

Careers in academic medicine: the Clinician Scientist Scheme

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It is becoming commonplace to use the term 'crisis' when describing the current state of academic medicine in the UK. To take an optimistic view, the use of this term does imply recognition of a serious problem, and might stimulate attempts to solve it. A recent report from the Council of Heads of Medical Schools highlights some of the problems¹. Over 10% of clinical academic posts remain unfilled despite a clear requirement for even greater numbers. It is estimated that around 1,000 new posts will be required in the next four years to teach the expanding number of medical students who will attend existing and newly formed medical schools. Clinical academics are also needed to provide research leadership, and raise standards of service through development of new and effective treatment.

This problem is not new and a number of solutions have been suggested over the last few years, including the recommendations made in the Richards Report². The underlying cause of the problem is complex, but certainly includes the lack of a structured and flexible training programme for clinical academics. Although the current training system usually permits a first period of research (leading to MD or PhD), the opportunities for post-doctoral research have been more variable between specialties and across the country. Other disincentives to an academic career include the long training required and the lower income expected, both during training and later from private practice. Loss of private practice income may be more relevant in other disciplines, such as surgery, but clearly applies to some medical specialties. Perhaps more importantly, young doctors are daunted by the difficulty of meeting the demands of both university and NHS employers – ie of performing high quality research in the face of an increasing clinical workload.

One of the traditional stepping stones in an academic career was a post as clinical lecturer, during which teaching, research and clinical training could usually be combined. The number of these posts is falling, in part because clinical lecturers are unlikely to contribute significantly to the results of the Research Assessment Exercise (REA); this has led to a tendency to replace them with non-clinical lecturer

or senior lecturer posts. Whilst many current clinical lecturers make a major contribution towards medical student teaching, at present this does not have the same implications for funding as research. There is a clear need to maintain the clinical lecturer grade as one route to a senior academic post.

A major attempt to improve the career pathway for potential academics has been made by the Royal College of Physicians³ and the Academy of Medical Sciences⁴. The two reports from these bodies in 2000 proposed the development of a National Clinician Scientist Scheme. The College's report, *Training in academic medicine*, came from the Academic Medicine Committee (chaired by John MacDermot) and focused on the need for significant changes in the training of physicians planning a career in academic medicine. The Academy's report, *The tenure track clinician scientist* (chaired by John Savill), considered clinical academic careers more broadly across all branches of medicine. However, the main proposals of both reports are in agreement. It was suggested that the first phase of training for a potential academic would involve research towards a PhD or MD, together with a variable amount of clinical training. The novel suggestion was that there should then be a second phase of training, as a clinician scientist, during which the young academic could perform further post-doctoral research and complete their clinical training.

A key feature of this scheme is that the clinician scientist will be eligible to apply for a distinct National Training Number, known as an NTN(A). They will normally already have an NTN in their chosen specialty and, when they achieve their NTN(A), their existing training number will be released and can be reused. Thus, there should be no disincentive to current training schemes in appointing clinician scientist Fellows. An important recommendation is that clinician scientists should be given 'tenure track' status in the host medical school, with the expectation that they would normally achieve a senior academic post at the end of their fellowship. Not all medical schools have been able to accept this proposal. There is also recognition that getting started on a research training pathway may be difficult, and so a research training access scheme has

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been proposed which would provide training in research, probably between SHO and SpR level, to allow potential academics to prepare their training fellowship applications. However, it is not clear where funding for this scheme would come from.

Clinician scientist posts may be funded by existing clinician scientist fellowships, as currently provided by the Medical Research Council, or by new fellowships funded from the Department of Health, Higher Education Funding Council for England (HEFCE) or Association of Medical Research Charities (AMRC). The first tranche of Department of Health clinician scientist fellowships has now been awarded, and it is hoped that the total number of clinician scientists (from all sources) will be around 50 per year. It is proposed that these fellowships will be taken up towards the end of specialist training, and that the majority of fellows will wish to complete their Certificate of Completion of Specialist Training (CCST) on an *ad personam* basis. In order that the overall training of these individuals reaches the appropriate standard, a National Clinician Scientist Monitoring Committee has been established, as a subcommittee of the Advisory Group on Medical and Dental Education, Training and Staffing (AGMETS) R&D, chaired by Sir John Pattison. This Committee will have the responsibility for approving applications for NTN(A), based on an appropriate research award and satisfactory arrangements for continued clinical training.

The Royal College of Physicians is working actively to promote this scheme through its Academic Medicine Committee. This Committee is broad based, with representatives from various interested groups, including the MRC and the Wellcome Trust. The College Committee works closely with, and has cross-representation on, the Clinical Academic Training Committee of the Academy of Medical Sciences. The Academy's Committee is currently preparing a report, *Implementing the Savill report*, to describe how the Clinician Scientist Scheme can be adapted to different disciplines of medicine and dentistry. The timing of periods of research will clearly need to be different in certain craft specialties, where sustained practical experience is necessary for clinical training. In addition, the Academy proposes a mentoring system, whereby a senior academic not directly associated with their work would provide unbiased guidance to each clinician scientist.

The Academic Medicine Committee is working with the Association of Clinical Professors of Medicine and the JCHMT to ensure that the Clinician Scientist Scheme is compatible with current and future training programmes in general internal medicine and the medical specialties. The Committee is also considering how best to maintain the clinical lecturer grade as an important element of the academic career pathway in medicine, and a working group to address this problem has recently been established. Perhaps some such posts could be converted to the equivalent of a clinician scientist, and would involve a post-doctoral research component together with continued clinical training? These individuals should be on course to become senior lecturers. Other posts, which could be pre-doctoral, might retain an important teaching

role, and could lead either to an academic or NHS consultant career.

A recent meeting organised by the Federation of Associations of Clinical Professors, and attended by the Chief Medical Officer, addressed the problem, 'What is the future for clinical academics?', and has just produced a report under this title⁵. The importance of clinical academics to the future of UK medicine was emphasised, and the various disincentives to an academic career were discussed. In particular, the pressures of the NHS were seen as a major factor in eroding the time of the academic to perform teaching and research. It was stressed that there needs to be more 'joined up' thinking by universities, Royal Colleges, the NHS and HEFCE, in order to address the practical problems of academic medicine. Despite many suggestions, there was still a lack of implementation, and in this respect it was suggested that a National Academic Medicine Committee should be formed, with representation from all of the relevant bodies.

Finally, I should mention the work of the Medical Academic Staff Committee of the BMA, whose chairman sits on the College's Academic Medicine Committee. They are well aware of the current problems in academic medicine, and are representing the interests of clinical academics in negotiations about the new consultant contract and academic pay awards. They are supportive of the Clinician Scientist Scheme and also of the Follett report⁶, which recommends that clinical academics should have a joint annual appraisal and performance review from both NHS and university appraisers. This scheme is already being implemented in some medical schools and has the advantage that the totality of the clinical academic's role can be considered by representatives from both sectors.

It should be clear from the above discussion that the current 'crisis' in academic medicine has been recognised by, and is being addressed by, a wide variety of professional organisations. I am hopeful that this coherent approach will have a positive impact on national policy makers. However, the problems of clinical academics cannot be viewed in isolation, and they clearly relate to the chronic lack of investment in the NHS. There is good evidence that the majority of clinical academics spend a substantial proportion of their time providing a clinical service; and increasing service demands clearly limit their effectiveness as researchers and teachers. How can we sustain our academic activities in the face of the increasing clinical workload, when the number of clinicians in many specialties is less in relation to the number of patients than in most other countries in Europe? The answer is that we require a major and sustained growth in the number of doctors at all grades, and I believe that this is becoming widely recognised.

Despite the current problems, I still believe that a career in academic medicine is one of the most interesting and rewarding paths a doctor can take. It provides the opportunity to combine a doctor's core role – caring for patients – with the excitement of clinical research and the rewards of teaching. Hopefully, implementation of the Clinician Scientist Scheme, together with other appropriate measures, will encourage a new generation of doctors to share my views.

References

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- 3 Royal College of Physicians. *Training in academic medicine*. London: RCP, 2000.
- 4 Academy of Medical Sciences. *The tenure-track clinician scientist*. London: Academy of Medical Sciences, 2000.
- 5 Federation of Associations of Clinical Professors. *What is the future for clinical academics?* A report by the Federation of Associations of Clinical Professors. London: FACP, 2001.
- 6 Joint Funding Council's Libraries Review Group. *The Follett Report*. Bristol: Higher Education Funding Council for England, 1993.