR and by other research funders. The integrated academic training pathway (IATP) develops and maintains a strong group of clinical academic leaders, who are able to: inspire and educate the next generation; lead basic, translational and clinical research to bridge the gap between bench and bedside and use medical advances to meet population need; encourage commercial sector investment in research in the NHS; and provide a key interface with industry and policy-makers.

As the Academy highlighted in our response to the Shape of Training Review, the UK must continue to promote clinical academic training as patient and public needs change. The UK population is ageing, the burden of chronic disease is increasing and diseases are becoming more complex and affecting multiple systems. The NHS must be able to respond to such developments. There are significant opportunities to achieve this, many of which come from medical science, such as a deeper understanding of molecular pathology and rapid technological developments. Effectively translating these opportunities into practice relies on embedding health research and innovation throughout the NHS. Clinical academic training delivers the future research leaders who will enable us to deliver this vision.

The Government has recognised the benefits that research brings to the health service, placing legal duties to promote research across the reformed health service. Research leadership in the NHS will be vital to delivering these duties, underpinned by research awareness throughout the workforce. Not only does UK healthcare and public health benefit from clinical academic training, but so too does the UK economy. Research in the NHS is a key component of our world-class medical research.

## 2. What are the 5 most important academic competencies for academic doctors in training and why?

It is vital that academic trainees can offer evidence of high quality clinical and academic achievements as part of their annual review of competency progression (ARCP). They must have an academic educational supervisor, separate from the clinical educational supervisor, who would ideally be an established clinical academic. The academic supervisor should draw up an Academic Training Programme with the trainee, with a realistic and achievable timetable for delivery.

<sup>&</sup>lt;sup>1</sup> Academy of Medical Sciences (2013). *Response to the Shape of Training review of postgraduate medical education and training.* http://www.acmedsci.ac.uk/index.php?pid=47&prid=122

Academic trainees have individual needs. Their goals and objectives will be specific to the research project undertaken and to their stage of training. Consequently, the skills and competencies needed also vary. We therefore do not think it is appropriate to highlight five competencies in particular. However, in the Academy's 'Guidelines for monitoring clinical academic training and progress', we identified that generic academic competencies can be divided into three domains:<sup>2</sup>

- 1. Generic and Applied Research Skills
- 2. Research Governance
- 3. Communication/Education

Academic progress should be assessed in relation to each of these domains and we also outlined examples of specific academic skills that sit under each one. The academic supervisor should identify training goals relating to generic academic competencies and specific research goals for the trainee as appropriate, summarised within a Personal Development Plan.

In addition to acquiring academic skills and completing a research degree, academic trainees will ideally also generate research and teaching outputs, such as presentations at national/international research meetings, applications for grants or fellowships, and peer-reviewed articles. The academic supervisor and trainee should consider in advance the outputs that can be achieved over a specific period.

More generally, competencies across all specialty curricula should ensure that all trainees receive robust training in research awareness, critical appraisal, and the evaluation of evidence. These competencies must be properly appraised at every trainee's ARCP.

#### 3. How are academic training pathways related to workforce needs?

Given the importance of developing future research leaders, workforce planning must balance the pressures of service delivery against the need to provide a clear training pathway and protected research time for academic trainees. Academic trainees have individual needs; they should be able to take up academic posts and balance these with clinical training. Delivering such flexibility relies on cooperation between research funders and the structures managing education and training locally, such as local education and training boards (LETBs) in England. At a local level, trainee rotations need to allow for flexibility and, at a national level, flexibility is required to allow academic trainees to transfer between regions, or to spend periods abroad, to optimise their research and clinical training.

We have previously stressed that the UK needs to maintain strong clinical academic specialties to meet the changing needs of patients and health services.<sup>3</sup> To achieve this, workforce planning must take account of the uneven distribution of centres of excellence and academic training opportunities across the UK.

International mobility is a key component of the UK's status as a world leader in medical research. Internationally competitive researchers will greatly benefit the UK's research endeavour, bringing

<sup>&</sup>lt;sup>2</sup> Academy of Medical Sciences (2011). *Guidelines for monitoring academic training and progress*. http://www.acmedsci.ac.uk/index.php?pid=99&puid=110.

<sup>&</sup>lt;sup>3</sup> Academy of Medical Sciences (2013). *Strengthening academic psychiatry*. http://www.acmedsci.ac.uk/index.php?pid=99&puid=271

both health and economic benefits. They must be able to move to the UK to take up research training posts, providing they are also deemed competent for clinical practice.

# 4. How is the balance between academic and clinical training (including time, aims and training needs) achieved?

A well-defined yet flexible career path is essential to nurture future clinical academics. We have seen significant improvements through the IATP, which enables some trainees to take time out of clinical training for academic training periods, to re-enter the clinical pathway and to balance their clinical and academic duties. This must be maintained. Academic training should integrate research and clinical activity in a way which is adapted to the needs of individual trainees. Research funding is competitive and time-sensitive. Training programmes therefore need to be appropriately flexible and allow trainees to take up externally funded fellowships in a timely manner.

As we highlighted in our response to the Shape of Training review, the current system of time-based competency certified through the Certificate of Completion of Training (CCT) generates a rigid system in which trainees within disciplines move at the same pace. It does not accurately reflect the skill or proficiency of the individual trainee. Academic trainees must become competent in both academic research and clinical practice. Taking time out to undertake a PhD and subsequently completing both clinical and academic training can be very time consuming – often adding up to five or six years to the total training period. Care must be taken not to discourage individuals who embark on this significant commitment by unnecessarily increasing the length of training. Equally, they need sufficient time to achieve both sets of competencies. Different academic trainees will balance their academic and clinical training differently; they should not be constrained by a requirement to achieve competencies by a particular point in time. Competency-based training and regular dialogue between a trainee and their supervisor(s) are therefore crucial.

#### 5. What are the five most common problems for academic doctors in training and why?

Clinical academic trainees experience many challenges during their training, but the key problems all stem from the need to balance both clinical and academic duties, as we highlight in the previous questions. We regularly interact with clinical academic trainees, for example at our career development events, and the most common concerns are as follows:

## The academic career pathway must not appear unattractive

Without clear pathways for career progression in clinical academia, which do not appear disadvantageous in terms of pay, conditions or security, there is a danger that academic careers will become unattractive. The IATP has gone a long way to addressing this problem at a trainee level, but it is important that NHS employers, universities and research funders continue to ensure that clinical academic careers are no less attractive than non-research NHS careers. One recent example was the review of Clinical Excellence and Distinction Award schemes for NHS consultants. Removing these awards, or making it more difficult for those combining clinical and research careers to receive them, would have undermined a major incentive for doctors to engage in medical research and risked obstructing the UK's translational science agenda. We were pleased to see these awards retained; it is vital that they continue to provide such an incentive.

<sup>&</sup>lt;sup>4</sup> Academy of Medical Sciences (2013). *Response to the Shape of Training review of postgraduate medical education and training*. http://www.acmedsci.ac.uk/index.php?pid=47&prid=122

#### There must be flexibility to move between research and non-research posts

To ensure that the academic workforce incorporates the most promising academics and future leaders, opportunities for research must be created and maintained throughout the whole training pathway, and beyond. There should be clear pathways for later entry to an academic career. This is particularly important in disciplines such as general practice, where clinical training is normally completed before academic training begins. There should also be well-defined exit routes for those who decide not to progress further along the academic pathway, which may attract greater numbers of trainees into broader based research experiences. This should not be perceived as 'failure'; the research experience gained by these doctors will be a valuable asset in promoting research awareness within the NHS.

## There must be flexibility in where training and research can be undertaken

Clinical training often requires moves between different locations. However, for academic training, it is often beneficial for trainees to be attached to an academic unit throughout training. It can be difficult to transfer research to a new location, for example where it involves regular contact with patients, or access to highly specialised expertise or equipment. Conversely, for some trainees, academic mobility is highly desirable, but it can be very difficult to generate support for this locally. Flexibility could help in such circumstances.

There must be sufficient opportunity to become competitive for senior clinical academic posts There is currently a 'pinch-point' in academic training, at the stage of postdoctoral research. By this point, trainees will have already spent at least three years away from clinical duties undertaking a PhD and there is pressure to return to clinical training. Consequently, postdoctoral work must be undertaken alongside clinical work. Given the competitive nature of research, it is no longer possible for trainees to progress from a PhD/MD directly into a permanent university post such as a clinical senior lectureship without significant postdoctoral training. The Clinical Lecturer posts developed by the IATP have partly addressed this, but it remains very challenging to maintain the momentum of a research career, while also maintaining a clinical workload. The outcome is frequently that trainees emerge with a CCT without yet having adequate postdoctoral experience to be competitive for prestigious externally funded Intermediate Fellowships/Clinician Scientist Fellowships, which enable the transition from postdoctoral to independent researcher. For trainees to obtain sufficient postdoctoral research experience, there should be clearly defined structures that allow trainees to integrate their specialty training with high quality postdoctoral research training, including increased flexibility in the duration and timetabling of ACL posts and provision of increased numbers of appropriately-supported clinician scientist fellowships.

### Availability of senior clinical academic posts

Once trainees have completed their clinical training and gained sufficient postdoctoral experience, they must be able to progress their careers through timely access to senior clinical academic posts.

#### 6. Are there any other comments or suggestions you would like to make?

We would be delighted to provide further detail to the review team in person.