

**Medically- and dentally-qualified academic staff –
recommendations for training the researchers and
educators of the future**

**Draft report of the Academic Careers Sub-Committee of Modernising
Medical Careers and the UK Clinical Research Collaboration
November 2004**

Medically- and dentally-qualified academic staff – recommendations for training the researchers and educators of the future

SUMMARY

Medical practice is under continuous and rapid evolution. A key driver of this evolution is new discoveries about the nature of disease, new means of clinical investigation and the development of new treatments. The spirit of enquiry and research that generates these new discoveries is an essential part of the culture of a healthy National Health Service (NHS).

Recent years have seen major cultural changes within the NHS, with clinicians finding themselves under great pressure to accomplish set goals and targets, which are frequently related to process rather than outcome. Providing education and training and performing research have not featured strongly amongst these NHS goals. But clinical academics who undertake these activities are a crucial part of the workforce that will shape the future of the NHS.

Warning bells have been ringing for some time over the perilous state of academic medicine in the UK. The deterrents for a clinical academic career have been well documented over the years but can largely be summarised as:

- i. *lack of both a clear route of entry and a transparent career structure;*
- ii. *lack of flexibility in the balance of clinical and academic training and in geographical mobility; and*
- iii. *shortage of properly structured and supported posts upon completion of training.*

This report sets out a series of recommendations to address these deterrents to clinical academic careers. The proposals can be grouped into four sections, each addressing the key stages of a clinician's career, namely: Medical School; Foundation Programme; specialist training and consultant / GP grade. Proposals for each of the career stages are made separately for academic dentists. The recommendations are as follows:

Medical Schools

For the Medical School stage, it is recommended that:

1. **medical students must be taught by leading clinical academics so that students understand the attractions of a career in academic medicine and how to pursue this aim;**
2. **the opportunity to undertake an intercalated BSc or equivalent is maintained, through the provision of scholarships and bursaries;**
3. **increased opportunities are provided for some students to explore the theory and practice of education in the undergraduate curricula through appropriate programmes, special study modules / student-selected components and intercalated degrees;**

4. **MB-PhD schemes are sustained and developed by funders allocating studentships to approved programmes for a five-year period on a competitive basis;**
5. **MB-PhD programmes are developed in the field of education, structured if necessary on a regional or national basis.**

Foundation Programmes

For the Foundation Programme stage, which will consist of two years (F1 and F2), the following options are recommended:

6. **the preferred option is for an integrated academic F2 programme which encompasses academic activities throughout the year, designed for those who show an aptitude and commitment for a research / educational career, with the following as additional opportunities;**
7. **a four-month academic rotation within the F2 year, designed to offer the F2 trainee the opportunity to explore his / her potential interest in a research / educational career, delivered either as “stand-alone” or in the context of an academic F2 year;**
8. **a pilot two-year integrated academic Foundation Programme targeted in part at MB-PhD students.**

Specialist Training

In order to ensure that there is an explicit academic training pathway during the specialist training period, and that these are flexible programmes that allow both clinical and academic competencies to be attained, it is recommended that:

9. **dedicated academic training programmes are developed in departments with a critical mass and well supported by external grant programmes**
- this is the core proposal of this report;
10. **substantial efforts are made to develop academic training programmes in those specialties that have been subject to particular decline in their academic activity, for instance the surgical specialties, pathology, radiology, public health and psychiatry;**
11. **these programmes are appointed *ad personam* on a Deanery basis with national oversight by a sub-committee of the UK Clinical Research Collaboration;**
12. **appointees to these programmes are given an NTN(A) at entry;**
13. **these programmes consist of two phases: the academic fellowship phase leading to a competitive externally-funded training fellowship and a higher degree and the clinical lectureship phase, leading to a Certificate of Completion of Training and providing opportunities for postdoctoral experience;**

14. **a cohort of National Clinical Educationalist Awards are created to support the higher training of educationalists.**

It is important that the proposed dedicated academic training programmes do not exclude other means of entering and pursuing a career in clinical academia. It is proposed that:

15. **entry to designated academic training programmes should be flexible, and open to trainees who change to an academic pathway at later points of entry;**
16. **awards by research funders of research training fellowships should not be restricted to those with NTN(A)s;**
17. **direct entry to the Specialist Register under the auspices of the Specialist Training Authority (and its successor body PMETB) be maintained and enhanced.**

Additional recommendations are made for academic GPs, many of whom enter academia once they have completed their clinical training. These are:

18. **the creation of two-year 50% clinical, 50% academic posts leading to the attainment of a Master's degree for general practitioners who intend to enter academia. These should be available both as part of vocational training, and after the doctor has completed vocational training;**
19. **the creation of a competitive two-year funding scheme to provide salary support for fully clinically trained general practitioners who have completed a doctorate and wish to prepare an application for a postdoctoral fellowship.**

In light of the fact that the new consultant contract is not yet generally being offered to academic GPs, it is recommended that:

20. **there should be no distinction in rates of pay between senior academic GPs and other senior clinical academics.**

To ensure that clinical academia remains an attractive option for those who decide to take a career break, it is recommended that:

21. **a mechanism of additional mentoring prior to and post career break is developed;**
22. **'re-entry' programmes are developed and made available following extended career breaks.**

Consultant / senior academic GP grades

In order to accommodate a new generation of trained clinical academics coming out of the proposed dedicated academic training programmes to establish their careers, the following are recommended:

23. **creation of a cohort of ‘new blood’ senior lectureship posts that are funded in partnership between and jointly owned by NHS Trusts, Universities, the UK departments of health and other research funders;**
24. **clinical academics retain pay parity with their NHS counterparts;**
25. **development of a clear pathway back into full time clinical practice from academia, subject to evidence of continuing good clinical performance;**
26. **establishment of programmes of continuous professional development that allow further clinical training of consultant academic staff, as appropriate, for career requirements;**
27. **revision of academic career progression / promotion criteria within Universities for clinical educationalists.**

Academic dentistry

The problems and opportunities of clinical academic dentistry are similar to those of academic medicine. It is recommended that:

28. **Dental Schools develop comprehensive programmes to encourage students into clinical academic dentistry, including the development of BDS-PhD programmes;**
29. **a limited programme of integrated Foundation Programmes are created for potential academic trainees;**
30. **an academic training programme in dentistry is developed, along the lines proposed for medicine;**
31. **increased flexibility and partnership in funding for training positions in clinical academic dentistry is required;**
32. **there should be an expansion of the established clinical academic workforce in dentistry, including a programme for “new blood” senior lectureships.**

It is proposed that the Sub-Committee continues to work with stakeholders to oversee the implementation of these recommendations.

BACKGROUND

1. Several reports have highlighted the difficulties facing aspirant clinical academics, as they attempt to negotiate the hurdles of dual training in clinical and academic skills (see Appendix A). Various efforts have been made to resolve these difficulties but these have had limited success as highlighted by a report from the Council of Heads of Medical Schools (CHMS) and the Council of Deans of Dental Schools¹, which showed large reductions in the numbers of academic staff between 2000 and 2003 in many medical disciplines, with the surgical specialties, pathology, radiology, public health and psychiatry especially affected.
2. There has been no shortage of activity amongst the academic medical community to try to develop solutions to the problems of training clinical academic staff, but there are serious workforce issues still to be addressed. The young clinical academic trainee finds himself / herself at the centre of a triangle of employers and regulators each concerned with their own particular aspect of employment, training and regulation (Figure 1). It is essential that these communities of employers and regulators are brought together to share ownership of these trainees who are essential to the future vitality of the NHS and Medical Schools.

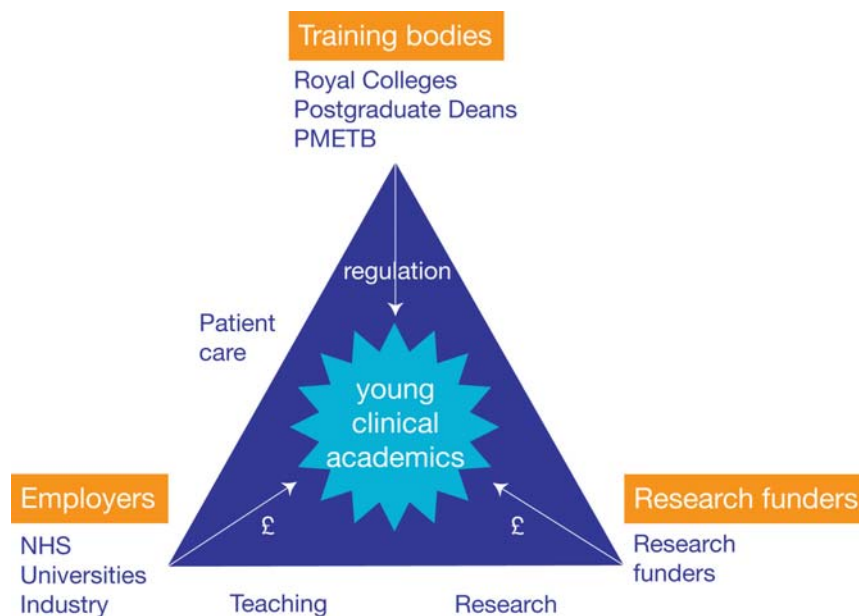


Figure 1 – The clinical academic triangle

3. New impetus to address these problems has come from the publication of reports by the Academy of Medical Sciences² and the Biosciences Innovation and Growth Team³ which highlighted the numerous issues confronting clinical research in the UK. In response, the Government set up the Research for Patient Benefits Working Party (RfPBWP) to take forward the recommendations made by these reports.

¹ *Clinical Academic Staffing Levels in UK Medical and Dental Schools: A survey by the Council of Heads of Medical Schools and the Council of Deans of Dental Schools*. May 2004 http://www.chms.ac.uk/fchms_pubs.html

² *Strengthening Clinical Research*. October 2003 <http://www.acmedsci.ac.uk>

³ *Bioscience 2015: Improving national health, increasing national wealth. A report to Government by the Biosciences Innovation and Growth Team*. November 2003 <http://www.bioindustry.org/bigTreport>

4. Whilst the Working Party was finalising its report, in the March 2004 Budget the Chancellor of the Exchequer and the Secretary of State for Health announced increases to NHS R&D funding (£100 million per annum by 2008) and the promotion of a partnership approach to strengthen clinical research through the creation of the UK Clinical Research Collaboration (UKCRC).
5. One of the recommendations of the RfPBWP was that UKCRC should set up a sub-committee to provide sustainable solutions to the training and career problems of medically-qualified academic staff, taking account of researchers and those whose primary interest lies in education⁴.
6. This was particularly opportune as a significant project intended to improve postgraduate training was underway under the auspices of Modernising Medical Careers (MMC). It was agreed that MMC and UKCRC would work together through a joint sub-committee and liaise closely with the Postgraduate Medical Education and Training Board (PMETB), the statutory regulator of training, to develop sustainable solutions to the problems facing medically-qualified academic staff.
7. The resulting Sub-Committee was asked to identify the roadblocks to careers in clinical academic medicine and solutions for removing these, with the aim to improve all aspects of academic careers for medically-qualified researchers and educationalists. Its membership and terms of reference are set out in Appendix B.
8. It is possible to group careers of NHS doctors into one of the following four strands, all of equal value / importance:
 - doctors who primarily undertake NHS service and training commitments and often have some additional undergraduate teaching duties;
 - doctors who, whilst primarily undertaking NHS service and training, have a more substantial commitment to one or more of education, training and research, and may pursue a higher qualification in teaching or research during their training;
 - doctors with a research doctoral degree who pursue a career as a clinical academic researcher; and
 - doctors with a higher qualification and training in education who pursue a career as a clinical academic educationalist.
9. Whilst acknowledging the importance of all doctors having exposure to and knowledge of academic work, the focus of the Sub-Committee has been on the latter two groups of doctors – specifically those who intend to pursue a full time academic career as researchers and educators in their chosen field. The career pathways for clinical academic educationalists in this report are primarily aimed at those individuals who require a deeper understanding of educational theory and practice, over and above the delivery of teaching. However, the importance of increasing teaching capacity through providing shorter, modular, learning opportunities for existing clinical academics and NHS medical staff (for example through postgraduate certificates or diplomas) should not be understated.

⁴ *Research for Patient Benefit Working Party – Final Report*, Department of Health, May 2004

Three barriers to potential academic trainees

10. Currently there are important deterrents for those wishing to pursue a career in clinical academic medicine. The Sub-Committee has identified three major barriers that are likely to be responsible for the current poor levels of recruitment and retention.

- i. **Clear route of entry and a transparent career structure.** The first barrier to potential clinical academics is the absence of a clearly defined entry point or career pathway. For many medical students, a career in research or education remains a remote concept with limited information on means of entry, what it entails and the subsequent career track.

However, the first interests in academia usually emerge during undergraduate medical education or, in some cases, are evident at the time of entry to medical undergraduate education.

At present an intercalated degree provides an opportunity to explore such germinal interests in research. A small minority show a high degree of initial commitment to a research career by pursuing MB-PhD training. No similar provisions are currently available for students wishing to pursue a career in education.

- ii. **The training pathway.** The second barrier to an academic career is finding a passage through the complex training requirements of clinical and academic medicine. Flexibility is the key to success, and there are three types of necessary flexibility.

The first is geographical flexibility. It is vital that trainees are given the freedom on the one hand to stay in one place as long as necessary to facilitate research or educational training and, on the other hand, the freedom to move around at later training stages to diversify that experience and training.

The second and third are flexibility from both clinical and academic training bodies. In essence every doctor entering academic training before the completion of clinical training needs a unique training programme and therefore *ad personam* training programmes and mentoring are essential. Of course, there are clinical and academic competencies that need to be completed but there are many different ways to achieve these.

- iii. **Exit from the training pipeline.** The third important barrier to aspiring academics is the shortage of posts structured for career establishment and the insecurity of tenure of these posts once achieved. Failure to gain impetus as an independent research worker, attract strong trainees, or renew grants can spell the end of a research career.

Academic posts can also be less attractive due to lack of parity of income with NHS colleagues. Later on, an academic career reduces the ability to earn from private practice. Furthermore, the apparent failure of some Universities to promote and reward the careers of medical educators provides little encouragement for young doctors to specialise in medical education.

An additional issue is that there has been no formal mechanism for broadening training after completion of the Certificate of Completion of Training (CCT) - thus academic trainees have been fearful of pursuing either clinical training alongside research or educational training that is any less broad than for those contemporaries who are aiming for a full-time clinical career.

The training of clinicians in the future

11. In light of the major changes to the postgraduate training of doctors currently being implemented through MMC, it is important to understand what these proposals entail and how their implementation will have an impact on any solutions to remove barriers to clinical academic careers.
12. The MMC's principles for the new training are: trainee-centred; competency-assessed; service-based; quality-assured; flexible; coached and structured; and streamlined. Of particular note is the emphasis that has been placed on flexibility, mentorship and streamlining. The goals are to improve and to shorten training, in particular by eliminating the long periods that many doctors now spend in the Senior House Officer grade. There will be a move to competence-based assessment rather than accreditation on the basis of time served. In the future there will be two phases to the training of clinicians.
 - i. **Foundation Programme.** The first is the two-year Foundation Programme (F1 and F2) focused on developing key competencies. F1 will be similar to the current pre-registration house officer year and upon successful completion, General Medical Council (GMC) registration will be achieved. The new F2 year is designed to provide a further generic curriculum to all doctors. Although the main focus of training will be the assessment and management of the acutely ill patient, this year will also cover other ground including team working, the use of evidence and data, time management, communication and IT skills.
 - ii. **Specialist or GP training.** Having completed the Foundation Programme, doctors will start the process of differentiation into the major specialties / sub-specialties of medicine. As with F1 and F2, training will be assessed in the future on the basis of achievement of competencies rather than solely on the basis of time served.

The Medical Royal Colleges are currently re-modelling specialty training into more streamlined programmes. The indications are that there will be training in a general specialty (e.g. general medicine or surgery) and/or individual specialties (e.g. urology, neurology), each leading to the award of a CCT. Those who take the former route will have the opportunity to undertake specialty / sub-specialty training following the award of a CCT.

In most disciplines, the trainee is likely to have to undergo one to two years of basic specialty training, followed by a few years of higher training in a chosen area. However, in some disciplines entry will be directly into the specialty

following the Foundation Programme (e.g. proposals being developed in urology).

The overall length of GP training would typically be three years with the core based in primary care. Academic training may start before or after vocational training has been completed.

There will be several competitive entry points for doctors pursuing these career pathways (see Figure 2). The first will be between F1 and F2. The second will be at the transition between Foundation Programme and specialty training. If the specialty requires basic specialist training, a third competitive entry point may come between this period and entry into individual specialties. The next will come for entry into the consultant / GP grade. And finally, another entry point may come for those individuals who wish to undertake higher specialty / sub-specialty training and who already have been awarded a CCT.

An integrated clinical academic career pathway

13. The work of MMC in overhauling the training of all doctors provides real opportunities for the development of an integrated career pathway for clinical academics and to address current major barriers as outlined above, specifically:
 - lack of both a clear route of entry and a transparent career structure;
 - lack of flexibility (clinical and academic training/geographical); and
 - shortage of properly structured and supported posts upon completion of training.
14. The following section outlines the Sub-Committee's recommendations for each career stage. These, when implemented, will result in fully-integrated clinical academic career pathways. The broad outline of this career path is illustrated in Figures 3 and 4.



Figure 2 – Clinical training path

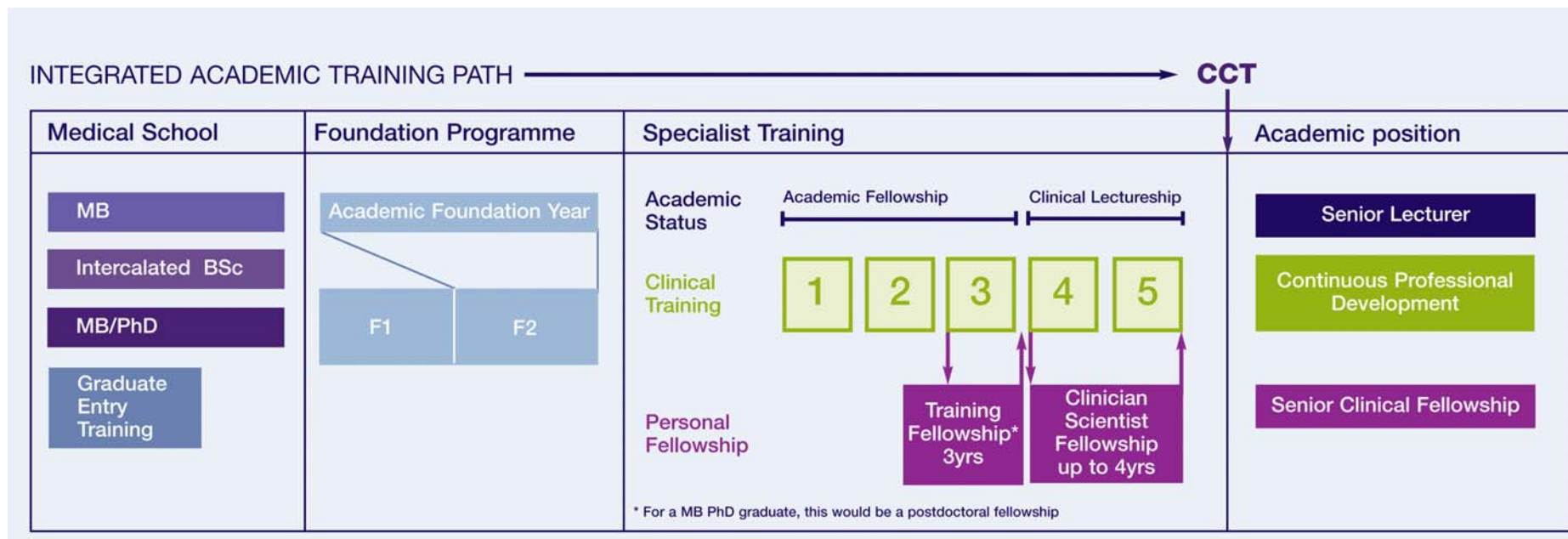


Figure 3 – Integrated academic training path for researchers

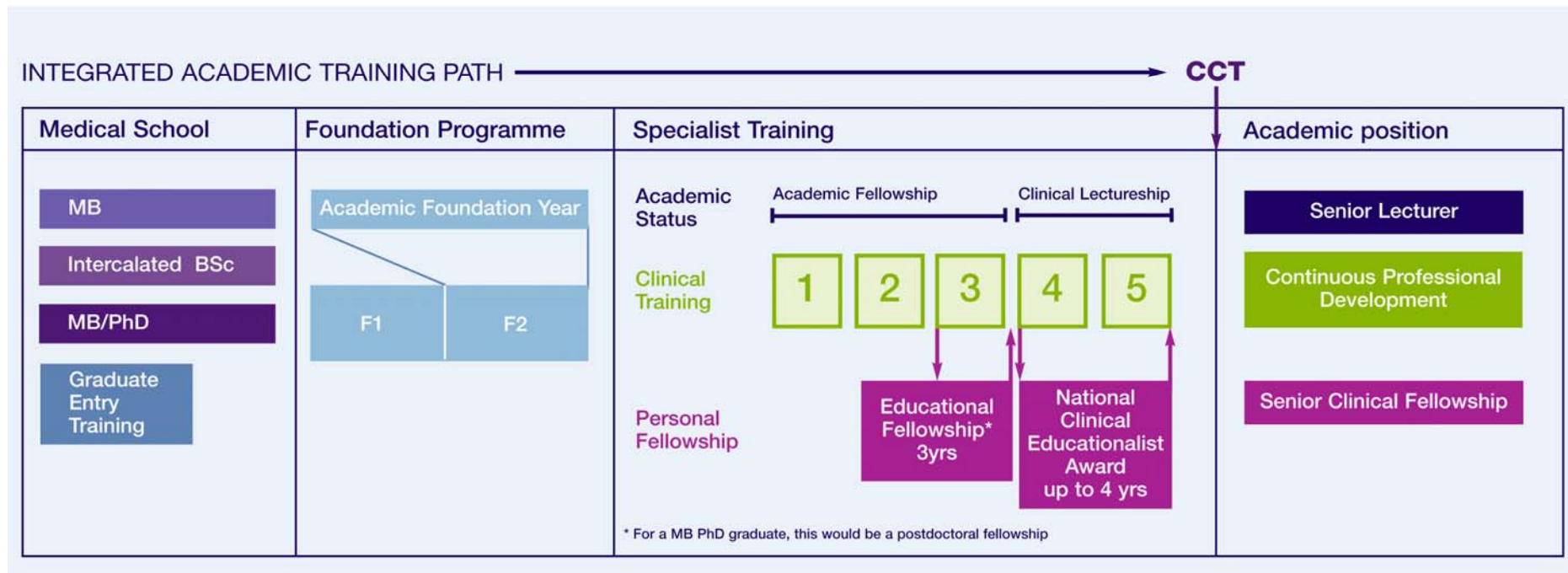


Figure 4 – Integrated academic training path for educationalists

RECOMMENDATIONS

Medical Schools

15. Medical students should be made aware of academic career pathways as part of the career advice that is provided in Medical Schools. Clear documentation describing academic pathways should be developed to support this process.
16. Students undertaking special study modules in academic departments should receive advice from academic mentors about how to pursue an academic career, on top of the information that is made available through the Schools' careers services. Medical students must be taught by leading clinical academics so that students are exposed to role models and understand the attractions of a career in academic medicine.
17. Special study modules and student-selected components should offer opportunities for students to work with clinical educators, as well as researchers.
18. In addition to undertaking an MB course, most Medical Schools offer students the opportunity to take an extra year (or two) to study and obtain a BSc or equivalent. This additional year can provide students with insights into scientific method and the discipline of research. It is important that pressure on the time and costs of training medical students does not reduce the opportunities for students to undertake an intercalated BSc or equivalent. In addition, greater opportunities should be made available for some students to explore both the theory and practice of education through these intercalated degrees. If possible, bursaries and scholarships should be available to enable students to intercalate a year without financial penalty.
19. At present, a small number of students with academic potential (usually those who gained a 2.1 or higher in a relevant BSc or BA) can commit to early training in research by intercalating a PhD within the MB course. Currently there are two "formal" MB-PhD programmes within the UK⁵, but other Medical Schools are also beginning to offer this option.
20. These programmes need support from host institutions, and at least some studentship funding needs to be secured. Given the timeframe between knowing the results of the BSc / BA and enrolling for the MB-PhD programme, applying for *ad personam* PhD studentships is unrealistic and the current situation of insecure funding deters some good students. Allocating studentships to approved programmes for a five-year period on a competitive basis would greatly enhance MB-PhD programmes.
21. MB-PhD and/or Master's programmes should also be made available in the field of education. However, such programmes should only be established where there is sufficient supervisory experience and the capacity to support a number of such doctoral /Master's students to ensure a vibrant postgraduate culture with sufficient peer support. Establishing these programmes may require collaboration between a number of Medical Schools and Universities.

⁵ At the University of Cambridge and University College, London

22. Medical Schools running MB-PhD programmes should also facilitate clinical placements that allow appropriate continued contact with the research / educational training base during the MB course.
23. In summary, the Sub-Committee recommends that:
 1. **medical students must be taught by leading clinical academics so that students understand the attractions of a career in academic medicine and how to pursue this aim;**
 2. **the opportunity to undertake an intercalated BSc or equivalent is maintained, through the provision of scholarships and bursaries;**
 3. **increased opportunities are provided for some students to explore the theory and practice of education in the undergraduate curricula through appropriate programmes, special study modules / student-selected components and intercalated degrees;**
 4. **MB-PhD schemes are sustained and developed by funders allocating studentships to approved programmes for a five-year period on a competitive basis;**
 5. **MB-PhD programmes are developed in the field of education, structured if necessary on a regional or national basis.**

Foundation Programme

24. During the development of the Foundation Programme, the British Medical Association (BMA) proposed a four-month academic rotational programme during F2 as an important opportunity to provide an entry point into, and to gain experience in, academic medicine. A working paper was developed by an MMC Delivery Board Sub-Committee that enlarged on this proposal.
25. This academic rotation was also supported in the Strategic Learning and Research Committee (StLaR) consultation paper, *Developing and sustaining a world-class workforce of educators and researchers in health and social care*, Phase II Strategic Report.
26. The Sub-Committee considers that such academic opportunities during F2 require clearly defined strategic objectives and educational outcomes. The key strategic objective is to develop the academic workforce. A distinction should therefore be drawn between F2 trainees who have already made a career decision to pursue a research /educational career, and those who want the opportunity to explore a potential interest in a research / educational career. To this extent, two modes of academic training should be considered during F2.
 - i. **Integrated academic F2 programme for trainees wanting to pursue an academic career.** The high-level strategic objective for this route is that the participants make firm decisions to commit to an academic career and make a positive contribution to developing the academic workforce. Selection into this programme should be recognised as a precursor to the full development and

participation in a defined academic pathway, although it should not be a necessary precondition for entering into that pathway at a later date.

The integrated academic F2 programme will consist of a year that has an underlying academic theme so that there is academic activity throughout the year (e.g. an academic mentor, attendance at academic departmental meetings, project work, a taught component). This year may include a focused and protected four months of academic work.

It should be noted that achievement of F2 clinical and generic competencies is an essential outcome of this integrated academic F2 programme, since all doctors will need to demonstrate these competencies before moving on to specialist training.

Academic F2 placements must therefore be designed to allow experience, learning and assessment of these competencies, taking into account the requirements of the European Working Time Directive.

Selection of individuals will therefore need to reflect a process that identifies doctors who are not only able to take on the academic challenges but who have acquired well-developed clinical skills relatively early in their foundation training.

These posts should be awarded competitively at local level, to clearly defined, rigorous selection criteria. The local Deaneries and Universities/Medical Schools/other eligible academic institutions should make appointments jointly, with each Deanery having an academic lead. The selection process should also involve an NHS representative, to ensure that rotation is organised to balance academic needs of trainees with the service requirements of the NHS Trusts.

Academic outcomes should be specifically agreed, along with the support to enable them to happen, at the outset of the placement. These may include:

- development of skills needed to write grant proposals to pursue a higher degree;
- participation in a research / educational project;
- sustained academic relationships leading to further joint working (after the placement is completed); and
- successful outcomes to the learnt component of the programme.

- ii. **Stand-alone four-month F2 academic rotations**, developed to offer the F2 trainee the opportunity to explore their potential interest in a research / educational career should also be available. These may be of particular value to provide Foundation training exposure to academic subjects that have been less sought after, such as the surgical specialties, pathology, radiology, public health and psychiatry. They may also provide opportunities to participate in programmes for those interested in education.

As with the integrated academic F2 programme, it will be essential that trainees participating in the stand-alone four-month academic rotations meet the required F2 clinical and generic competencies. It may be, for example, that

trainees continue to participate in twilight cover or Hospital at Night arrangements. This will depend on local arrangements, the requirements of the trainee and compliance with working-time regulations.

27. In parallel, we recommend that **pilot two-year integrated academic Foundation Programmes** should be established. Such a system would be of benefit to MB-PhDs since it will more easily accommodate their needs for continued contact with the research base throughout the Foundation Programme and a flexible start date to allow students some extra time to complete their PhD if necessary. For instance, the pilot Foundation Programme could have posts that rotated within hospitals that had a major research activity on site, had a flexible start date and continued periods of release for further research training. Integrated Foundation Programmes will offer much greater flexibility to provide, within the context of a two year training programme, the core clinical curriculum together with an additional academic component. Indeed, in the fullness of time an integrated approach to the two-year Foundation Programme for all doctors seems desirable and this may be an ideal context within which to pilot such programmes.
28. The Sub-Committee will undertake further work with stakeholders to identify the number of programmes that should be established. In doing this, it is important that a degree of flexibility is built in so that entry into academia does not become too prescriptive. It will also be vital that good demographic data is captured once the programmes are established, so that the overall picture is not lost through the system of regional appointments. The annual survey conducted by CHMS could be a way to ensure consistent data collection in the future.
29. In summary, the Sub-Committee recommends the development of the following options:
 6. **the preferred option is an integrated academic F2 programme which encompasses academic activities throughout the year, designed for those who show an aptitude and commitment for a research / educational career, with the following as additional opportunities;**
 7. **a four-month academic rotation within the F2 year, designed to offer the F2 trainee the opportunity to explore his / her potential interest in a research / educational career, delivered either as “stand-alone” or in the context of an academic F2 year;**
 8. **a pilot two-year integrated academic Foundation Programme targeted in part at MB-PhD students.**

Specialist Training

30. Development of explicit academic training pathways following this Foundation Programme will be vital if academia is to be perceived as an attractive career option. It is also essential that each trainee entering such an academic pathway is provided with a unique and flexible programme that enables both clinical and academic goals to be efficiently achieved.
31. In order to realise this, creation of **dedicated academic training programmes** is proposed. This is the core proposal of this report. For research training, it is envisaged that something in the order of 200–250 places on academic programmes will be required across the UK each year. We recommend that there should be notional numbers of academic trainee places allocated in each of the major specialties, in order to draw the particular attention of potential academic trainees to the broad range of opportunities for training. Such allocations will be advisory rather than rigid quotas, the key criterion for selection being the quality of the candidate. However, substantial efforts should be made to develop academic training programmes in those specialties that have been subject to particular decline in their academic activity, for instance the surgical specialties, pathology, radiology, public health and psychiatry. The Sub-Committee is conducting further work with the CHMS and its constituent Medical Schools in order to identify the numbers required for dedicated training programmes to nurture educationalists who will contribute to and lead curriculum design, revision and implementation, assessment and programme quality assurance.
32. If the awardee decides not to pursue an academic career at any point in the training programme, he / she would be able to return to a standard clinical training programme. It is imperative that a transparent route back is established so that those entering the academic training programmes are well informed of the process at the outset. It should be noted that the trainee will lose the flexibilities associated with the academic training programme upon returning to a standard clinical training programme.
33. Universities/Medical Schools/other eligible institutions, together with their local NHS partners, should create designated academic programmes. A key characteristic of the clinical posts in these programmes will be their association with a strong academic environment, as well as with a critical mass of both clinical workload and clinical staff. This will ensure on the one hand, that a proper clinical training can be provided to academic trainees, and on the other hand, that excessive service demands do not overwhelm the capacity of the trainee to undertake academic activity in parallel. An excellent academic / NHS partnership in teaching and district general hospital (DGH) environments will be a prerequisite for the development of first class training programmes.
34. Each academic trainee will have the opportunity to develop a flexible training programme to achieve his / her academic and clinical goals, through the provision of an *ad personam* training programme and mentoring. Delivery of such a programme should be trainee-centred as far as possible, with a single point of contact for the trainee.
35. The applicant will be awarded an NTN(A) upon appointment to these programmes. Funding for the clinical elements of these posts will be provided by the regional Postgraduate Deans in partnership with NHS employers, as is presently the case.

Follett principles of integrated academic and clinical job planning should be extended to academic trainees. The Sub-Committee notes and commends the flexibility of the Scottish system in which the Postgraduate Dean controls the whole of the clinical trainee's base salary, enabling placement on the basis of training opportunity rather than historic service needs.

36. Postgraduate Deans, University and NHS employers will work in partnership to enable the geographical and clinical / academic training flexibility necessary. It is recommended that Deanery-based academic training committees, acting as a source of both oversight and mentorship, are developed to facilitate this partnership, but these should not act as a straightjacket to restrict any geographical flexibility that is required to provide a first class training.
37. It is proposed that appointment to these designated academic programmes will be organised at a Deanery-level in a process overseen by the UKCRC. The UKCRC will be responsible for the appointment, oversight and monitoring of the sub-committees that will conduct the selection process and for provision of the secretariat for the process. Stakeholders that will be represented in the interviewing committees will include NHS employers, Medical Schools, Postgraduate Deans and Medical Royal Colleges.
38. The key principle is that appointments will be made *ad personam*, i.e. the brightest candidates with the greatest evidence for future potential academic development will be those chosen for academic training. To achieve this, it is proposed that there will be a two-stage process for appointment. The first step will be national advertisement for appointments to academic programmes of training. This will be accompanied by reference to a listing of potential academic training schemes. These schemes will be developed within each Deanery by a partnership including Medical Schools, NHS partners and Postgraduate Deans. Candidates will be able to apply to the Deanery of his / her choice.
39. The first stage of appointment will be the selection of successful candidates for academic programmes. It is proposed that there will be Deanery-conducted interviews that will be focused on appointing the strongest candidates. The primary goal of this stage will be to assess the potential of each individual candidate for academic training. A further essential criterion for appointment to an academic programme is that the candidate would be fully eligible and suitable for appointment to an equivalent NHS training pathway in the relevant specialty. This is essential because it is key that the NHS has as much 'ownership' of these trainees as their academic partners. In the case that the trainee at a later stage decides or is advised to revert to regular clinical training, a smooth transition will be ensured, subject to the satisfactory clinical training progression of the trainee.
40. After the selection of the successful candidates, the second stage of the process will be aimed at matching each appointee to the scheme that fits best his / her training requirements. This process will be undertaken by the secretariat in conjunction with both the appointee and the directors of individual training schemes.
41. The purpose of this two-stage process is four-fold: firstly to retain a clear focus on the academic trainees themselves; secondly to ensure a consistent standard of appointment;

thirdly to ensure that there is a selective pressure not only on the trainees but also on the academic training schemes on offer; fourthly that it offers a route for the continuous evolution and development of new training schemes, and avoids fossilisation of training opportunities. This rigorous process should ensure that strong candidates for academic training are matched to equally strong training environments.

42. The dedicated academic training programmes will consist of two phases, as outlined in Figures 3 and 4.

i. **Phase 1: Academic Fellowship** period. The first year of this phase will consist of general clinical training, similar to the basic specialist training provided to standard clinical trainees. It will be desirable at this stage for the academic trainees to gain a DGH-type experience.

In the second year, the academic trainee will be based normally in a teaching centre. Clinical service and training will still comprise the majority of the trainee's timetable but there will be designated sessions for academic training and preparation of an application for a competitive research or educational training fellowship. Trainees wishing to carry out research will be able to apply for currently existing training fellowships, for instance from the NHS, Medical Research Council, Wellcome Trust, Cancer Research UK, British Heart Foundation and other research funders. The Sub-Committee also recommends that funding for "educational fellowships" and other training opportunities needs to be identified and will undertake further work with key stakeholders.

Upon successful attainment of a training fellowship, the awardee will embark on a three-year academic period to obtain a higher degree. These fellowships will include protected time for some on-going clinical activity to allow skills to be maintained and competence to be developed.

In the event that an individual is unsuccessful in obtaining an academic training fellowship within a reasonable period, he / she will join a standard clinical training programme but must accept some loss of the flexibility that has been associated with the academic training programme.

ii. **Phase 2: Clinical Lectureship** period. Upon completion of a higher degree, the academic trainee will enter a clinical lectureship post. This transition will be conditional on satisfactory progress in both academic and clinical training, including attainment of a higher degree or educational qualification, normally within six months of the end of the training fellowship. The host institution and NHS will be responsible for locally overseeing the transitional process into the clinical lecturer stage. If the academic trainee is unsuccessful in this transition he / she will return to a standard clinical training programme.

The clinical lectureship will provide the trainee with the opportunity to complete his / her clinical training in conjunction with postdoctoral research career development. Many trainees will apply for Clinician Scientist Fellowship schemes or other postdoctoral support that provide a level of research support that allow the individual to spend approximately equal times in research and clinical training and service.

It is proposed that a number of competitive National Clinical Educationalist Awards should be created to support postdoctoral training of educationalists. These may be used for the acquisition of international experience, for example in centres of excellence such as McMaster, Toronto, Harvard, Maastricht, Monash and Chicago. The Sub-Committee will work with key stakeholders to try to identify or establish funding for such awards.

At the end of this phase, the trainee will have completed his / her clinical training leading to the attainment of a CCT *and* a period of further postdoctoral training.

43. The scheme outlined in paragraph 42 can be very simply adapted to provide a seamless academic and clinical training for MB-PhD graduates. These individuals will have completed their basic research training during their MB-PhD programme and would be in a strong position to compete for a postdoctoral fellowship during the second year of specialist training. These individuals could be expected to move on a faster track into the Lecturer phase of the training programme, subject to satisfactory local assessment as set out in paragraph 42 (ii).
44. In summary, the Sub-Committee recommends that:
 9. **dedicated academic training programmes are developed in departments with a critical mass and well supported by external grant programmes;**
 10. **substantial efforts are made to develop academic training programmes in those specialties that have been subject to particular decline in their academic activity, for instance the surgical specialties, pathology, radiology, public health and psychiatry;**
 11. **these programmes are appointed *ad personam* on a Deanery basis with national oversight by a sub-committee of the UKCRC;**
 12. **appointees to these programmes are given an NTN(A) at entry;**
 13. **these programmes consist of two phases: the academic fellowship phase leading to a competitive externally-funded training fellowship and a higher degree and the clinical lectureship phase, leading to a Certificate of Completion of Training and providing opportunities for postdoctoral experience;**
 14. **a cohort of National Clinical Educationalist Awards are created to support the higher training of educationalists.**

The role of the Master's Degree

45. For most clinical academic staff, a doctoral research degree will be a normal part of research training. However, for some, a significant taught component is necessary as a prelude, or less commonly as a substitute, for a doctoral degree. For training in epidemiology, public health and clinical trials research, there is considerable advantage in undertaking an MSc or equivalent as the first component of training (providing a background in such subjects as statistics, study design, ethical aspects etc.). Such a taught course may be provided typically as either a full-time intensive one year course or alternatively, as a modular part-time course that may run alongside clinical training and service work.
46. Time out from clinical training to do a one-year MSc might also be an appropriate route for those wanting to pursue interests in education but who do not want to commit to the level of specialisation implied by a clinical educational fellowship at that time in their lives.

Academic Clinical Trials Research and Public Health Medicine

47. The Sub-Committee notes that there is a shortage of clinical academic staff in clinical epidemiology (including clinical trials) and public health medicine. There are at least two potential training routes for clinical epidemiologists which need to be developed. For many clinical epidemiologists, especially those with a major focus on clinical trials, their research programme will be closely linked to their clinical specialty and therefore the academic training should be linked to accreditation in their chosen clinical field.
48. The Sub-Committee recommends that integrated four-year research training programmes that incorporate a taught Master's component in epidemiology or clinical trials within a combined programme leading to a doctoral dissertation be developed as the primary route. However, the Sub-Committee also recognises that the long duration of many epidemiological studies might make a longer training programme more appropriate, perhaps including a relevant intercalated MSc (such as statistics or health economics). Flexibility will be essential in these training programmes to combine clinical and research training. The other likely training route for clinical epidemiologists will be through public health medicine. The training programme for such individuals will therefore need to be implemented in the context of the reforms to the training in public health medicine currently being developed by the Faculty of Public Health Medicine.

Other routes of entry

49. For many clinical disciplines, designated academic training programmes will become established as the dominant route of development of a clinical academic career. However, it is important that this does not exclude other means of entering and pursuing a career in clinical academia, for example academic GPs and medical educators who often develop academic careers after the completion of clinical training.
50. In particular, care must be taken to ensure that the system remains flexible enough to accommodate late entrants into academia. Entry into an academic career usually requires the award of a training fellowship from a research funder by national competition, or less frequently, appointment to an 'un-named' research position on a

grant or research contract. We propose that individuals who have competed successfully for a competitive training fellowship and who already hold an NTN should automatically have this changed to an NTN(A) number. Those who are appointed to a research training position or an education-based learning and research programme that is not a competitive training fellowship post should be interviewed on an annual basis alongside other candidates for designated academic training programmes. If they meet the *ad personam* criteria for appointment to a designated programme, these individuals should be awarded an NTN(A), which will bring the necessary flexibility to allow them to pursue further academic training.

Direct entry to the Specialist Register via the Specialist Training Authority

51. A small number of trainees who pursue an academic career in the context of a narrow clinical specialism enter the Specialist Register directly on the recommendation of the Specialist Training Authority (STA), without completion of the requirements for a Certificate of Completion of Specialist Training. The Sub-Committee recommends that this route is maintained, in due course under the auspices of PMETB. This route is likely to continue to be attractive to only a minority of trainees, because it is only suitable for those intending to practise within a narrow area of clinical practice. However, it provides a route to clinical academia for those for whom research and / or education will be their dominant activity.
52. One major difficulty with this pathway at present is that guidance on clinical training requirements is not provided at the beginning of specialist training. The assessment by the STA is made in the context of the exact history of each individual's clinical training, taking into account his / her academic excellence. This mechanism has had the great benefit of allowing individuals with a great diversity of background to enter the Specialist Register. However, it may also discourage trainees from pursuing this route because there is little clarity in advance on what may be acceptable requirements for clinical training within a narrow specialism. The Sub-Committee recommends that PMETB develops a mechanism to provide guidance early in an academic career on an *ad personam* basis to those who may be contemplating direct entry to the Specialist Register, whilst maintaining the option for retrospective approval of clinical training for those exceptional individuals who have ploughed their own unique training furrow.
53. An additional discouragement to direct entry to the Specialist Register is the perception that it may be extremely difficult at a later career stage to extend the scope of clinical practice. This is a generic issue for all doctors once they have been entered on to the Specialist Register in any defined specialty, with or without a CCT, and one that we consider further under paragraphs 80 and 81. The development of transparent mechanisms for extension of clinical practice and further clinical training in the context of Continuous Professional Development may remove the perception that the direct route of entry to the Specialist Register leads to a clinical 'dead end' from which no career progression is possible.
54. The Sub-Committee therefore recommends that:
 15. **entry to designated academic training programmes should be flexible, and open to trainees who change to an academic pathway at later points of entry;**

16. **awards by research funders of research training fellowships should not be restricted to those with NTN(A)s;**
17. **direct entry to the Specialist Register under the auspices of the Specialist Training Authority (and its successor body PMETB) be maintained and enhanced.**

Academic GPs

55. General practice differs from hospital medicine in that many doctors have completed their clinical training before starting formal academic training. Indeed, a significant number start academic training after a period of full-time NHS practice. It is common practice for trainee academic GPs to undertake a Master's degree, for reasons outlined in paragraph 45 before starting doctoral training.
56. Therefore, although dedicated academic training programmes should be created for general practice (which may incorporate a year of training for a Master's degree), there also needs to be a scheme that facilitates the entry to an academic career of general practitioners who have completed their clinical training.
57. We recommend that a two-year 50% clinical, 50% academic fellowship leading to the attainment of a Master's degree should be created to encourage entry of principals in general practice to academia. These should be available both as part of vocational training (as in a number of existing academic vocational schemes), and also for doctors who have completed vocational training. Primary Care Trusts or Workforce Development Confederations should fund the clinical elements of these posts where they are undertaken following the completion of vocational training, as these posts would be important parts of local recruitment and retention strategies. We will work with key stakeholders to identify possible sources of funding for the MSc component of the fellowship.
58. Once a Master's degree has been obtained, the GP wishing to pursue an academic career will normally apply for an academic training fellowship. Following completion of a training fellowship, the trained GP does not have an easy opportunity to prepare an application for further research funding. Academic units in general practice do not have positions that provide a ready springboard for preparation of postdoctoral grants. A significant number of young GPs are lost to academic medicine at this stage.
59. To counteract this problem, the Sub-Committee recommends that a scheme should be developed to offer competitive two-year salary support (possibly 50%) for fully clinically trained GPs who have completed a doctorate and wish to prepare an application for a full postdoctoral fellowship. This would allow them seamless progression of their academic career. The Sub-Committee will work with key stakeholders to identify funding for such a scheme.
60. Another issue for academic GPs lies in their contract. In the past, academic GPs who were senior lecturers and above were generally paid on the NHS consultant salary scale. The new consultant contract is not generally being offered to academic GPs, putting them at a significant disadvantage to their clinical colleagues in Medical Schools. The Sub-Committee recommends that academic general practitioners with a

senior lecturer or above contract are offered terms that provide parity with academic consultant staff.

61. In summary, the Sub-Committee recommends:
18. **the creation of two-year 50% clinical, 50% academic posts leading to the attainment of a Master's degree for general practitioners who intend to enter academia. These should be available both as part of vocational training, and after the doctor has completed vocational training;**
 19. **the creation of a competitive two-year funding scheme to provide salary support for fully clinically trained general practitioners who have completed a doctorate and wish to prepare an application for a postdoctoral fellowship;**
 20. **that there should be no distinction in rates of pay between senior academic GPs and other senior clinical academics.**

Family-friendly working practices

62. While clinical academic medicine will always be challenging and competitive, there is no reason why family-friendly working practices should not be encouraged. The changing demographic of Medical Schools with women now making up over 50% of the intake⁶ suggests that if steps are not taken to make the academic path an attractive one to female graduates, then the pool of individuals competing for academic training positions will be significantly reduced.
63. Furthermore, there is an issue of low retention of female clinical academics. While gender parity seems to be attained at the training fellowship level, this is not the case at postdoctoral and senior level⁷. Together, these trends could significantly affect the ability of the academic programmes to deliver a sufficient number of well-trained clinical academics.
64. One way to ensure greater retention of clinical academics in general, and female clinical academics in particular, would be through the development of carefully structured support programmes for those who decide to take a career break, either during their clinical academic training or in a career grade post. Whilst flexible working arrangements can go some way towards accommodating those who decide to take a break, it will not in itself help with the impact of reduced contact with the academic and clinical environment and the resulting de-skilling that can occur. It is proposed that the following processes are put in place to address these problems.
65. Prior to taking a break from the academic training programme, the trainee will work with his / her academic mentors to develop a structured plan that will, circumstances allowing, enable the trainee to continue their engagement with the academic environment during the period of absence. This would involve, for example, providing appropriate access to journals, regular updates on laboratory developments, and regular

⁶ <http://www.bma.org.uk/ap.nsf/content/Womenacademic>

⁷ For instance, women account for approximately 45% of current Wellcome Trust Research Training Fellows but only 27% of Clinician Scientist Fellows and 14% of Senior Clinical Fellows.

contact with a mentor and research colleagues. A similar approach should be provided for trainees in education.

66. Depending on the duration of the career break, and the stage of the trainee's academic development, it may be necessary for the trainee to undertake a more structured approach upon his / her return that will allow the revision of academic direction and updating of research / educational skills. This might be achieved in a number of ways.
67. For the shortest absences or for those who have already established his / her academic programme, a period of intensive academic exposure may be all that is required for the individual to re-engage fully. This could be achieved quite readily through active mentoring and immersion in the research / educational environment.
68. For more prolonged absences and for those trainees who feel that they might wish to develop a new approach in a field that might have moved on rapidly, it is proposed that a mechanism is developed which will allow the trainees to develop their academic programme to a point where they will be competitive to apply for Clinician Scientist Fellowships or an equivalent in education. Similar mechanisms should be developed for individuals at a more advanced stage of their career.
69. It is essential that provision is also made for the maintenance of the trainee's clinical skills and mechanisms will need to be developed that will allow the individual to maintain clinical contact during their break and to undergo refresher training upon his / her return. The Sub-Committee will explore funding sources to implement these proposals to manage the clinical and academic work of those who decide to take a career break.
70. The Sub-Committee therefore recommends that:
 21. **a mechanism of additional mentoring prior to and post career break is developed;**
 22. **'re-entry' programmes are developed and made available following extended career breaks.**

Development of clinical academic careers at consultant/ senior academic GP level

71. The Sub-Committee anticipates that implementation of the training proposals set out in this report will provide attractive routes that will encourage a new cohort of academic clinical trainees. However, it is no use training academic staff if there are no career positions at the end of the training pipeline.
72. There are two routes for academic consultants to establish career positions. The first is application for advertised positions at senior lecturer level, or promotion within a University from lecturer to senior lecturer status. The second route is by competition for Fellowships that are awarded at consultant level, usually Senior Clinical Fellowships, though some Clinician Scientist awards bridge from trainee to consultant level. In view of the reduction in numbers of clinical academic staff and positions reported by CHMS, the number of senior lectureships available will not be sufficient for future needs. The Sub-Committee propose the creation of a new cohort of 'new blood' senior lectureship posts and will work with the key stakeholders to achieve

funding for these. These posts should be phased in over a period of time in order to match the posts with the best available candidates.

73. We recommend that the salary costs for these posts should be provided in a partnership between their clinical employer, normally an NHS Trust, and the funders of their research and educational activities, e.g. Universities, the UK departments of health and other research funders. Partnerships should be flexible, reflecting the work plan of the individual.
74. We recommend that there should be an annual national competition to award these 'new blood' senior lectureships. Individuals wishing to compete for one of these awards should be at or near completion of clinical and academic training. They will have identified a clinical and academic institutional partnership prepared to sponsor their application. The joint sponsorship, and normally funding, by NHS and academic institutions will ensure joint 'ownership' of these individuals. The criteria for assessment and award of these positions will be twofold. Firstly, the excellence of the individual will be assessed. Secondly, the proposed clinical and academic working environment will be considered. These criteria are of equal importance. The ideal environment will provide both clinical and academic excellence, critical mass and support in order to maximise the potential for the young academic consultant to succeed.
75. We recommend that there should be notional numbers of senior lecturer positions allocated within each of the major specialties, to encourage academic entry to those specialties in which there is a relative shortage of academic activity. However, it is a key principle that appointment to these 'new blood' senior lecturer positions should be made *ad personam*, with the primary criterion being excellence. A weak candidate should not be appointed to a shortage specialty in preference to a first class candidate in a popular subject area.
76. The clinical workplan for the new senior lecturer posts will be specified normally in the context of a team workplan agreed with the relevant NHS Trust. This way, the clinical workload can be managed and undertaken by the team working as a whole.
77. Contracts for the senior lecturer posts will normally be held by the University but there will be joint appraisal by the University and the NHS Trust as set out in the consultant contracts for clinical academics.
78. The creation of these new posts should go some way towards alleviating the current shortage of clinical academic career posts structured for career establishment. However, it is essential that there is a strong link between the supply of excellent young academics and the availability of career posts. The Sub-Committee recommends that the UKCRC retains a role in assessing the numbers of posts needed in relation to supply and demand issues.
79. Pay differentials have the potential to remain as a major disincentive to academic careers. The implementation of new consultant contracts has led to most NHS clinicians receiving salaries for 12 programmed activities and academics for 11. It is extremely important that academic consultant staff do retain pay parity with their NHS counterparts and that the criteria for the new clinical excellence awards and the number

of awards in practice adequately reflect the important contributions of clinical academics to the NHS.

80. It is possible that in spite of their best efforts, some of those who complete their training and achieve an academic career post may not succeed in academia in the medium to long term. Therefore, it is important that there is a clear pathway back into full time clinical practice for these individuals, in the context of a well-developed system of annual appraisal and continuous professional development. One factor that will help this transition is clear joint 'ownership' of academic staff by NHS and University partners. The Sub-Committee recommends a quinquennial review point for all clinical senior lecturers at which transition can be planned, if appropriate, from academia to full-time NHS work, subject to evidence of continuing good clinical performance and completion of normal continuous professional development.
81. Because academic clinical consultant staff have completed both clinical and academic training, it is likely that many will have chosen a narrower scope of clinical training that might not have been the case if they had opted for a full time clinical career. For those academic staff that choose at some point to opt for full time clinical work, it is likely that some additional training and supervision may be necessary and / or appropriate. The Sub-Committee recommends that mechanisms for providing such training are developed and not seen as exceptional solutions for exceptional problems. Indeed, mechanisms for broadening clinical training after completion of CCT are essential to sustain and enhance career flexibility for clinical staff both in full-time practice and in academia.
82. The Sub-Committee therefore recommends the:
 23. **creation of a cohort of 'new blood' senior lectureship posts that are funded in partnership between and jointly owned by NHS Trusts, Universities, the UK departments of health and other research funders;**
 24. **clinical academics retain pay parity with their NHS counterparts;**
 25. **development of a clear pathway back into full time clinical practice from academia, subject to evidence of continuing good clinical performance;**
 26. **establishment of programmes of continuous professional development that allow further clinical training of consultant academic staff, as appropriate, for career requirements.**

Educationalists

83. It should be noted that the creation of career pathways for clinical educationalists will not, *per se*, solve the problem of the relative undervaluing of this type of academic activity. If the objective of a solid and internationally acclaimed research base in medical education is to be achieved, leading to the dissemination of best practice, appropriate systems need to be in place to assess research in this emergent field.
84. Clarification of academic career progression / promotion criteria within many Universities will be necessary to enable clinical educationalists to progress to chairs in their discipline.

85. Established clinical educationalists with honorary consultant contracts should, on average, be promoted to reader / chair, subject to performance, at a rate equivalent to clinical researchers. Similarly their job plan should protect a similar proportion of time for academic activity as that afforded to researchers.
86. The Sub-Committee therefore recommends the:
27. **revision of academic career progression/promotion criteria within Universities for clinical educationalists.**

Academic Dentistry

87. The problems and opportunities of clinical academic dentistry are similar to those of academic medicine. However, staffing problems in Dental Schools are even more severe than in Schools of Medicine. There has been little change in numbers of staff holding clinical academic dental contracts between 2000 and 2003, and the CHMS and CDDS report of 2004 suggests that this is because the staff numbers in the year 2000 were at the minimum viable level.
88. The Sub-Committee therefore recommends action in support of academic dentistry broadly along the same lines as set out above for academic medicine.

Dental Schools

89. Recommendations 1-5, and the proposals in paragraphs 16-23 inclusive, are also generally applicable to undergraduate dental education. In particular, there is a need for development of some BDS-PhD programmes. This should be the responsibility of individual Dental Schools, in collaboration with external funding agencies.

Vocational training years

90. Upon graduation, dentists are required to undertake a period of vocational training in general dental practice, normally of one year; however, for some trainees this can be extended to two years to complete a programme of General Professional Training so that the trainee gains experience of secondary dental care. In common with the Foundation Programme for medical graduates, a limited number of **pilot 2-year integrated academic Foundation Programmes in dentistry** should be established. These will combine the requirements for clinical vocational training with placement in an academic and dental centre, and will include at least four months full-time experience of research.

Specialist training

91. In light of the parlous state of clinical academic dental numbers, and the possible expansion in the number of dental students, there is an urgent need to create **dedicated academic training programmes** for dentists along the same lines as recommended for medicine, as summarised in paragraph 44 above. The proposals in paragraphs 30-43 inclusive can generally be applied to the dental academic training programme proposed. There are fewer than 500 clinical dental academic FTEs (full time equivalents) in established posts in the UK, and there is an urgent need to increase the pool of

candidates available for appointment both to these posts as they fall vacant through resignation and retirement, and to additional posts that will need to be established to render clinical academic dentistry fully viable. It is therefore recommended that between 10 and 15 places on academic dental programmes will be required across the UK each year, either one or two in each Dental School.

92. Proposals both for the dental Foundation Programme and for the dedicated academic training programme in academic dentistry should be developed by Universities, Dental Schools, and Postgraduate Dental Deans, including proposals that will ensure that appointments will be made only of individuals showing evidence of great potential for future academic performance. Proposals must be developed in such a way that there is a balance of trainees between the major dental specialties.
93. At present, most clinical training posts in academic settings are funded from HEFCE sources. In recognition of the considerable contribution that academic dentistry makes to the development of the clinical service, funding for vocational training schemes, and academic training programmes should be shared between Universities, the NHS (through the MPET budget stream) and external funding agencies.

Clinical academic dental careers at consultant level

94. In common with medicine, there is a need for expansion of the clinical academic workforce, and there is a need for the proposed “new blood” senior lectureships (paragraph 72) to include posts in dentistry, with funding provided in partnership between an NHS Secondary or Primary Care Trust, Universities, and other research funders. The partnership should be flexible, reflecting the work plan of the individual clinical academic dentist.
95. In summary, the Sub-Committee recommends that:
 28. **Dental Schools develop comprehensive programmes to encourage students into clinical academic dentistry, including the development of BDS-PhD programmes;**
 29. **a limited programme of integrated Foundation Programmes are created for potential academic trainees;**
 30. **an academic training programme in dentistry is developed, along the lines proposed for medicine;**
 31. **increased flexibility and partnership in funding for training positions in clinical academic dentistry is required;**
 32. **there should be an expansion of the established clinical academic workforce in dentistry, including a programme for “new blood” senior lectureships.**

CONCLUSION

96. The Sub-Committee hopes that this series of recommendations, when implemented, will help to revitalise clinical academic careers. In developing these recommendations the Sub-Committee has consulted widely.
97. The Sub-Committee will continue to meet as a standing committee of the UKCRC and MMC and to work closely with PMETB. It will monitor the implementation and outcomes of these recommendations with a view to developing further actions in response. An Implementation Group is currently being set up to turn the Sub-Committee's recommendations into actions.

Appendix A

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Appendix B

Academic Careers Sub-Committee of Modernising Medical Careers and UK Clinical Research Collaboration: Membership

| | |
|----------------------------|--|
| Professor Colin Blakemore | (Member, UK Clinical Research Collaboration and Chief Executive, The Medical Research Council) |
| Dr Lisa Cotterill | (Assistant Director, Research Capacity Development Programme, Department of Health) |
| Professor Alan Crockard | (National Co-ordinator, Modernising Medical Careers) |
| Professor David Gordon | (Chairman, The Council of Heads of Medical Schools and Deans of UK Facilities of Medicine) |
| Professor Shelley Heard | (Chair, Workforce Group of the Conference of Postgraduate Medical Deans of the United Kingdom) |
| Professor Peter Houghton | (Chief Executive, Norfolk, Suffolk and Cambridgeshire Strategic Health Authority) |
| Professor Peter Kopelman | (Delivery Board Member, Modernising Medical Careers) |
| Professor Parveen Kumar | (Academic Vice-President and Senior Censor, Royal College of Physicians) |
| Sir Peter Morris | (Royal College of Surgeons) |
| Professor David Neal | (Postgraduate Medical Education and Training Board) |
| Dr Geraint Rees | (Wellcome Trust Senior Clinical Fellow) |
| Professor Michael Rees | (Chairman, British Medical Association Medical Academic Staff Committee) |
| Professor Martin Roland | (Director, National Primary Care Research and Development Centre) |
| Professor John Savill | (Professor of Medicine, Vice Principal and Head of the College of Medicine and Veterinary Medicine, University of Edinburgh) |
| Mr Rama Thirunamachandran | (Director of Research and Knowledge Transfer, Higher Education Funding Council for England) |
| Professor John Tooke | (Dean, Peninsular Medical School) |
| Professor Patrick Vallance | (Registrar, Academy of Medical Sciences) |
| Dr Mark Walport | (Chair, Academic Careers Sub-Committee of Modernising Medical Careers and UK Clinical Research Collaboration, Member, UK Clinical Research Collaboration and Director, The Wellcome Trust) |
| Dr Paul White | (Chief Executive, Barts and the London NHS Trust) |
| John Williams | (Secretariat) |
| Naho Yamazaki | (Secretariat) |

Appendix B

Academic Careers Sub-Committee of Modernising Medical Careers and UK Clinical Research Collaboration: Terms of Reference

The overarching aim of the Academic Careers Sub-Committee of Modernising Medical Careers and UK Clinical Research Collaboration is to improve all aspects of the academic careers for medically qualified researchers and teachers.

The Academic Careers Sub-Committee will:

- consider ways of improving access to, training for, and sustaining, academic careers (research and teaching);
- consult widely with stakeholders to harness as broad a range of ideas as possible;
- focus exclusively on the careers of medically qualified academic staff (research and teaching), whilst recognising the importance of developing first class academic career structures for a wide range of health professionals by liaising with other groups with relevant specific remits;
- build on the work undertaken by the Academy of Medical Sciences, the Strategic Learning and Research Advisory Group for Health and Social Care, and others;
- liaise closely with the Postgraduate Medical Education and Training Board; and
- report jointly to Modernising Medical Careers and UK Clinical Research Collaboration.