

Strengthening academic psychiatry in the UK

The Academy of Medical Sciences

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This report is published by the AMS and has been endorsed by its Officers and Council. Contributions by the working group were made purely in an advisory capacity. The members of the working group participated in an individual capacity and not as representatives of, or on behalf of, their affiliated hospitals, universities, organisations or associations. Their participation should not be taken as endorsement by these bodies.

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Summary

Mental ill health accounts for some 15% of the disease burden in developed countries, and patients with serious mental illness die 25 years earlier than the rest of the population. Yet despite these worrying statistics, spending on mental health research currently amounts to only one-twentieth of the total UK health research spend. In addition, there are currently concerns about recruitment to psychiatry in the UK, and the Academy has previously identified psychiatry as a vulnerable academic discipline. This is at a time when the UK needs a pool of talented academic psychiatrists who can strengthen our understanding of mental illness and take full advantage of scientific advances in its prevention, diagnosis and treatment.

In response to these concerns, the Academy established a high-level working group in early 2012 under the chairmanship of Sir David Carter FRSE FMedSci to consider how to strengthen academic psychiatry in the UK. The working group engaged with key stakeholders through meetings, correspondence, a widely circulated discussion paper and a workshop. Although the main focus of the inquiry was the recruitment and training of clinical academic psychiatrists, the related challenges facing psychiatry in general were also considered.

Profile of psychiatry

Recruitment to psychiatry has undoubtedly suffered from a perception that it is remote from the rest of medicine, insufficiently scientific and concerned with the treatment of stigmatised and challenging patients in geographically isolated hospitals. In part, the negative perception may reflect loss of self-esteem among psychiatrists who no longer see themselves as having a lead role in a discipline 'de-medicalised' by multi-professional working.

It is clear that much needs to be done to enhance the profile of psychiatry and

psychiatrists in medical schools and beyond if recruitment is to be enhanced. It is essential that psychiatrists position their specialty so that it can attract the brightest and best students and postgraduate trainees. The recruitment campaign launched recently by the Royal College of Psychiatrists is timely. Senior clinical academic psychiatrists in particular must portray psychiatry as an exciting scientific specialty that is integrated in the broader context of overall patient care and offering great potential for research at undergraduate and postgraduate levels.

Balancing the needs of clinical and academic training

Postgraduate training in psychiatry must emphasise the underlying science base of the discipline and produce a workforce that can take full advantage of the march of science and adapt to changing patient and service needs. The subset of psychiatrists who wish to develop a clinical academic career should receive most of their clinical training in an environment where research is valued.

Training programmes must encourage and maintain a flexible approach to balancing clinical and research training needs. Senior clinical academic psychiatrists need to establish and maintain a strong presence in training programmes to maximise their influence on training and the career development of clinical academics.

Academic training opportunities

Nurturing the career development of trainees is the key to strengthening academic psychiatry in the UK. The Academy welcomes the growth of training schemes that integrate clinical training and academic development. When aspiring clinical academic psychiatrists take time out of

clinical training to undertake doctoral research it is essential that they do so in optimal settings that favour multidisciplinary interaction and provide excellent supervision and mentorship. When applying for research training fellowships, psychiatrists appear to do as well as those in other specialties and concerns about capacity in academic psychiatry can be addressed by increasing the number of high-quality applicants, providing excellent mentoring and encouraging cross-discipline linkages.

Sustaining academic careers

It is important to ensure that there is an appropriate balance between the availability of training posts and more senior academic positions in psychiatry. The Medical Schools Council is encouraged to continue monitoring the number of academic positions in UK medical schools so that it can be determined whether the desired increase in clinical lecturer positions is being matched by a significant increase in the number of senior lecturers and readers. The UK is fortunate to have several outstanding centres of excellence linked to or based in Higher Education Institutes. These centres provide extensive research and clinical training opportunities for aspiring academic psychiatrists. The Academy strongly supports a strategic approach on the part of research funders to develop and sustain these internationally competitive centres of excellence. Collaboration between centres and with university departments of psychiatry is strongly encouraged.

Interdisciplinary opportunities

Biomedical advances are currently posing major questions about the traditional boundaries between specialties in medicine. It is imperative that training programmes are refined as knowledge of disease and its prevention, diagnosis and management increases. In psychiatry a blurring of traditional conceptual

boundaries between diseases of the brain and of the psyche is also underlining the need for clinicians to have a broader understanding of the scientific basis of the discipline. Training programmes need to develop flexibly so that training in psychiatry can be integrated appropriately with that of other specialties. The Academy strongly supports the development of integrated training opportunities. It strongly encourages the Royal College of Psychiatrists to work with other Colleges and those responsible for postgraduate training in the UK to develop cross-training opportunities for trainee psychiatrists. Of the options for integrated training considered in this review, the Academy recommends the creation of a new sub-specialty that will allow psychiatrists to have up to two years of training in a related specialty important for their clinical academic development. Given the complex nature of mental illness and its management, the Academy sees this option as the best take-off point for an evolutionary approach to integrated training.

Although this Review has been primarily concerned with training for clinical academic psychiatrists, the Academy holds strongly to the view that integrated training opportunities should be available for all trainee psychiatrists and tailored to their career needs and those of the patients they will serve. To develop and implement new and effective treatments for mental health disorders, the UK will need cadres of clinical academic psychiatrists who will not be constrained by current boundaries between specialties and who have acquired expertise in other related scientific disciplines.

Recommendations

This review has developed recommendations, the aims of which are grouped in the three areas outlined below. Individual recommendations are set out in the final chapter of this report.

Enhancing recruitment to academic psychiatry

- Improving recruitment to psychiatry and clinical academic psychiatry in medical schools.
- Improving career pathways for medical graduates aspiring to a career in academic psychiatry.

Increasing research opportunities for academic psychiatrists

- Improving research capacity in clinical academic psychiatry.
- Ensuring that trainee clinical academic psychiatrists can carry out doctoral research in optimal settings.
- Providing excellent mentoring for trainees.
- Ensuring that clinical academic psychiatry has a balanced workforce that is able to develop and deliver mental health services.
- Enhancing the international standing of UK research in clinical science by realising the full potential of centres of excellence and collaboration between them.

Integrating psychiatry with other neuroscience disciplines

- Removing unhelpful and constraining boundaries between psychiatry and related specialties through a pragmatic and evolutionary approach to development of novel integrated training programmes.

The Academy attaches great importance to the drive to strengthen academic psychiatry in the UK. It appreciates that implementation of the recommendations made in this review will constitute a sustained but surmountable challenge. The Academy is confident that established psychiatrists, the Royal College of Psychiatrists, those concerned with medical workforce planning and training programmes, Universities, medical schools and their Deans, research funders and regulators will work constructively with each other to accomplish desirable and necessary change.

1 Introduction

Biomedical and clinical research is critically important in the drive to improve health and healthcare in the UK and has significant implications for the nation's wealth and wellbeing. Given the large burden of disability caused by poor mental health, it is vital that the UK maintains excellent psychiatric services and an academic psychiatry constituency that is able to contribute fully to improving knowledge of mental illness and its prevention, diagnosis and management. In 2009 an Academy report reflected concern that most UK academic specialties outside internal medicine appeared to have experienced some decline (data from Medical Schools' Council); psychiatry was seen as one of several 'vulnerable' academic specialties where there were particular concerns about decreasing academic recruitment and unfilled academic posts.¹

The Medical Research Council (MRC)-led Review of Mental Health Research in 2010 chaired by Professor Christopher Kennard FMedSci concluded that although the UK is well-placed to be at the forefront of advances in basic understanding and improved prevention, diagnosis and management of mental illness, mental health research spend (estimated at 5–6.5% of total UK health research spend) is not proportionate to the burden of disease (estimated as 15% of health burden in the developed world).^{2,3} The UK base in neuroscience, social science and mental health research needs to be better integrated with the potential of the National Health Service (NHS) to conduct large-scale studies and with the potential of industry to develop novel therapies. Major obstacles to progress were identified as the suboptimal capacity of UK mental health research, the stigmatisation of mental illness and the need to improve research access to

large numbers of patients, samples and data. As key parts of its vision for improving mental health research, the Review identified the need to increase research capacity and innovation, augment support for multidisciplinary research groups, enhance research training and ensure a critical mass of research workers. Greater breadth in structured training programmes, capacity building through studentships and fellowships, and project funding calls to stimulate research activity were all seen as important in incentivising and strengthening research training in mental health. Academic psychiatry in the UK must be able to play a full part in the burgeoning of mental health research and the improved management of mental illness.

In January 2012 the Academy formed a working group to develop a position paper on the training of academic psychiatrists in the UK. The decision was made in response to concerns expressed about the state of academic psychiatry training and against a background of a marked recent decline in fill rates of psychiatry training positions and a perception that fewer trainees were taking up an academic career in the specialty.

The terms of reference for the working group were as follows:

- To identify the challenges and barriers, perceived or otherwise, in recruiting and retaining trainees in academic psychiatry and make recommendations to strengthen the workforce in this area.
- To consider how psychiatry and the neurosciences can work across traditional boundaries to develop an academic training programme that will equip future generations with the knowledge and skills

1 The Academy of Medical Sciences (2009). *Building clinical academic capacity and the allocation of resources across academic specialties*. <http://www.acmedsci.ac.uk/p99puid150.html>

2 Mental Health Foundation (2010). *Economic burden of mental illness cannot be tackled without research investment*. <http://www.mentalhealth.org.uk/content/assets/PDF/campaigns/MHF-Business-case-for-MH-research-Nov2010.pdf>

3 Medical Research Council (2010). *Review of mental health research - report of the Strategic Review Group*. <http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC006848>

required to meet healthcare needs.

- Where appropriate, to make comparisons of clinical academic workforce profiles in other countries, in particular the USA.

The working group met on two occasions (in March and April 2012), supplemented its work by discussions with leading figures in academic psychiatry in the UK and overseas, and obtained evidence from organisations responsible for the direction, funding and regulation of clinical academic training in the UK. A discussion paper was approved by the Academy's Council in June and circulated for comment to selected individuals and organisations. The Academy hosted a workshop in September 2012 that allowed further discussion and input to the work of the working group. The resulting document was agreed by the working group in October, subjected to the Academy's normal governance procedures and then endorsed for publication at the meeting of the Academy's Council in November 2012.

In undertaking its remit, the working group concentrated on the training of clinical academic psychiatrists but saw it as important to set issues currently facing academic psychiatry in the broader context of the challenges currently facing psychiatry in

general in the UK. The working group did not consider issues facing specific sub-specialties within psychiatry: rather, it considered ways of strengthening clinical academic psychiatry across the discipline. Nevertheless, the working group was aware that some sub-specialties, such as forensic psychiatry and psychiatry of learning disability, may have particular difficulties in recruitment, training and academic profile.

It is also important to emphasise that when discussing science and research fields relevant to clinical academic psychiatry in this document, the working group and the Academy see them as stretching widely from basic neuroscience to clinical neuroscience, through primary care to secondary and highly specialised (tertiary) care, and through a broad range of specialty areas with which psychiatry has interplay. These areas include neurology and other medical specialties, neurosurgery, neuroimaging, psychology, paediatrics, obstetrics and perinatal medicine, care of the elderly, primary care, population health, infectious diseases, social medicine and research fields such as epidemiology, health services research and molecular genetics.

2 Issues facing psychiatry and clinical academic psychiatry

Recruitment to clinical academic psychiatry needs to be considered in the context of concern that low levels of recruitment into psychiatry in general in the UK will inevitably reduce the pool of talented trainees wishing to become clinical academic psychiatrists.

psychology and wish to pursue these interests at university. However, many pupils electing to pursue careers in basic neuroscience or psychology may do so because they are not fully aware of the opportunities presented by psychiatry and the clinical neurosciences.

Throughout this report reference is made to the training pathway for psychiatrists and academic psychiatrists. A typical training pathway for academic psychiatrists is illustrated in Box 1.

2.1.2 Medical school

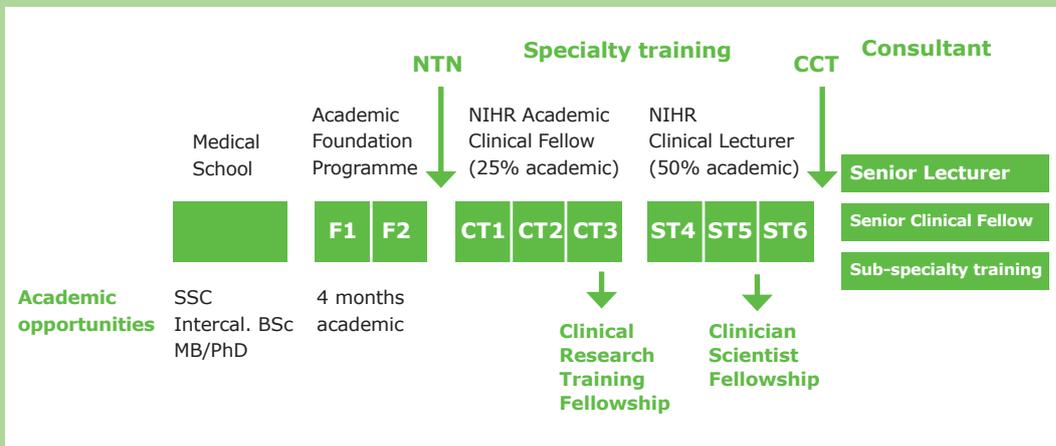
Psychiatry currently has an image problem in many medical schools.^{4,5} A common perception in other sectors of the profession is that it is remote from the rest of medicine, not sufficiently scientific, and deals with patients who are stigmatised and present a difficult therapeutic challenge where there are limited prospects of success. In part, psychiatry's problem may also reflect loss of self-esteem on the part of psychiatrists who no longer see themselves as having an uncontested lead role in a discipline 'de-medicalised' by the

2.1 Recruitment issues in secondary schools and medical schools

2.1.1 Secondary school

Many secondary school pupils are interested in the neurosciences, mental health and

Box 1: Typical training pathway for academic psychiatrists in England



Medical school is followed by two years of foundation training (F1, F2). Psychiatry trainees undergo three years of core training (CT1–3) and a minimum of three years of advanced training (ST3–6) before gaining their certificate of completion of training (CCT) in one of six psychiatry specialties: general psychiatry (with the option of three sub-specialties in liaison psychiatry, rehabilitation psychiatry or substance misuse psychiatry); child and adolescent psychiatry; forensic psychiatry; old age psychiatry; psychiatry of learning disability; or medical psychotherapy.

4 Rajagopal S, Rehill KS & Godfrey E (2004). *Psychiatry as a career choice compared with other specialties: a survey of medical students*. The Psychiatrist **28**, 444–446.

5 Curtis-Barton MT & Eagles JM (2011). *Factors that discourage medical students from pursuing a career in psychiatry*. The Psychiatrist **35**, 425–429.

advent of multi-professional working.⁶ In many centres, psychiatry's image and ability to relate to mainstream medicine is not helped by the geographical isolation of ageing psychiatric hospitals at some distance from the main teaching hospital campus.

To medical students, psychiatry can appear remote from the rest of medicine, divorced from its science base and perhaps lacking clinical academic role models. This may disillusion students who initially were interested in a career in psychiatry and lead to unfavourable comparisons with other clinical neuroscience disciplines that appear to be capitalising more effectively on the recent exciting growth in scientific understanding. An unintended consequence of the Research Assessment Exercise (RAE) has been a downgrading of the importance of teaching in some medical schools and this will remain a concern in the forthcoming Research Excellence Framework.⁷ This downgrading coupled with a diminished capacity of some university departments of psychiatry may have significantly weakened psychiatry teaching to the detriment of recruitment. A review of UK medical graduates in years one and three after qualification shows that three factors have greater influence on choice of psychiatry as opposed to other careers: experience of the subject as a medical student, self-assessment of skills and aptitudes, and anticipated hours and working conditions.⁸

Concern about the attractiveness of psychiatry to medical students is not confined to the UK. In 2012 the number of senior medical students applying for psychiatry residency programmes in the USA dipped to 616 from a high of 670 in 2010. This means that only 3.9% of graduating US medical students now enter the specialty, the lowest proportion to do so in the past six

years. Commenting on these trends, Professor John Oldham, President of the American Psychiatric Association said '*we need to reach out to medical students in more effective ways than simply exposing them to a four-week clerkship on an inpatient unit with no follow-up of the patients they have cared for*'.⁹ Whereas Professor Sidney Weissman (Past President, US Association of Directors of Psychiatric Residency Training Programmes) remarked '*The picture of contemporary psychiatry is confusing to many of us and must be confusing to our students*' and '*until we restore clarity to what our discipline is and develop creative ways to communicate it in a few weeks of psychiatry clerkship to our medical students, I am concerned that recruitment will continue to decline*'.

2.2 Recruitment to postgraduate training in psychiatry in general

2.2.1 Psychiatry: a discipline in crisis?

According to the Medical Programme Board for England, the ratio of applicants to psychiatry training places fell beneath 1:1 in 2010 in England. Although the ratio may since have improved slightly (to 1.4:1 in 2011) there can be no grounds for complacency. In England and Wales at the end of the second recruitment round in August 2011, only 83% of the 478 Core Training year-one (CT1) vacancies had been filled, a far smaller proportion than other major specialties. In 2012 the fill rate for CT1 vacancies in psychiatry rose only slightly to 85.3%. The uneven geographical distribution of filled posts may leave some parts of the UK at considerable disadvantage.

Although recruitment may be better in Scotland and Northern Ireland, numbers of applicants are also lower than desirable and work to reshape the medical workforce in Scotland is

6 Craddock N, et al. (2008). *Wake-up call for British psychiatry*. British Journal of Psychiatry **193**, 6–9.

7 The Academy of Medical Sciences (2010). *Redressing the balance: the status and valuation of teaching in academic careers in the biomedical sciences*. <http://www.acmedsci.ac.uk/index.php?pid=99&puid=181>

8 Goldacre MJ, et al. (2012). *Choice and rejection of psychiatry as a career: surveys of UK medical graduates from 1974-2009*. British Journal of Psychiatry published ahead of print October 25, 2012, doi:10.1192/bjp.bp.112.111153.

9 Moran M (2012). *Fewer US grads matching in psychiatry*. Psychiatric News **47** (8), 1b–30.

uncovering concern about unfilled consultant posts in mental health. Further concerns relate to the quality of those applying to train in psychiatry in the UK and the fact that around 40% of trainees currently fail to pass the MRCPsych examination, although pass rates are much higher for UK graduates.¹⁰

It is also recognised that some doctors who initially choose psychiatry do not pursue it as a long-term career.¹¹ Reasons given include perceived lack of respect from medical peers, perceived threat of violence from patients, job stress, self-assessed unsuitability and concerns about lack of evidence-based treatments. Ten years after graduation, 64% of those whose sole first career choice was psychiatry in postgraduate year one were still working in the specialty as opposed to 81% who had chosen it as their sole first career choice in year three.¹²

2.2.2 Foundation training

The Royal College of Psychiatrists (RCPsych) has been greatly concerned by the relative lack of opportunity for foundation programme doctors to experience working in psychiatry.¹³ The 2011 UK Foundation Programme Annual Report reveals that only around 4.6% of Foundation Year one (F1) doctors and approximately 11.7% of Foundation Year two (F2) doctors rotated through a placement in psychiatry.¹⁴ The College also stresses the desirability of psychiatry placements in Academic Foundation Programmes for those contemplating a career in academic psychiatry.

In Scotland, 24% of all foundation trainees currently have a four-month post in psychiatry. Almost all posts are hospital-based rather than community-based and they are predominantly available in F2, although a few F1 posts are available in liaison psychiatry in acute hospitals.

Whereas the combinations of three four-month attachments are fixed in F1 in Scotland, there is some flexibility in the combinations of attachments in F2. As in other parts of the UK, there is no impediment to trainees seeking to have four-month attachments in both neurology and psychiatry.

In England (informed by discussions involving the RCPsych, Medical Education England, the UK Foundation Programme and the Department of Health) the number of psychiatry placements will rise to 460 posts in both foundation years by 2014. This will mean that around 45% of doctors will have had psychiatry placements by the end of their foundation training in England.¹⁵ However, only a small proportion of these will be academic foundation placements, at least in the first instance.

2.2.3 Specialty training programmes and clinical academic training

There is a growing sense that postgraduate training in psychiatry in the UK, as in all specialties, could be improved and become much more flexible. There is also concern that training programmes may be unnecessarily protracted, particularly for those pursuing an academic career or those wishing to acquire experience in a related specialty while training principally in psychiatry. There is a perception in some quarters that academic and clinical excellence has been undervalued in trainee selection, and that the training needs of junior staff are too often subjugated to the staffing needs of the NHS. Lack of flexibility in specialty training programmes can have a profoundly negative effect on career development, particularly in the case of clinical academic trainees. Trainees move frequently from post to post in rotational programmes, have fewer patient-contact hours, seldom experience

10 For further information see <http://www.rcpsych.ac.uk/pdf/MRCPsych%20Cumulative%20Results%20Report%20-%20August%202011.pdf>

11 Lambert TW, et al. (2006). *Reasons why some UK medical graduates who initially choose psychiatry do not pursue it as a long-term career*. *Psychological Medicine* **36**(5), 679–684.

12 Goldacre MJ, et al. (2012). *Choice and rejection of psychiatry as a career: surveys of UK medical graduates from 1974–2009*. *British Journal of Psychiatry* published ahead of print October 25, 2012, doi:10.1192/bjp.bp.112.111153.

13 The Royal College of Psychiatrists (2012). *Recruitment strategy 2011–2012*. <http://www.rcpsych.ac.uk/pdf/Recruitment%20Strategy%20%28RCPsych,2012%29.pdf>

14 For further information see <http://www.foundationprogramme.nhs.uk/pages/home/keydocs>

15 Dr Stuart Carney, Deputy National Director, Foundation Programme Office: personal communication

continuity of care, and rarely develop strong working relationships with their trainers.

This said, the 2012 GMC survey of all UK psychiatry trainees reveals an average satisfaction score of 82.4%, range across all specialties 76.2–87.8%, overall response rate 95%) when trainees were asked about quality of teaching, clinical supervision and experience, whether they would recommend the post to a friend, and how useful the post would be for their future career. Although trainees in integrated academic training pathways were included in the survey, they were not questioned specifically as a subgroup about the quality of training in relation to a clinical academic career.¹⁶

Trainees interested in an academic career are more likely to remain motivated and enthusiastic if they stay in an academic centre or at least in an NHS environment where research is held to be important and desirable. This must be borne in mind by those administering training programmes, recognising that it can be difficult to balance the need to fill staff posts throughout a region with assigning optimal placements for those intent on an academic career; hospitals are spread evenly yet academic centres are not. Clinical workforce shifts on a capitation basis have the potential to destabilise academic workforces. The Academic Faculty of RCPsych remains deeply concerned by the lack of research culture in NHS training programmes and a situation in which aspiring clinical academic psychiatrists may train clinically at some distance from their research base and with little or no input from senior clinical academic colleagues. The Academy of Medical Sciences appreciates and shares these concerns.

The 'Inquiry into Modernising Medical Careers' led by Professor Sir John Tooke PMedSci in 2008 highlighted the need for flexibility in integrated clinical academic training pathways so that trainees can move seamlessly and without stigma in and out of conventional clinical training pathways.¹⁷ Although schemes such as the Academic Clinical Fellowship in England allow some 25% of programme time for training in research methodology and development of research proposals, the Tooke Report also recommended that opportunities should also be available for those wishing to pursue a research career after entry into higher specialist training schemes. Out-of-programme experience can be invaluable both to academic and non-academic trainee psychiatrists and must be facilitated by enlightened and flexible administration of training programmes. As will be discussed later, North American centres of excellence offer explicit clinical academic training programmes that allow deeper exposure to the neuroscience base, flexibility between clinical and academic components of training and protected research time.

2.3 Research funding and research opportunities in psychiatry

Mental health research in the UK undoubtedly suffers from the current lack of a major disease-specific medical research charity such as those that provide significant research funding in cancer, heart disease and arthritis. However, a new mental health research charity will be launched in 2013 and the Academy is encouraged by the number and strength of charities committed to aspects of mental health and brain research. Further encouragement stems from the Prime Minister's recent decision to launch a programme to improve dementia care and strengthen dementia research by 2015.¹⁸

16 General Medical Council (2012). *National training survey 2012: key findings*.

http://www.gmc-uk.org/National_training_survey_2012_key_findings_final.pdf_49303306.pdf

17 Tooke J (2008). *Aspiring to excellence findings and final recommendations of the independent inquiry into Modernising medical careers*.

http://www.mmcinquiry.org.uk/Final_8_Jan_08 MMC_all.pdf

18 For further information see <http://www.dementiachallenge.dh.gov.uk>

More concerning is the current lack of support from the UK pharmaceutical industry for mental health research. A stronger academic psychiatry constituency might address this in part by research leading to definition of targets and an enhanced ability to conduct clinical trials. This is an important issue but one that lies outside the scope of this report.

As mentioned earlier, estimates of the proportion of total UK health research spend that is devoted to mental health range from around 5 to 6.5%, much less than is spent in some other areas.¹⁹ The recent UK Health Research Analysis provided by the UK Clinical Research Collaboration (2012) shows that spending on mental health in 2009–2010 by the UK's four largest medical charities, four Health Departments and four relevant Research Councils was £89.5 million.²⁰ Although spending on mental health research had doubled since 2004–2005, the proportion of total spend devoted to mental health research in 2009–2010 was 5.5%, significantly less than the proportion spent on cancer (19.6%), infection (10.8%), neurological disease (9.8%) or cardiovascular disease (7.2%). Mental health research spend is disproportionately small in relation to disease burden as reflected in disability-adjusted life years or the 'mortality gap' in which patients with serious mental illnesses die from natural causes many years earlier than the general population.²¹ Evidence from the USA indicates that patients with serious mental illness are now dying 25 years earlier than the general population despite the fact that their increased morbidity and mortality is attributable in large measure to treatable medical conditions.²²

The 'Cinderella' status of mental health research is not unique to the UK. For example, in Australia in 2009, 9.5% of total research spend was devoted to mental health as opposed to 22% to cardiovascular disease and 15% to cancer.²³ In the USA, 10–11% of National Institutes of Health (NIH) funding is devoted to mental health research (including drug and alcohol research but excluding ageing research), a percentage that has been stable since 2001. However, it is important to view these figures in the context of award rates in disease areas. As will be discussed, award rates in mental health research fellowship schemes in the UK may not be radically different from award rates in other areas; in other words, capacity to undertake research is the most significant obstacle to progress in the field of mental health.

Data from some of the major UK research-funding organisations reflect training opportunities currently available to academic psychiatrists and give some insight into the success of their applications for fellowship support.

2.3.1 MRC

A preliminary analysis shows that across all clinical specialties in the seven years before 2012, the MRC received 1374 applications for Clinical Research Fellowships, 320 for Clinician Scientist Fellowships and 23 for Senior Clinical Fellowships. Seventy-four (4.3%) of this cohort of 1717 applications were categorised as 'mental health' applications on the basis of their titles and are assumed to have been submitted by psychiatrists. Twenty-three (5.6%) of the 405 clinical fellowships awarded were in 'mental health'. Awards were made to 10 institutions across the UK (Institute of Psychiatry/King's

19 Mental Health Foundation (2010). *Economic burden of mental illness cannot be tackled without research investment*. <http://www.mentalhealth.org.uk/content/assets/PDF/campaigns/MHF-Business-case-for-MH-research-Nov2010.pdf>

20 UK Clinical Research Collaboration (2012). *UK Health Research Analysis 2009/10*. <http://www.ukcrc.org/researchcoordination/healthresearchanalysis/ukanalysis/>

21 Colton CW & Manderscheid RW (2006). *Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states*. *Preventing Chronic Disease* **3(2)**, A42.

22 Parks J, Svendsen D, Singer P, Foti ME (Eds) (2006). *Morbidity and mortality in people with serious mental illness*. http://www.dsamh.utah.gov/docs/mortality-morbidity_nasmhpd.pdf

23 Christensen H, et al (2011). *Funding for mental health research: the gap remains*. *Medical Journal of Australia* **195(11)**, 681–684.

College London, Reading, University College London, Cambridge, Oxford, Manchester, Newcastle, Queen Mary's College, Edinburgh and Exeter).

Although there were disproportionately few mental health applications (and awards) considering that mental illness accounts for 15% of the national burden of ill health, psychiatrists when they applied to MRC were at least as successful as those applying from other specialties. Psychiatrists appeared to fare particularly well when applying for clinician scientist fellowships; although numbers are relatively small, psychiatrists had a success rate (41.6%) that bettered the overall success rate of 15.9%. A note of concern relevant to the present review is that experience at MRC suggests that psychiatrists expressing their initial interest in research at a later stage in training, e.g. specialist training year five (ST5), may lack good mentorship and career advice. Summer schools such as the effective Cardiff MRC Centre for Neuropsychiatric Genetics and Genomics (CNGG) summer school (see section 3.3.5) and new initiatives such as the Psychiatry, Scottish Training and Academic Research (PsySTAR, see 3.3.7) scheme in Scotland are seen as ways of improving mentorship and career advice.

The performance of psychiatrists in MRC fellowship applications is consistent with the findings of the MRC Review of Mental Health Research, i.e. that capacity, rather than research quality, is one of the major obstacles to strengthening mental health research.

It is also consistent with findings from Australia, where success in mental health research applications was commensurate with that in other areas of the National Health and Medical Research Council portfolio. International benchmarking provided additional reassurance about the quality of mental health research in Australia, but there are concerns that success in winning project grant funding is not matched by success in applying for fellowships, development grants and funding for centres of research excellence.²⁴

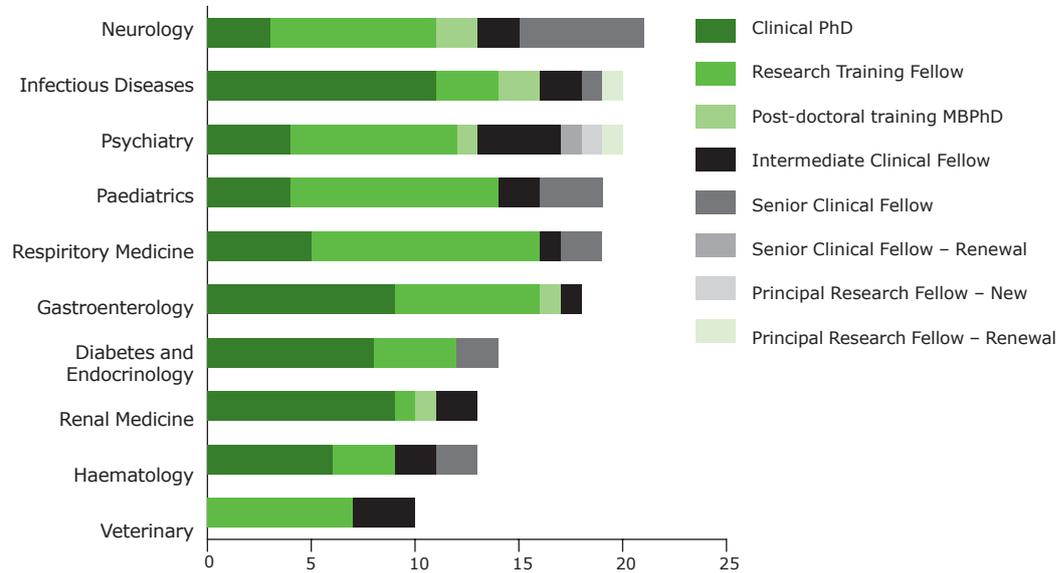
MRC is also now providing indirect strategic support for academic psychiatry in Scotland through the innovative PsySTAR scheme funded following national competition by its independent Medical Research Foundation. In Wales, MRC and the Welsh Government have also funded an entry-stage fellowship scheme in Cardiff. There are also specific research initiatives: for example, MRC is considering establishing a training programme for addiction and substance misuse research based on its addiction research clusters.

2.3.2 Wellcome Trust

In February 2012 the Wellcome Trust supported 196 clinical fellowships (research training, post-doctoral training for MB/PhDs, intermediate-level or senior), 16 of which were held by psychiatrists working in general psychiatry (14 awards), child psychiatry (one award) or psychiatry and the elderly (one award). Other successful specialties included neurology (21 awards), combined surgical specialties (19 awards) and paediatrics (16 awards).

24 Christensen H, et al (2011). *Funding for mental health research: the gap remains*. Medical Journal of Australia **195**(11), 681–684.

Figure 1: Breakdown of clinical fellowships funded by the Wellcome Trust within the 10 highest represented specialties.



Grants were awarded between financial years 2008/9 and 2010/11.²⁵

Analysis of all Wellcome Trust Clinical Fellowships (including clinical PhD fellowships) awarded in 2008–2011 shows that psychiatry was one of the more successful specialties, gaining 20 fellowships (Figure 1); of note is that the much smaller constituency of neurology obtained 21 fellowships in the same period.

Of the 20 psychiatry fellowships awarded by the Wellcome Trust between 2008 and 2011, 14 were held in one of five institutions (Institute of Psychiatry/King's College London, Cambridge, Oxford, Imperial College and Edinburgh).

2.3.3 National Institute for Health Research (NIHR)

NIHR has a portfolio of fellowships and clinical lectureships to support trainees in England who are interested in developing an academic career. Given that these schemes have been running for relatively few years, the available data do not allow assessment of their impact on

career progression of trainees wishing to build a career in academic psychiatry.

NIHR Academic Clinical Fellowships (ACFs) allow a balance of 25% research and 75% clinical training over three years. Trainee psychiatrists can enter between ST1 and ST4. In addition to developing academic skills, fellows are supported in preparing an application for a training fellowship leading to a PhD or equivalent or if applicable to a post-doctoral fellowship. Trainees who need further clinical training are allowed latitude in timing the uptake of their fellowship.

NIHR Clinical Lecturer (CL) posts allow trainees to spend 50% of time in research and 50% in clinical training for up to four years or until they acquire the CCT. These posts may only be offered at ST3 level or above and are designed for doctors who already hold a PhD, MD or equivalent. Exceptionally, and only until March 2014, psychiatrists can be appointed to a CL

25 For more details on the individual schemes see <http://www.wellcome.ac.uk/funding/>

post without having completed a PhD or MD. A survey conducted by the trainee representative on the Academic Faculty of RCPsych identified 13 NIHR CLs within university departments of psychiatry; only three of these individuals had a PhD or MD and so most were appointed by virtue of the current exemption.

It is important to stress that ACFs and CLs do not offer the only route to a clinical academic career in psychiatry, and that the protected time in ACFs is intended principally as an opportunity to acquire pilot data and prepare applications for a training fellowship rather than an opportunity to undertake a programme of research. Given a tendency for trainee psychiatrists to decide to undertake research at a relatively late stage in training, there is widespread concern within psychiatry that the impending introduction of the need to hold an MD or PhD will inhibit application for CL posts by trainee psychiatrists.

NIHR Clinician Scientist Fellowships (CSFs) are post-doctoral awards for individuals capable of leading research in their discipline and provide up to five years of support. The fellowships are typically taken up after a Clinical Lecturer post. Of 72 individuals applying between 2009 and 2011, 42 were interviewed and 23 were awarded fellowships. Psychiatrists made seven of the applications; three were interviewed and all three were awarded fellowships. This means that 13% of CSFs were awarded to psychiatrists.

It is also worth emphasising that psychiatrists have applied successfully for NIHR Fellowships (that support research training for individuals at various levels who can demonstrate a contribution to improving health, healthcare or services) and for NIHR senior investigator awards. Although there were no awards of NIHR fellowships to psychiatrists in 2009, psychiatry received six awards in the 2010 round.

2.3.4 Scottish Research Excellence Development Scheme (SCREDS)

SCREDS is the Scottish equivalent of the Integrated Academic Training Programme in England. It comprises PhD opportunities funded by the Chief Scientist Office, clinical academic posts funded by NHS Education Scotland (NES) or universities, and senior clinical fellowships funded by the Scottish Funding Council (SFC).

Clinical training in Scotland is administered by NES with significant university input. Currently, 1608 foundation posts including 120 academic foundation posts lead on to 4129 specialty training posts and 290 academic opportunities for specialty trainees (134 clinical lectureships, 119 clinical fellowships and 37 more advanced appointments). Flexibility of movement between clinical training and research training is an important feature of the scheme.

The clinical lectureships funded by NES or universities normally allow a time allocation of 80% clinical and 20% research over the full duration of the post. The research may focus on preparation for competitive entry to an out-of-programme period of doctorate research or development of an area identified by earlier out-of-programme experience. Significantly, this scheme allows clinical lecturers to be appointed before or after acquiring a higher degree.

Psychiatry trainees currently hold 8% of all specialty trainee positions and 8% of the clinical lectureships but only 1.7% of the clinical fellowships. Given that clinical fellowships are seen principally as an opportunity for out-of-programme doctoral research, the introduction of PsySTAR should address the relative lack of psychiatrists in clinical fellowship posts.

2.4 Lack of senior academic positions as a disincentive to a career in academic psychiatry

The 2009 Academy Report '*Building clinical capacity and the allocation of resources across academic specialities*' highlighted increasing concern about declining numbers of UK clinical academics and significant loss of research capacity in some specialties.²⁶ According to Medical Schools Council data, between 2000 and 2006 the clinical academic workforce fell steadily from just over 3500 to fewer than 3000 full-time equivalents (FTEs), this at a time when there was an across-the-board expansion of the NHS consultant workforce. After 2006 several initiatives (see below) created new junior, intermediate and senior clinical research programmes so that by 2007 the number of academic positions increased by 2% relative to 2006.

More recent evidence collated by the Medical Schools Council provides an overview of the number of clinical lecturers, senior clinical lecturers/readers and professors in psychiatry in the period 2004–2010.²⁷ It is important to emphasise that these numbers refer to individuals with a substantive university contract but do not include Academic Clinical Fellows, Research Training Fellows and NHS staff, who may contribute significantly to academic medicine.

Across the UK the number of FTE posts in academic psychiatry fell from 300.9 to 287.5 (4.4% reduction in this six-year period; see Figure 2). The number of clinical lecturers rose slightly (from 36.4 to 41.5, a 14.2% increase) but remains worryingly low, and a modest 11.3% increase in the number of professors (115.7 to 128.7) was offset by a concerning 21.2% decline (148.8 to 117.2) in the number of Senior Clinical Lecturers/Readers. In the devolved nations, FTE numbers doubled (Wales), remained steady at very low levels (Northern Ireland) or fluctuated at around 30 (Scotland). Consistent with this change in the distribution of posts, there is evidence of a 'greying' of the academic workforce as numbers of those aged 36–45 declined while numbers in age groups 46–55 and 56–65 increased (Figure 3).

Data now becoming available from the 2011 Medical Schools Council survey indicate that the overall number of FTE posts in UK psychiatry remains unchanged although there has been a rise (to 54.2 FTEs) in the number of lecturers in the 12 months to July 2011. Despite this encouraging increase in lecturers it must be emphasised that the overall number of clinical academic posts in psychiatry has fallen by 26.8% since 2000.

26 Academy of Medical Sciences (2009). *Building clinical academic capacity and the allocation of resources across academic specialities*. <http://www.acmedsci.ac.uk/p99puid150.html>

27 For further information see <http://www.medschools.ac.uk/AboutUs/Projects/clinicalacademia/interactivesurvey/Pages/default.aspx>

Figure 2: The trend in the number of full-time equivalent posts at various grades within academic psychiatry between 2004 and 2010.²⁸

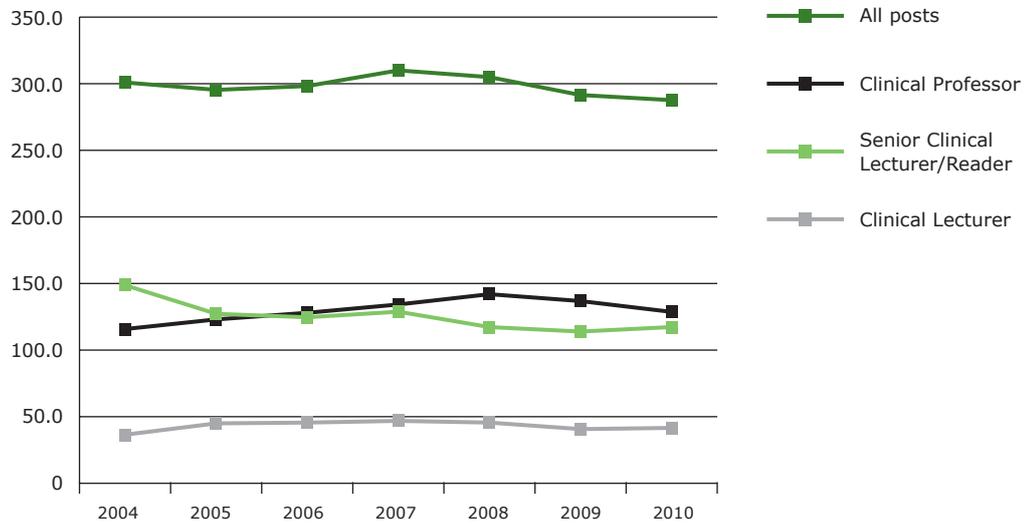
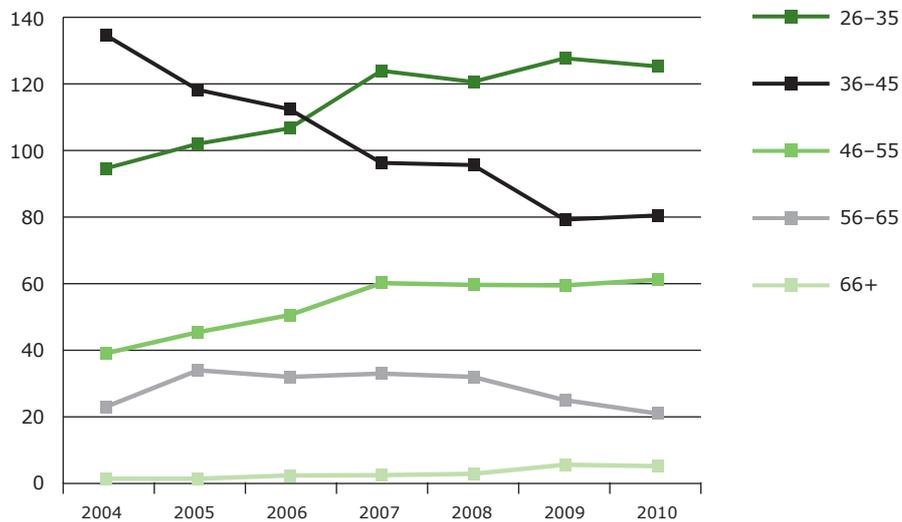


Figure 3: The trend in the number of full-time equivalent posts across different age groups in academic psychiatry between 2004 and 2010.²⁹



²⁸ Source: Medical Schools Council.
See <http://www.medschools.ac.uk/AboutUs/Projects/clinicalacademia/interactivesurvey/Pages/default.aspx>
²⁹ Source: Medical Schools Council.
See <http://www.medschools.ac.uk/AboutUs/Projects/clinicalacademia/interactivesurvey/Pages/default.aspx>

The Academy remains very concerned about the strength of the UK clinical academic workforce in several specialties including psychiatry. The recent decline in senior clinical lectureships and readerships in psychiatry is particularly concerning and must be arrested and reversed if the specialty is to attract outstanding graduates and provide them with realistic prospects of a long-term academic career. Senior Clinical fellowships such as those provided by MRC and the Wellcome Trust represent a critically important lifeline for psychiatry, but there is a sense that more needs to be done by the Higher Education/ University sector to safeguard and strengthen capacity. In this context, the SFC currently underpins Scotland's Senior Clinical Fellowship scheme that is administered by the Board for Academic Medicine as the third part of SCREDS. The fellowships are seen as a research-focused entry point to a permanent clinical academic career. SFC provides four years of funding for each fellow on the understanding that satisfactory progress will result in tenure. Psychiatrists have received two of the fifteen fellowships so far awarded and both fellows now hold chairs.

It is also important to point out that posts providing options for mixed academic and NHS work may also provide an attractive career goal for some psychiatrists. Loss of such posts can be a disincentive to recruitment into academic psychiatry, as well as having adverse effects on research and teaching capacity.

2.5 Unhelpful boundaries between medical specialties

Improved understanding of disease causation, better diagnosis and treatment, the advent of genomic medicine, and an increasing burden of chronic non-communicable disease in an increasing elderly population are among

factors now challenging rigid and long-standing boundaries between specialties.

The neurosciences have seen particularly significant advances leading to elucidation of the pathophysiology of mental illness, radical improvements in neuroimaging, application of molecular genetics and progress towards a more appropriate (mechanistic) classification of disease phenotypes. These advances already have profound implications for tailored therapy, selection of patients for clinical trials and the research portfolios of pharmaceutical companies.

Given these recent advances, questions can be raised as to why the dominant classifications of mental disorder – the International Classification of Diseases (ICD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) – '*continue to draw a sharp distinction between disorders of the mind, the province of psychiatry, and disorders of the brain, the province of neurology*'.³⁰

White and colleagues argue cogently that the current line of demarcation between disorders of mind and of brain is inappropriate and counterproductive for clinicians and patients on either side of the traditional divide. They propose that reclassification of psychiatric disorders as disorders of the (central) nervous system will update classification in the light of contemporary neuroscience and foster '*integration of psychiatry into the mainstream of medicine, where it belongs*.' Online responses to this recent article range from supportive to critical while highlighting the distinctive holistic contribution that psychiatrists make to diagnosis and the treatment of patients with mental health disorders; arguably the training provided to psychiatrists emphasises the psychosocial needs of the patient in a way that is lacking in other medical specialties.

A question central to the present review is whether psychiatry and its training

30 White PD, Rickards H & Zeman AZJ (2012). *Time to end the distinction between mental and neurological illnesses*. British Medical Journal 344, e3454.

programmes should be more closely integrated with other specialties to take full advantage of the burgeoning science and neuroscience base, enhance recruitment and encourage more flexible training pathways that could lead to improved patient care and greater professional satisfaction. Linkage between psychiatry and neurology is perhaps at the forefront of this debate, but it must not be forgotten that psychiatry has equally important overlaps with other areas of medicine such as epidemiology, geriatric medicine, neurosurgery and primary care, and with social and community care. Dementia provides an example of an increasingly common problem where a broad training in basic and cognitive neurosciences, neurological examination and psychiatry could produce a cadre of individuals better able to understand and deal with both the neurological and mental health elements of the disease. Similarly, training in endocrinology or immunology might be a stepping-stone to greater understanding of affective disorders given the well-known reciprocal relationship between mood changes and some endocrine and immune states and treatments.

2.6 Emerging conclusions about opportunities for academic psychiatry in the UK

- Psychiatrists need to do much more to enhance their profile and that of psychiatry in medical schools, improve teaching with emphasis on the scientific basis of the discipline, place psychiatry in an appropriately broad context of patient care and emphasise the opportunities for research.
- There is a pressing need to ensure that aspiring clinical academic psychiatrists are trained clinically in an optimal environment where research is valued, where training programmes are flexible and allow an appropriate balance between clinical and research training, and where senior clinical academics play a major role as trainers and mentors.
- Funding is available for mental health research in the UK but the amount applied for does not reflect the relative burden of mental ill health.
- Psychiatrists appear to do as well as those in other specialties when they apply for research training fellowships.
- There is some suggestion that success rates in application to fellowship schemes by psychiatrists could be improved by better mentoring, refinement of grant applications and cross-discipline linkages.
- The capacity of the clinical academic trainee workforce rather than the quantity or the quality of its research is still an obstacle to strengthening academic psychiatry.
- Fellowship awards to psychiatrists from some major funders appear to be concentrated in relatively few institutions, a finding consistent with the drive to develop and sustain internationally competitive centres of excellence.
- It is important to ensure that there is an appropriate balance between training posts and more senior academic positions in academic psychiatry.
- There needs to be a wide range of clinical and academic options for successful trainees that will also foster closer integration between academic medicine, the NHS and the departments of health throughout the UK. There is an opportunity for closer integration between psychiatry and other specialties to strengthen the neuroscience base, improve clinical and research training in these specialties, and develop novel career pathways for psychiatry that will benefit the specialty and the patients it serves.

3 Strengthening academic psychiatry

This section deals with ways in which academic psychiatry might be strengthened by improving recruitment and optimising opportunities to develop a career with an appropriate balance between clinical training and research. In addition, it considers ways in which the UK might capitalise on its centres of excellence and university departments of psychiatry, and explores existing boundaries between specialties that may be inimical to training, research and delivery of clinical services.

3.1 Engagement with school pupils and medical students

Within secondary schools there is potential to nurture enthusiasm so that more pupils showing interest in the brain, neuroscience, psychology and societal medicine go on to medical school with the aim of working in the clinical neurosciences including psychiatry. If psychiatry is to attract the brightest and best medical students, academic psychiatrists need to heighten their profile in medical schools and across the universities. In addition, they need to take leadership roles in the drive to reintegrate psychiatry within medicine, and counter psychiatry's negative image by encouraging students to engage with a discipline that promotes excellence and offers exciting opportunities for clinical practice and research. Medical students must be able to interact with successful clinicians who have thriving academic careers and who serve as role models.

Excellent websites, such as that provided by the Institute of Psychiatry, can give a sense of the exciting advances in our understanding

of mental illness and its management, and showcase what psychiatry has to offer.³¹

Similarly, the outstanding websites of leading North American departments of psychiatry such as Yale and Pittsburgh stress a commitment to clinical and academic excellence, the importance of neuroscience and the exciting challenge of a psychiatric career.^{32,33} However, UK medical schools and their departments of psychiatry vary greatly in the quality of websites, ease of navigation and positive portrayal of the potential of a career in psychiatry.

Teaching in psychiatry in UK medical schools must place more emphasis on the relevant science base, demonstrate the value of being able to work with patients with mental illness, and place psychiatry in a broader context that takes account of the epidemiology of mental illness and need for collaboration with a wide range of specialties. Stronger linkage between teaching in neurology and psychiatry is highly desirable, but it is easier to pay lip service to integration than it is to deliver an integrated curriculum that captures the imagination of students, shows psychiatrists working alongside clinicians drawn from other specialties and addresses concerns about recruitment to psychiatry and related disciplines.

Liaison psychiatry provides a particularly good opportunity for students and young doctors to see the impact that psychiatry can have when working alongside other disciplines in acute care settings. Given that most individuals with mental illness are dealt with in the community, there is also a major opportunity to strengthen psychiatry teaching in primary care.

31 For further information see www.kcl.ac.uk/iop/

32 For further information see www.medicine.yale.edu/psychiatry

33 For further information see <http://psychiatry.pitt.edu/>

Time pressures in today's crowded medical school curricula are a fact of life and, as mentioned earlier, such constraints are a major current concern in the USA. Some UK schools have resisted pressure to reduce radically the amount of time available for psychiatric teaching, and some believe that the profile of psychiatry in a medical school is linked to the proportion of graduates wishing to become psychiatrists. In UK medical schools in the period 1974–2000, an overall average of 4.9% of graduates chose psychiatry as a career, the proportion ranging from significantly higher in Edinburgh (7.2%) to significantly lower in Imperial College London (3.2%).³⁴

Concern remains that not enough young doctors are entering the specialty to fill new posts and replace psychiatrists who have retired.³⁵ When exploring ways of increasing recruitment it is well worth considering the possibility that trained clinical psychologists could be attracted to train as psychiatrists if accelerated training programmes were available. It is vital that research continues into factors influencing recruitment and retention in psychiatry in general and academic psychiatry in particular. As part of a new recruitment campaign (see section 3.2), RCPsych also intends to work with medical schools to define factors that may encourage medical students to become psychiatrists.

3.2 RCPsych Recruitment Campaign

The RCPsych is so concerned by the low number of applicants for postgraduate training places in psychiatry and the small proportion of UK graduates who apply, that it has initiated a five-year Recruitment Campaign running from 2011 to 2016.³⁶ The Campaign stresses the

need to enhance the profile of psychiatry in medical schools, challenge the view that it is 'unscientific' and that psychiatric patients are 'untreatable', and engage and inspire medical students who might otherwise be lost to the specialty. The aim is to increase the number of applicants for CT1 posts from approximately 400 in 2011 to 600 in 2016 and achieve a 95% fill rate. The Campaign will focus primarily on recruitment of UK medical graduates, recognising that '*they can make an important contribution to the specialty because of their unique exposure and experience of the socio-cultural context of the UK*'.

The RCPsych has formed a committee dedicated to promoting recruitment that will include medical students, foundation doctors and specialty trainees. Dynamic 'ambassadors for psychiatry' will be appointed to engage with students and inspire them to consider psychiatry as a career. In addition the College plans to do the following:

- Offer secondary school pupils more access to work-experience placements, educational workshops delivered by medical students, and careers fairs for those interested in medicine, psychology and neuroscience.
- Encourage medical students to become student associates of the College, nurture medical school psychiatry societies and promote good practice in undergraduate teaching (including greater integration of psychiatry with other subjects, more electives and student-selected components, and more summer schools). Medical schools are seen to have a key role in providing 'enrichment activities' that will improve generic recruitment into psychiatry and provide interested medical students with opportunities tailored specifically

34 Goldacre MJ, et al. (2012). *Choice and rejection of psychiatry as a career: surveys of UK medical graduates from 1974-2009*. British Journal of Psychiatry published ahead of print October 25, 2012, doi:10.1192/bjp.bp.112.111153.

35 Lambert TW, Turner G, Fazel S & Goldacre MJ (2006). *Reasons why some UK medical graduates who initially choose psychiatry do not pursue it as a long-term career*. Psychological Medicine 36(5), 679–684.

36 The Royal College of Psychiatrists (2012). *Recruitment strategy 2011-2012*. <http://www.rcpsych.ac.uk/pdf/Recruitment%20Strategy%20%28RCPsych,2012%29.pdf>

to encourage recruitment to academic psychiatry.

- Press for more psychiatric placements in foundation programmes and academic foundation programmes. Taster placements in psychiatry will be encouraged so that young doctors can make a more informed choice about a career in psychiatry. Careers fairs will be used to disseminate high-quality career information and provide a platform for potential role models such as ambassadors for psychiatry and trainee psychiatrists.

Significantly, the College President, Professor Sue Bailey, has identified improving the profile of research and academic psychiatry as one of the priorities of her Presidency.³⁷ The College's academic faculty will work to strengthen the research culture and increase the profile of academic psychiatry and the opportunities available. Issues include greater flexibility in training in academic psychiatry, provision of early opportunities for academic activity (e.g. during foundation training) and the need to ensure that trainees can look forward to a viable and fulfilling job at the end of training.

The Academy sees the RCPsych Recruitment Campaign as timely, highly desirable and comprehensive. It will be a major challenge for the College and clinical academic psychiatrists to deliver given the time commitment and opportunity cost, need to link effectively with other disciplines and need to build stronger relationships within medical schools and with foundation programme directors. The Campaign aims to provide an important update of the factors influencing recruitment to psychiatry at medical school and will address factors that may adversely affect recruitment and retention of postgraduate trainees.³⁸

3.3 Opportunities to encourage development of clinical academic careers

If clinical academic psychiatry is to strengthen, established academic psychiatrists must reach out to attract the very best medical students and postgraduate trainees, nurture their career development and provide mentoring even when trainees rotate away from their clinical academic base. The aim should be to develop a stream of talented individuals who aspire to a career in academic psychiatry and who have the potential to compete successfully in fellowship award schemes such as those offered by the MRC and Wellcome Trust.

There are several ways in which medical students and young trainee doctors can be given an opportunity to sample and explore the attractions of a clinical academic career. The Academy recognises that not all of the people who take up such opportunities will become clinical academics, but several will become research-active NHS clinicians or at the very least research-engaged NHS clinicians who can contribute to teaching, training and an enhanced research culture in the NHS. The following section sets out opportunities to encourage development of a clinical academic career in psychiatry. The Academy is deeply committed to making sure that a range of such opportunities is available, recognising that the opportunities listed here are not mutually exclusive and that their appeal will vary from individual to individual and at various stages of career development.

37 The Royal College of Psychiatrists (2012). *The Royal College of Psychiatrists strategic plan 2012–2015: excellence leadership engagement*. <http://www.rcpsych.ac.uk/files/pdfversion/OP84.pdf>

38 Lambert TW, et al. (2006). *Reasons why some UK medical graduates who initially choose psychiatry do not pursue it as a long-term career*. *Psychological Medicine* 36(5), 679–684.

3.3.1 The Academy's INSPIRE scheme

The Academy's new five-year INSPIRE initiative is supported by the Wellcome Trust and is intended to encourage undergraduate medical students to consider a research career. The scheme offers grant support to UK medical schools as well as a 'special project' fund to support particularly innovative or high impact projects. Networking, collaborative partnerships, an enhanced research culture and 'sharing conferences' are key ingredients of the initiative. Although aimed across the board at all specialties, INSPIRE offers a potential platform for medical students to engage with academic psychiatry.

3.3.2 Intercalated BSc and BMedSci degrees

In-depth study of some aspect of biomedical science while in medical school will help recruitment to clinical academic medicine including academic psychiatry. Intercalated BSc/BMedSci degrees offer students an opportunity for early scientific training and greater exposure to a discipline in which they may build a career. For example, at the University of Nottingham all medical students work to acquire a BMedSci degree at some stage after year-three of their course. The intercalated BSc in psychological medicine offered by Birmingham University is highlighted in the RCPsych Recruitment Campaign as an illustration of what is on offer. Many of these degree courses offer an opportunity to work in neuroscience, experimental psychology and other areas relevant to a career in academic psychiatry. In some schools an intercalated BSc has almost become the norm whereas others are actively considering a move to a six-year course that will include an honours BSc degree for all students. The intercalated BSc degree is seen as a positive feature when ranking applicants for Foundation Programmes and selecting graduates for Academic Foundation Programmes.

In commending the desire of medical schools to increase or at least sustain intercalated degree opportunities, the Academy appreciates that university tuition fees will now be a significant disincentive to some students. Medical schools, research funders and Government need to consider ways in which financial hardship can be obviated or alleviated by increased availability of bursaries. There may be an attractive niche here for smaller but growing mental health charities to provide targeted funding. There can be no doubt that recognition of intercalated degree courses by national research assessment exercises would do a great deal to strengthen the prevailing research culture and counter any tendency in Higher Education Institutions (HEIs) to downgrade the importance of student research.

3.3.3 MSc degrees in psychiatry and psychology

At one time all UK training centres provided taught membership courses so that trainees could meet the requirement to attend an academic course before sitting the MRCPsych examination at the end of core clinical training. Many university departments of psychiatry offered courses that led on to a further qualification, usually a Masters degree. Although course attendance is no longer a prerequisite for the MRCPsych examination, a significant number of departments still offer MSc courses, many of which are now part-time or distance e-learning courses. Some psychiatrists feel that removing the need to attend a taught course has removed an opportunity for psychiatrists to obtain a thorough grounding in the discipline, gain fresh insights into the expanding neuroscience base, and identify role models and mentors for a clinical academic career.

One way of strengthening academic psychiatry would be to use broad-based Masters degree courses as part of an explicit academic core-training programme at centres of excellence. Such courses would incorporate neuroscience teaching and be open to a range of specialties

in addition to psychiatry. It is also important to emphasise that Masters courses may also benefit psychiatrists interested in research and teaching who do not want to be career academics; such individuals may be critical to the delivery of undergraduate teaching and postgraduate training.

3.3.4 MB PhD and MD PhD degrees

MB PhD programmes in the UK are a relatively recent innovation pioneered in Cambridge (1990, nine-year course; three years pre-clinical, three years clinical with intercalated three year PhD) and University College London (1994, eight-year course). An Academy working group and symposium in 2007 suggested that the MB PhD course offers a very valuable option for training clinical scientists with transferable research skills and noted that neuroscience was a popular area for study in these programmes.³⁹ The degree appeared to be meeting expectations for high academic standards and enhanced recruitment to clinical academic medicine. Perceived problems with timing of the PhD included difficulty in maintaining contact with research on return to medical studies, the possibility that individuals may develop research interests in a different area during their clinical career and concern that graduates may not have established a strong enough track record to compete for more senior posts such as clinical fellowships.

There is a sense that academic psychiatry in the UK could benefit from recruiting graduates of MB PhD programmes. Significantly, the Wellcome Trust has recently introduced a bespoke training fellowship for individuals who have obtained a PhD early in their career, typically through an MB PhD programme. These fellowships provide an opportunity to develop

an independent research career through a period of post-doctoral training in the best laboratories in the UK and overseas.⁴⁰

In the USA, MD PhD programmes have been on offer for some 50 years and several hundred students now enter them each year, most being supported centrally by the NIH Medical Scientist Training Program (MSTP). MSTP graduates are extremely successful in research careers and grant applications, and a high proportion of US clinical academics are recruited from this pool. In marked contrast to the current situation in the UK, these graduates enter US training pathways that are designed to accommodate and fast-track them. In the view of Dr John Krystal, Chair of the Department of Psychiatry at Yale University, the need for MB PhD or MD PhD training programmes is increasing, not least because growing fields that were established in a context of more informal training (e.g. functional magnetic resonance imaging) are now competitive and highly technical.

Dr Thomas Insel, Director of the US National Institute of Mental Health (NIMH), has recently suggested that psychiatry has become the 'hot specialty' in the US for MD PhD students who want to do research.⁴¹ Apparently the number of MD PhD students choosing psychiatry as a career has more than doubled in the past decade. At Columbia University, 20% of psychiatry residents in recent years have been MD PhDs, and in 2012, half of the students matching with the Yale residency were MD PhDs.^{42,43} Eleven of the 17 psychiatry residents at the 2012 NIMH Brain Camp (see 3.3.5) were MD PhDs. Many had studied neuroscience in college, published high-impact papers in medical school, and continued to do

39 Academy of Medical Sciences (2007). *MB PhD Programmes. A position paper by the Academy of Medical Sciences.* <http://www.acmedsci.ac.uk/download.php?file=/images/publication/MBPhDPos.pdf>

40 For further information see <http://www.wellcome.ac.uk/Funding/Biomedical-science/Funding-schemes/Fellowships/Clinical-fellowships/WTX050468.htm>

41 Insel T (2012). *The future of psychiatry (= clinical neuroscience).* <http://www.nimh.nih.gov/about/director/2012/the-future-of-psychiatry-clinical-neuroscience.shtm>

42 For further information see <http://medicine.yale.edu/psychiatry>

43 For further information see <http://columbiapsychiatry.org/residency/home>

research in clinical training. As a group they saw psychiatry as the specialty where they can have the greatest impact and wish to transform it into clinical neuroscience, while remaining committed to clinical excellence and development of a new scientific basis for clinical care.

3.3.5 Summer schools and scientific retreats

Summer schools, such as those organised jointly by the Institute of Psychiatry and RCPsych since 2009, offer an excellent opportunity for medical students to engage with enthusiastic postgraduate trainees, consultants and leading figures in mental health research.⁴⁴ Such schools can change perceptions of psychiatry, showcase what it has to offer and encourage students to pursue a psychiatric career. The RCPsych website currently advertises five summer schools in England that are open to undergraduates and the College is now urging each of its divisions to establish a psychiatry summer school. Summer schools are also planned or underway in Scotland and Wales.

Summer schools also offer a valuable means of recruiting postgraduates and assisting their career development. The Institute of Psychiatry/RCPsych course is also open to Foundation doctors whereas the Cardiff MRC Centre for Neuropsychiatric Genetics and Genomics (CNGG) runs an annual summer school in brain disorder research aimed specifically at clinical trainees, particularly those in foundation and core training, interested in an academic career.⁴⁵ The Cardiff school introduces research in psychiatric and neurological disorders and provides insight into related neurosciences such as epidemiology, neuroimaging, molecular biology and genetics. Demand can be gauged from the fact that in

its first year the school attracted some 180 applicants from across the UK.

In the USA, the NIMH Brain Camp mentioned earlier is a four-day intensive retreat for second-year psychiatry residents, most of them identified through an NIMH-sponsored Outstanding Resident Award Program.⁴⁶ Its Faculty of distinguished scientists includes Nobel laureates and its courses offer insights from neuroscience relevant to clinical problems facing the trainees. A recent Brain Camp focused on neuromodulation using cognitive training and repetitive transcranial magnetic stimulation to alter symptoms of depression and anxiety.

The biannual Cold Spring Harbor Laboratories workshop brings together selected schizophrenia researchers (PhD students, post-doctoral fellows, clinical academics and young principal investigators) for an intensive one-week programme.⁴⁷ Leading international figures present research and coverage includes the clinical syndrome, cognitive neuroscience, neurobiology, neuroimaging, genetics and molecular approaches. Active discussion is promoted and speakers are encouraged to stay on to allow cross-disciplinary interaction. Career advice and mentoring are provided for all attendees. The course has accrued an impressive list of alumni who have contributed to schizophrenia research, often through collaboration with other attendees.

3.3.6 Clinical training and academic psychiatry

Early exposure to high-quality training is likely to encourage trainees to pursue a career in psychiatry and so benefit recruitment to academic psychiatry. The Academy welcomes the recent move to increase the number

44 For further information see <http://www.rcpsych.ac.uk/training/studentassociates/newsandevents/events/summerschools.aspx>

45 For further information see <http://medicine.cardiff.ac.uk/event/cngg-summer-school-4/>

46 Insel T (2012). The future of psychiatry (= clinical neuroscience). <http://www.nimh.nih.gov/about/director/2012/the-future-of-psychiatry-clinical-neuroscience.shtml>

47 For further information see <http://meetings.cshl.edu/courses/c-schiz12.shtml>

of psychiatry placements on Foundation Programmes in England (section 2.2.2). Given the large burden of mental illness, it is important for young doctors to gain further experience in dealing with patients with mental illness both in hospital and community settings. There is now an invaluable opportunity to develop packages for those wishing to pursue a career in psychiatry (or other clinical neurosciences) that offer combinations of placements in, for example, psychiatry, neurology, neurosurgery, general practice, liaison psychiatry or paediatrics. Furthermore, to accommodate all those who wish to sample working in an academic environment, consideration could be given to increasing the number of academic foundation posts by re-badging existing foundation posts. The value of these developments to recruitment to psychiatry and clinical academic psychiatry will of course depend on the quality of training received and there is an onus on established psychiatrists, university departments of psychiatry and RCPsych to provide training that enthruses trainees and presents exciting career prospects.

Earlier sections of this document have highlighted the critical importance of flexibility in training programmes so that clinical academic psychiatrists can have an appropriate balance between clinical training and research opportunity. Inflexible administration of training programmes by deaneries/local education and training boards must not be allowed to restrict or compromise invaluable out-of-programme experience.

RCPsych holds to the view that a six-month research post supervised by research-active academics should be an integral part of core training although its academic faculty is more concerned to see this as an option available for those with research interest and potential. The Faculty is critical of the ways in which the ACF/CL schemes are administered and argues that overall responsibility for training in academic psychiatry should be returned to universities.

It must be said that there are also others who see the difficulties currently experienced by academic psychiatry as due in large measure to imposition of the common denominator of an unduly bureaucratic global training regimen. The RCPsych is not immune from criticism in this regard. The College's Academic Faculty considers that the problems currently being experienced in academic psychiatry will only get worse while the funding and organisation of training is the responsibility of the Department of Health and outwith the control and influence of the universities.

The Academy takes the view that all concerned in training must see flexibility as critically important so that clinical training can be balanced with academic needs. It is vital that senior clinical academics establish a stronger presence in training programmes to maximise their role in training and the career development of clinical academics. For those considering a clinical academic career, mentoring by senior clinical academics will be of immense benefit from the start of core training.

The Academy appreciates the attractions of the North American model (see section 3.3.8), where the balanced training of aspiring clinical academics is organised, administered and delivered by a university department. However, it believes that training of clinical academics in the UK should not be divorced from the NHS, provided that the particular needs of clinical academics can be safeguarded and fully supported. Optimising current training programmes to provide appropriately flexible training for clinical academics has much more to recommend it than complete separation of the training programmes for academic and non-academic clinicians.

The Academy believes that it is an advantage for all psychiatry trainees (including the majority who will not go into clinical academia) to be exposed to research methodology to create a 'research aware' consultant workforce who can support research in the NHS and access its outputs.

3.3.7 Mentoring and supervision of clinical academic trainees

All trainees need supervision during research training, not least to ensure an appropriate balance between the research and clinical elements of their training plan. As mentioned, young psychiatrists embarking on postgraduate training are likely to be in particular need of career advice and guidance when considering a clinical academic career. As emphasised earlier, there is an onus on established clinical academics to provide this support.

The recently established Psychiatry, Scottish Training and Academic Research (PsySTAR) scheme is run jointly by the universities of Edinburgh, Glasgow, Aberdeen and Dundee. It offers a clinical PhD programme for talented individuals starting specialist training in psychiatry. Teaching in biomedical and applied health sciences is provided in the first year of specialist training, after which trainees go out-of-programme for a three-year PhD project. Supervisors are drawn from world-leading research environments. Primary supervision is supplied by a basic scientist or non-psychiatrist clinician, whereas secondary supervision is provided typically by another scientist or research psychiatrist (who may be based in another location). An identified clinician, usually an experienced academic psychiatrist working in the same sub-specialty and primary location as the trainee, ensures an appropriate balance between academic and clinical training.

A recent Academy publication highlights the distinction between research supervision and mentorship, and strongly advocates that all clinical academic trainees should also have a mentor throughout their training.⁴⁸ The Academy's one-to-one mentoring scheme began in 2002 with support from the Department of Health and by 2011 had matched around 270 pairs of mentors and mentees. It supports post-doctoral clinical academics on the cusp

of an independent career. An independent review in 2010 found that 82% of mentees were satisfied with the scheme, 59% felt that it had had a positive effect on their career and 53% believed that it had helped them to stay in academic medicine. The Academy has catalysed development of local schemes throughout the country but does not plan to extend its scheme to support trainees at earlier stages of their research careers, seeing this as a more appropriate task for HEIs. There is a strong case for an appraisal exercise in which the RCPsych, involved HEIs and the Academy work together to establish a system to ensure that trainee academic psychiatrists have continuity of mentoring, particularly at times of transition between various phases of their training.

Several other initiatives are aimed at improving mentoring of clinical academic trainees. For example, in Cardiff the MRC CNGG has established a Clinical Academic Mentoring Scheme that also provides some financial support to help participants make applications for fellowships such as those offered by the Wales Clinical Academic Training Scheme, MRC and the Wellcome Trust. Six to eight individuals are accepted each year and mentoring usually extends for some two to three years. Such schemes address the perceived need for improved mentorship and career advice for academic psychiatrists (mentioned earlier in the context of strengthening applications for grant funding).

3.3.8 Research environment

A thorough grounding in the sciences relevant to psychiatry and psychology is key to training academic psychiatrists. In the words of Dr Thomas Insel, '*there is a need for better science training at all levels – where science is defined by relentless curiosity, active inquiry, and critical thinking*'.⁴⁹ PhD students must work in an excellent research environment that favours multi-disciplinary interaction

48 Academy of Medical Sciences (2012). *Supporting tomorrow's leaders today*. <http://www.acmedsci.ac.uk/p260.html>

and provides supervision by scientists at the leading edge of their discipline. For some students a non-clinical environment may be the optimal setting for PhD training and a non-clinical supervisor may be more appropriate for their PhD degree. The Academy supports a pragmatic and flexible approach to deciding whether the PhD is undertaken as part of an MB PhD course or as a postgraduate degree in a clinical academic training programme. Regardless of timing, flexibility between the clinical and academic components of training remains critically important.

Before starting their research, trainees should be encouraged to interact with a variety of research environments and potential supervisors to identify the optimal setting for their doctoral research. Interactions can also involve attendance at summer schools and retreats, short research placements in a centre of excellence, and discussions with those leading clinical academic training programmes. Trainees must take every opportunity to broaden their interests and ensure that they work in the very best research environments and with the most appropriate research supervisors.

Whereas funding organisations such as The Wellcome Trust support four-year PhD programmes for non-clinicians, PhD programmes for clinicians are generally restricted to three years. It can be argued that a four-year PhD programme would allow an introductory common-stem training year that would be of value to clinicians planning to work in a range of neuroscience and related disciplines. In addition to grounding in research methodology, this introductory year could broaden horizons and allow more informed career choice. Concern not to prolong the time taken to acquire the CCT militates against a four-year PhD course although the changing

face of clinical neuroscience may lead some centres and some funders to reconsider its potential.

As clinical and scientific departments within medical schools have moved to amalgamate in a more themed approach to research, the identity and autonomy of traditional university departments has been eroded. Concern at the loss of departmental identity in psychiatry is balanced by the potential benefits of improved linkage to other relevant departments and the resulting opportunities to improve teaching and strengthen research. Some universities continue to retain trainees within established clinical academic disciplines during their research training, but above all the Academy holds strongly to the view that clinical academics must train in integrated systems. Trainees must work in a supportive environment where there is research excellence, free transfer of skills, cross-fertilisation of ideas and rational use of technological developments.

The Academy report '*Supporting tomorrow's leaders today*' highlighted lack of a clear career structure, insufficient flexibility and limitations of research training environments as major obstacles to recruitment and training of clinical academics.⁵⁰ It promoted the concept of providing optimal training environments in strong centres as a means of developing the career of trainees in disciplines lacking academic critical mass. For those working in areas such as population health, epidemiology and health services research, it is important that they have access to large databases, are not enmeshed in needless bureaucracy, and have training on the balance between safeguarding patient information and allowing it to be shared appropriately.

49 Quote taken from a personal communication from Dr Thomas Insel, Director, National Institute for Mental Health, USA.

Local Clinical Academic Training (CAT) schemes or Integrated Academic Training (IAT) schemes have developed in several centres in the UK and are proving to be very beneficial for trainee academic psychiatrists. Such schemes provide a multidisciplinary environment devoted to excellence in research training, horizon broadening and working in cross-disciplinary themes rather than confining trainees to a particular specialty or disease. The range of individuals/posts supported in any one centre's CAT/IAT scheme may include intercalating BSc students, vacation studentships, academic foundation posts, PhD MD Fellowships, clinical lectureships, intermediate/clinician scientist fellowships and senior research fellowships. At King's College London, as in all NIHR IAT schemes, there is a compulsory programme of IAT teaching for all Academic Clinical Fellows and Academic Clinical Lecturers that can generate credits for MSc courses being undertaken at the same time.

In addition, CAT/IAT schemes offer an invaluable host platform for externally funded schemes such as the PsySTAR scheme. Flexibility in career development, sound advice, research supervision, mentorship and interaction with those working at the leading edge of clinical and basic sciences are key features of CAT/IAT schemes.

McGill University hosts Canada's largest neuroscience graduate programme, an important feature of which is an Integrated Programme in Neuroscience (IPN) designed for graduates working for a PhD or MSc.⁵⁰ This interdisciplinary and interdepartmental programme is 'dedicated to producing world-class neuroscientists'. It spans cellular and molecular neuroscience and behavioural

and cognitive neuroscience. In addition to laboratory research, IPN offers an extensive range of courses and a seminar programme that facilitates communication and interaction between students in different disciplines. Students with outstanding undergraduate academic records may apply directly to enter the PhD programme rather than begin their graduate studies in the MSc programme. The IPN Rotation Programme makes it possible for a small select group of outstanding students to begin their doctoral work by sampling three laboratories and potential supervisors before deciding to work for their PhD in a specific research area.

In the USA, Yale University is consistently ranked in the top two or three Departments of Psychiatry in terms of obtaining competitive funding from the National Institutes of Health.⁵¹ Of the 12 medical graduates accepted into the Yale residency programme in 2012, six were MD PhD graduates and one was an MD MSc graduate. Yale's Neuroscience Research Training Programme is specifically designed to train successful physician scientists and equip graduates to be '*the next generation of leaders in psychiatry and clinical neuroscience*'. Key features are that: training in clinical psychiatry is balanced flexibly with training in clinical, translational and basic research in all phases; research time is protected; and mentorship is a priority. Although all residents experience research and research training, they can also apply for an NIMH-funded research fellowship that provides increased research time (up to 80% in year three and full-time in year four). An additional fifth-year Clinical Fellowship is available for residents who wish to consolidate clinical experience in specific areas of psychiatry.

50 The Academy of Medical Sciences (2000). *The tenure-track clinician scientist: a new career pathway to promote recruitment*. <http://www.acmedsci.ac.uk/p99puid29.html>

51 For further information see <http://www.mcgill.ca/ipn/>

52 For further information see <http://medicine.yale.edu/psychiatry>

3.4 Centres of excellence and the quality of UK psychiatric research

Following its review of mental health research in 2010, the MRC signalled areas that the UK research community should address over the next 5–10 years.^{53,54} Encouragingly, the MRC ambition is to do the following:

- Focus on prevention of mental disorders based on better understanding of causes, risk levels and new approaches to early preventive measures.
- Accelerate research and development to provide new, more effective treatments for mental illness, and implement them more rapidly.
- Expand the capacity for research in this area in the UK.

3.4.1 Centres of excellence

In the USA the NIMH-supported research centres provide an ideal environment for building the pipeline of individuals interested in pursuing research careers.⁵⁵ In the UK, focusing resource in centres of excellence linked to or based in HEIs is also seen as a route by which a specialty can develop academic and research capacity.⁵⁶ The resulting benefit to UK psychiatry has been development of research centres that can build critical mass; are more likely to be sustainable, cost-efficient and globally competitive; and most likely to provide an optimal environment for those developing a career in academic psychiatry. In addition, these centres can exert a penumbra effect on psychiatry in general that has wider positive implications for recruitment, training and development of the specialty. At the same time, this emphasis on existing centres of excellence must not deter new or established institutions from developing new research areas: indeed, emerging centres should be

identified and nurtured to develop their full potential for excellence in respect of research, teaching and training.

The UK's existing centres of excellence in psychiatry provide extensive research and clinical training opportunities for would-be academic psychiatrists. The centres have not been created using a standard template and vary greatly in size, target areas of mental health research, interdisciplinary linkages and incorporation of externally funded centres such as MRC centres. All share a commitment to internationally competitive research and the training of future generations of research workers.

3.4.2 Research Assessment Exercise

Some sense of the quality of UK psychiatry research strength can be gained from the 2008 RAE (see Table 1), bearing in mind that the RAE does not necessarily provide a comprehensive overview of research quality and that HEIs may have elected to submit psychiatrists in categories other than Unit of Assessment Nine (UOA9; Psychiatry, Neuroscience and Clinical Psychology).⁵⁷ Of the 17 institutions making submissions to UOA9 only seven (Cambridge, Imperial College London, King's College London, Newcastle, Oxford, University College London and Edinburgh) submitted more than 40 FTE Category A staff. In eight institutions (Bristol, Cambridge, Imperial College, London King's College, Oxford, University College London, Edinburgh and Cardiff) the proportion of research activity judged to be world-leading or internationally excellent (4* or 3* respectively) equalled or exceeded 55%.

53 Medical Research Council (2010). *Review of mental health research - report of the Strategic Review Group*. <http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC006848>

54 Sahakian BJ, Malloch G & Kennard C, on behalf of Mental Health Review Group (2010). *A UK strategy for mental health and wellbeing*. *Lancet* **375**, 9729, 1854–1855.

55 For further information see <http://www.nimh.nih.gov/about/advisory-boards-and-groups/namhc/reports/investing-in-the-future.pdf>

56 Academy of Medical Sciences (2009). *Building clinical academic capacity and the allocation of resources across academic specialties*. <http://www.acmedsci.ac.uk/p99puid150.html>

57 For further information see <http://www.rae.ac.uk/results/qualityProfile.aspx?id=9&type=uoa>
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Explanation of the different categories of activities:

4*: Quality that is world-leading in terms of originality, significance and rigour.

3*: Quality that is internationally excellent in terms of originality, significance and rigour but which nonetheless falls short of the highest standards of excellence.

2*: Quality that is recognised internationally in terms of originality, significance and rigour.

1*: Quality that is recognised nationally in terms of originality, significance and rigour.

Unclassified: Quality that falls below the standard of nationally recognised work. Or work that does not meet the published definition of research for the purposes of this assessment.

The FTE Category A staff submitted is the FTE number of Category A staff selected by the submitting institution for inclusion in their submission to the unit of assessment. Category A staff are those who were employed by and on the payroll of the submitting institution on the 31 October 2007 census date. HEIs had

Table 1: The RAE 2008 quality profiles for UOA9: Psychiatry, Neuroscience and Clinical Psychology

HEI	FTE Category A staff submitted [#]	Percentage of research activity in the submission judged to meet the standard for:				
		4*	3*	2*	1*	U/C
University of Birmingham	18.20	5	20	40	25	10
University of Bristol	20.76	5	55	35	5	0
University of Cambridge	40.80	40	40	15	5	0
Imperial College London	55.10	10	50	30	10	0
University of Kent	8.10	10	20	30	35	5
King's College London	214.59	15	40	40	5	0
University of Manchester	39.50	5	45	40	10	0
Newcastle University	46.90	5	35	50	10	0
University of Nottingham	31.50	5	30	50	15	0
University of Oxford	46.40	15	45	30	10	0
Queen Mary, University of London	8.65	10	30	40	20	0
St George's Hospital Medical School	3.83	5	10	45	20	20
University of Sheffield	20.00	10	30	50	10	0
University College London	99.20	15	55	25	5	0
University of Edinburgh	89.86	10	55	25	5	5
University of Glasgow	13.90	0	25	55	20	0
Cardiff University	21.30	20	60	15	5	0

the discretion to decide in which subject areas (units of assessment) to submit and which of their eligible staff to include in each UOA submission. Because decisions on which staff to include in submissions lay with HEIs, the FTE Category A staff submitted does not necessarily constitute the total FTE of staff who were active in research in that subject and HEI on the census date.

It is noteworthy, but hardly surprising, that the list of institutions with the highest ratings for research quality has significant overlap with the list of those successful in MRC and Wellcome Trust fellowship schemes mentioned earlier. These can justifiably claim to be internationally competitive, but as can be seen from Table 1, the quality of research activity is not necessarily a function of size. It can also be very difficult to disentangle the contribution of psychiatrists to today's multidisciplinary research groupings. Similarly, success in MRC and Wellcome Trust fellowship schemes, as discussed earlier, does not necessarily reflect overall success of HEIs in competitive fellowship schemes.

3.4.3 Collaboration and networking

Each of the UK's centres of excellence for psychiatric research has particular areas of strength but no one centre 'covers the whole waterfront'. Greater collaboration between centres (including collaboration with leading centres overseas) could allow trainees to move easily between them in the interest of career development, acquisition of new techniques and horizons, and participation in educational activity.

Illustrations of the value of linkage include the following:

- The Wellcome Trust-funded (£5.4 million) Neurosciences and Psychiatry Network is a five-year collaborative research initiative involving the University of Cambridge and University College London. It aims to characterise the structure and functions of the developing adolescent and young adult brain in healthy individuals and in young people suffering from depression or conduct disorders, psychoses and early emerging personality disorders.⁵⁸
- The Scottish Funding Council and Chief Scientist Office have recently funded the Scottish Imaging Network: A Platform for Scientific Excellence (SINAPSE) to strengthen neuroimaging. This collaboration between six universities has enabled recruitment of six professors, enhanced research income, expanded and strengthened PhD programmes, increased research output and fostered an imaginative programme of seminars, courses and summer schools.⁵⁹
- The MRC already supports collaboration between two or more universities in areas such as allergic mechanisms in asthma and musculo-skeletal ageing. Its support for the PsySTAR scheme already mentioned rests on collaboration between four universities and MRC may well consider alliances between universities in further programmes of mental health research.⁶⁰
- Collaboration between the Ecole Polytechnique Federale de Lausanne and the Departments of Psychiatry/Neurosciences in the Universities of Geneva, Lausanne and Basle is funded by the Swiss National Science Foundation. The programme, 'Synaptic Basis of Mental Disease' was one of eight selected from 80 applications from across all fields of science. The award is worth

58 For further information see <http://nspn.org.uk/>

59 For further information see <http://www.sinapse.ac.uk/>

60 For further information see <http://www.ed.ac.uk/schools-departments/psychiatry/psystar/home>

€17 million over four years (renewable for a further two periods of four years), supports collaboration between some 30 neuroscientists and examines pathophysiological mechanisms with a focus on imaging, genetics, development of relevant models and refinement of phenotypes. A key feature is dedication of €800,000 a year to a clinician scientist scheme that aims to recruit outstanding undergraduates and young postgraduates interested in psychiatry and related neurosciences.

The Academy considers that it is vitally important for the UK to have strong centres of excellence and exploit their full potential as a training resource. At the same time it is important not to discount the potential for all university departments of psychiatry to provide an excellent environment for clinical academic training. A strong network of research-active university departments has to be in the best interests of British psychiatry (academic and non-academic), the medical schools that house them and the patients they serve. Departments may benefit from linkage with other university departments or with centres of excellence. It is worth emphasising that interdisciplinary collaborations may involve psychiatrists working with a wide range of neuroscience interests and linkages to areas such as applied psychology, epidemiology, social sciences, primary care, health services research, clinical trials and the pharmaceutical industry.

3.5 Boundaries between specialties

Flexibility, including freedom to go out-of-programme, is highly desirable in clinical academic training programmes and a recurring theme in this document. Recent moves to clarify career pathways for clinical academic

staff have undoubtedly been helpful, and division of training into an early generalist (core) phase followed by modular higher specialist training is probably viewed as a positive development. More contentious is ease of movement across traditional specialty boundaries. In the context of academic psychiatry it is clear that several psychiatrists and neurologists would have welcomed greater ease of movement between the two specialties, and neurology is by no means the only specialty in which psychiatrists might wish to spend some time during training. Most contentious of all is the emerging debate about whether the existing portfolio of specialties in UK training programmes is fit for purpose in an era in which medicine is increasingly transformed by demographic shifts, new technologies for prevention, diagnosis and treatment, and advances in information technology. As mentioned earlier, a new molecular taxonomy of disease is already beginning to question traditional boundaries between brain and psyche and underlines the need for clinicians of the future to have a broader understanding of the neurosciences as the basis of their clinical practice. In many ways, the future of psychiatry and neurology as discrete entities is at the forefront of the specialty boundary debate and boundary issues have important implications for academic psychiatry.

In their plea for removal of the distinction between mental and neurological illnesses, White and colleagues have argued the following:⁶¹

- Reclassification of psychiatric disorders as disorders of the central nervous system will reduce stigmatisation and discrimination against patients with mental illness.
- Regular exchange of trainees between psychiatry and other areas of medicine will enhance the general medical and neurological skills of psychiatrists and

61 White PD, Rickards H & Zeman AZJ (2012). *Time to end the distinction between mental and neurological illnesses*. British Medical Journal **344**, e3454.

help them to understand and manage the wider biological dimension of their patients' disorders.

- Regular rotation of neurology trainees through mental health training posts will improve their ability to deal with psychological aspects of medical disorders.

However, these authors do not envisage that the specialties of psychiatry and neurology will fuse in the short- or medium-term and recognise significant historical, cultural and organisational impediments to merger. They see closer collaboration between the two specialties as the way forward in the context of a new rational disease classification that will promote a biopsychosocial model of illness.

In 2009 the Academy addressed the need for new and different academic clinical specialties, arguing that reactive change has been a continuing feature of medicine that is often led by clinical academics.⁶² Assessing the 'direction of travel' of a specialty in the light of changing disease prevalence, therapeutic and technical interventions and research skills needed a more logical approach than attempting to forecast precise numbers needed in the academic medical workforce. In the context of the present review, the Academy strongly supports the need to challenge interdisciplinary boundaries rendered inappropriate through the march of neuroscience, particularly when those boundaries are not in the best interests of patients and inimical to mental health research. The Academy is also strongly supportive of closer integration of training between psychiatry and other specialties but shares the view that merger of psychiatry and neurology training programmes at this juncture would be 'a bridge too far', lacking justification and unlikely to succeed.

Professor David Greenaway, Vice-Chancellor of Nottingham University, is leading a major independent review of UK postgraduate medical education and training: 'The Shape of Training'.⁶³ The review is sponsored jointly by the General Medical Council (GMC), Academy of Medical Royal Colleges, Medical Education England, Medical Schools Council, NHS Education Scotland and Health Departments in Wales and Northern Ireland. The Review aims to shape the way doctors are trained and make sure that they are equipped to meet the changing needs of patients, society and health services. In addition it will consider the balance between specialisation and generalism in medicine and ways of balancing the workforce demands of health services with the learning needs of trainees. A final report with recommendations is expected in the summer of 2013. It is clear that there will be major implications for clinical academic medicine (and not least, for clinical academic psychiatry).

3.6 Options for novel psychiatry training programmes

If the relationships between psychiatry and other specialties are to change, it is important to examine the structure of current training programmes and options for change. Accordingly, in preparing this document the working group examined options for delivery of more integrated training involving psychiatry and other disciplines, taking the interface between psychiatry and neurology as a test bed. It cannot be over-emphasised that linkage between these two specialties is considered here as a useful test bed and it is fully recognised that psychiatry has important interfaces with many other disciplines, sectors and specialties that offer intriguing possibilities for closer integration of training across existing programme boundaries.

62 The Academy of Medical Sciences (2009). *Building clinical academic capacity and the allocation of resources across academic specialties*. <http://www.acmedsci.ac.uk/p99puid150.html>

63 For further information see <http://www.shapeoftraining.co.uk/>

The following discussion is written primarily from the standpoint of integrated training for all psychiatry trainees but with a clear understanding that neurologists might also wish to take advantage of novel integrated training options. It is also written in the clear understanding that the number of neurologists in the UK is dwarfed by the large number of psychiatrists, and that although there is considerable overlap between psychiatry and neurology there are large areas within each discipline that have little practical overlap with the other. It must be stressed that integrated training programmes would be developed for all psychiatry trainees and not just those with academic aspirations. Such inclusivity would ensure optimal training for all, allow flexible career development for those yet to decide on whether to become a clinical academic, and might attract individuals who previously would have turned to other specialties because of a perceived lack of scientific rigour in psychiatry.

3.6.1 Current basis of training programmes in psychiatry and neurology

Psychiatry recruits from F2 into CT1. Its training curriculum is devised by RCPsych, approved by the GMC, and currently extends over six years (CT1–3, ST4–6). Passing the MRCPsych examination after three years allows the trainee to progress to ST4–6. During advanced training the trainee may qualify in general psychiatry (with three possible sub-specialties: liaison-, rehabilitation- or substance misuse-psychiatry); child and adolescent psychiatry; forensic psychiatry; old age psychiatry; psychiatry of learning disability; or medical psychotherapy.

Neurology recruits from CT2 Core Medical Training into ST3. The neurology curriculum is devised by the Royal College of Physicians, approved by the GMC and currently extends for five years (ST3–7). Trainees may also qualify in the approved sub-specialty of stroke medicine if

they undergo appropriate modular training (two years experience, at least one year of which is at the level of advanced training in stroke medicine) that is integrated with the main specialty.

3.6.2 Options for change

Option one: Current clinical training model with cross-training: 'status quo plus cross-training'.

The psychiatry curriculum refers primarily to specific learning objectives. Provision of neurology experience within psychiatry specialist training is possible because the curriculum is broadly specified. However, any neurology experience would need to meet learning objectives, individual rotations might find it difficult to organise, and the fact that psychiatry trainees greatly outnumber neurology trainees could pose logistic problems.

The neurology curriculum currently mentions mental health disorders only in the neuropsychiatry section as an allied topic. Neuropsychiatric experience is not mandatory but can be organised as part of a neurology rotation. Psychiatry experience within neurology specialist training is therefore possible at the expense of other areas of neurology training and depends on the ability of individual rotations to organise it.

Several psychiatrists who had spent time in neurology (or another specialty) before crossing over to psychiatry have said that they would have welcomed the opportunity to have some training in neurology during their psychiatry training. In some countries such as Germany, trainees specialising in neurology and psychiatry spend a year of their training in the other discipline, and this can lead to a decision to change career. If psychiatry trainees were to be offered training in neurology, there is a strong view that it must be properly integrated and not seen as an 'add-on' in the late stages of training. As the Association of British

Neurologists (ABN) has pointed out to this review, some medical rotations already include rotation through psychiatry, and opportunities for cross-training already exist at ST1–2 level where trainees only require foundation competencies.

Implementation of a *status quo plus cross-training* option would involve conversations between postgraduate deans and/or Local Education and Training Boards (LETBs) and the relevant Royal Colleges but would not require amendment of existing curricula or approval of a new curriculum (provided that the objectives or competences to be gained are stated in, or compatible with, existing curricula). The simplest way for a trainee to take up this option at present would be through out-of-programme training that was prospectively approved by the GMC. As far as the GMC is concerned this would be simple and straightforward.

A proposed pilot scheme in England will assess a rather different broad-based curriculum experiment in which a two-year rotation (after foundation training but before specialty training) provides four posts in psychiatry, paediatrics, medicine (including neurology) and primary care. The scheme may allow uncommitted trainees further exposure to these disciplines in the interest of career choice and acquisition of skills in general medicine and psychiatry. The results are awaited with interest.

Option two: Modify existing CCT curricula.

The GMC allows individual specialties to modify their curricula so that an additional or supplementary approach to option one would be to modify psychiatry and neurology curricula to include a common 'cross-training' section. The different style and construction of the two curricula would make this a challenging but not insurmountable problem. Implementation

would require agreement of the two Royal Colleges followed by an application to the GMC. A preliminary indication from the GMC is that this option would not be problematic provided it was clear when 'cross-training' would be undertaken and that it was borne in mind that time in core training is already tightly constrained and that trainees need to pass an examination (MRCP or MRCPsych) to exit this stage successfully.

Option three: new CCT specialty merging psychiatry and neurology.

Creation of a programme leading to award of a new CCT is a complex process. Specialties in which a CCT can be awarded are laid out in the relevant EU Directive and new specialties need to be approved by the Secretary of State. However, the Medical Act (1983) might permit establishment of CCTs in specialties that do not appear in the relevant annex, provided the specialist training is in accordance with Article 25 of the Directive. It would therefore be possible in principle to establish a new specialty where integrated training in psychiatry and neurology culminated in award of a CCT. This would require a sponsoring body, presumably a Royal College or Colleges, although it is possible that bodies other than Royal Colleges could devise and sponsor the CCT and make application to the GMC. Creation of this new specialty would require agreement of both specialties, significant lead-time and the support of the UK's postgraduate training authorities. It is by no means certain that there is an appetite for this radical change on the part of the specialties concerned or justification for merger when large areas of neurology have little overlap with psychiatry and vice versa. On the other hand, it is very clear that creation of a new specialty CCT would first require clear agreed justification, defined training pathways and, crucially, an availability of definitive posts on completion of training.

Option four: New sub-specialty. Sub-specialties are approved by the GMC rather than the Secretary of State. It is perfectly possible for a sub-specialty to have more than one 'parent'. Stroke medicine is an example of sub-specialty training that can be undertaken by trainees working towards a CCT in cardiology, clinical pharmacology and therapeutics, general internal medicine, geriatric medicine, neurology or rehabilitation medicine. Typically it is achieved by modifying the content of the parent training rotations to provide two years of training to fulfil the requirements of the new sub-specialty. Some sub-specialties have their sub-specialty training running in parallel with their specialty training whereas others place it towards the end of the CCT curriculum. Sub-specialty 'endorsements' are already possible in psychiatry and a move to offer a new sub-specialty would mean developing a short (two-year) curriculum that could be 'shared' between psychiatry and neurology. It would be important for the new sub-specialty curriculum to allow for different styles of delivery depending on the parent CCT with which a trainee was associated. Establishing such a sub-specialty would require discussions between the GMC, the two Royal Colleges and the Medical Programme Board for England and its equivalent in the devolved nations. Issues requiring clarification would include the question of timing and relationship of a new sub-specialty to clinical academic training programmes.

Encouragingly the ABN has recently endorsed a proposal by the RCPsych for a sub-specialty in neuropsychiatry and indicated that it would be desirable for such sub-specialty training to be accessible to neurologists as well as psychiatrists.

Option five: Post-CCT Fellowship. This training would not require approval by the GMC unless it was intended to lead to award of a sub-specialty certificate. Some specialties (notably surgery) have piloted post-CCT Fellowship schemes to allow trainees to acquire particular skills before taking up a consultant position. Post-CCT fellowships open to CCT holders in psychiatry or neurology would be a further way to acquire cross-training. Pilot experience with post-CCT surgical fellowships has been mixed and they have attracted opposition from the British Medical Association because they prolong training. However, post-CCT fellowships that allowed acquisition of specific specialist experience at the interface between psychiatry and neurology might prove attractive to some and could greatly benefit academic training as well as service delivery. Introducing such fellowships would require agreement on funding because they are outside training schemes funded by the Multi Professional Education and Training (MPET) budget. In Scotland, Advanced Medical Training Fellowships have been introduced to create such an option and, for the moment, funding is provided by NES, universities or external agencies.

Option six: Dual CCT in psychiatry and neurology. This option was not initially considered by the working group but was introduced during the consultation exercise by Dr Paul Buckley of the GMC. The GMC believes that dual programmes should be encouraged in that they could deliver a workforce that is appropriately trained to improve patient services and able to adapt to advances in our understanding of mental illness and its management. It will be critically important that the development of dual programmes is carefully managed with clear and transparent criteria that are sensitive to the interests and needs of all concerned. The GMC has recently established a small operational group to consider further development of this option. In principle it would be possible to develop a dual CCT programme in psychiatry and neurology but care would be needed to ensure that training programmes were not

lengthened inappropriately. Length of training is already a particular concern for clinical academic psychiatrists given the time needed to undertake research as well as complete clinical training.

The ABN have raised the intriguing suggestion that clinical academics wishing to restrict their clinical practice to a specific area could avoid protracted training if full academic training was linked with limited specialist training determined on an *ad-hominem* basis. This limited registration would allow the individual concerned to see clinically relevant patients without the need to extend clinical training to specialty-CCT level.

Credentialing. The GMC defines credentialing as a process that 'provides formal accreditation of attainment of competencies (which include knowledge, skills and performance) in a defined area of practice, at a level that provides confidence that the individual is fit to practise in that area in the context of effective clinical governance and supervision as appropriate to the credentialed level of practice.'⁶⁴

Credentialing is not yet an option. However, the GMC is currently giving it active consideration as a means of recognising training and acquisition of competencies in management of breast disease, musculoskeletal medicine and forensic/legal medicine.⁶⁴ None of these are recognised CCT specialties and all are seeing shifts in practice that involve more than one professional group. The GMC has agreed in principle to establish a framework for credentialing and it could well become a viable option for integration of training in psychiatry and related specialties.

3.6.3 Discussion of options and emerging conclusions

Development of training options in the course of this review has reinforced the growing sense that the UK must do more to explore the benefits of change in psychiatry training programmes. The options for integrated training were presented for discussion in the consultation exercise and discussed further at the workshop convened by the Academy on 10 September 2012. In essence the emerging conclusions were as follows:

- The training of psychiatrists must emphasise the scientific basis of the discipline, ensure that the specialty is appropriately integrated with other relevant areas of medicine and have the flexibility to allow optimal career development of clinical academics.
- There was broad support for options to allow closer integration of training between psychiatry and a range of relevant specialties. Although integration of training in psychiatry and neurology was taken as test bed, it was fully recognised that many psychiatrists will wish to build a clinical career where integration of their training with that of another specialty is more relevant. When considering novel training options, 'one size will not fit all'.
- Opportunities for integrated training need to be provided for all trainees and not just for those pursuing a career in clinical academic psychiatry.
- Opportunities are already available so that those considering a career in psychiatry can acquire experience in a range of relevant disciplines during foundation training. Such broadly based early postgraduate experience should be encouraged.

⁶⁴ Postgraduate Medical Education and Training Board (2010). *Credentialing steering group report*. http://www.gmc-uk.org/CSG_Report.pdf_32599899.pdf

⁶⁵ http://www.gmc-uk.org/CSG_Report_April_2010.pdf_34123082.pdf

- There was support for pragmatic access to cross-training (outlined earlier in option one) as a means of enhancing training in psychiatry and specialties such as neurology. Although option two could be introduced if there was a desire to do so, timing of the cross-training and need to avoid curricula overcrowding are potentially problematic.
- When discussing integration of training between psychiatry and another specialty such as neurology, there was strong support for developing a new sub-specialty option (option four). This was seen as a means of effecting desirable change quickly without bureaucratic or regulatory difficulty, and with a strong likelihood that the professionals concerned would welcome the development.
- A move to implement option four would be the first stage in an evolutionary process that could allow closer and deeper integration of training as justification strengthened and benefits became apparent to patients, professionals and the NHS. It is abundantly clear that many trainee psychiatrists would see integration of training with neurology as less relevant to their personal career development than an opportunity to integrate training with that of another discipline. The new sub-specialty model (option four) would readily extend to the interface between psychiatry and a broad range of specialties.
- There was also some support for selective use of option five (post-CCT training) provided it did not expand standard training programmes, incur significant expense or create a second tier of consultants.
- If credentialing is formally introduced by the GMC as a training option it could have significant attractions for psychiatrists wishing to acquire specific expertise in a related specialty.
- Creation of a new specialty CCT (option three) received little support, whereas development of a dual CCT programme between psychiatry and neurology (option

six) was not viewed as appropriate or desirable at present. The major concern about dual CCT programmes centred on the risk that they would prolong training significantly. The length of existing UK training programmes for psychiatrists in general, and clinical academic psychiatrists in particular, was a recurring cause for concern in this review. However, there was willingness to accept that closer integration of training programmes could well become increasingly desirable with time as scientific advance and changing practice define areas of overlap and strengthening justification.

Conclusions about the need for integrated training programmes

The overwhelming consensus on the part of organisations and individuals consulted in the UK and in leading academic institutions in North America is that a pragmatic approach to integration of psychiatry training programmes with those of other specialties is now both desirable and necessary. On the other hand, complete merger of psychiatry and neurology training programmes is regarded as inappropriate, unduly restrictive and lacking clear justification. As our understanding of mental illness increases and science advances, the UK needs to develop a cadre of highly skilled clinical academic psychiatrists who can develop and implement effective treatments for mental illness and adapt their practice to take full advantage of a burgeoning science base. A new sub-specialty that allows psychiatrists to integrate their training with that of a relevant specialty could promote broad-based academic endeavour and offer attractive career options. It would be important to ensure that such integration did not prolong training programmes, programmes that are already viewed by many as unnecessarily long. The Academy fully supports this evolutionary approach to integrated training of psychiatrists in the UK and considers that it is likely to increase the attractions of a clinical academic career, improve service delivery and strengthen research capacity.

4 Recommendations

Earlier sections of this report have analysed the issues facing clinical academic psychiatry and suggested several ways in which they could be addressed. This final section sets out several recommendations aimed at strengthening academic psychiatry with particular reference to recruitment, retention, research opportunities and integration of training in psychiatry with training in other relevant disciplines. The recommendations are presented in three groups.

Enhancing recruitment and retention in academic psychiatry

Recommendation 1: Improve recruitment to psychiatry and clinical academic psychiatry in medical schools

- Psychiatrists** must increase their profile and that of their specialty in medical schools and seize the initiative for the clinical training and teaching of future academic psychiatrists. Established academic psychiatrists in particular must work actively to portray psychiatry as an exciting scientific discipline that is integrated with a range of relevant specialties and research interests. It is essential that academic psychiatrists identify talented students and trainees, encourage them to enter the specialty and actively support their career development. The overriding ambition must be for psychiatry to recruit and retain the brightest and the best students.
- UK Universities and their medical schools** must maintain strong **departments of psychiatry** and encourage them to play an active role in neuroscience research. Universities should also develop, or at least maintain, portfolios of relevant intercalated BSc, BMedSci (Hons), Masters and MB PhD degrees, all of which can provide a strong platform for further scientific study in the context of mental health.
- University departments of psychiatry** must take a lead role in promoting enrichment activities such as research days, summer schools and student psychiatric societies, to safeguard and strengthen psychiatry in general and academic psychiatry in particular.
- The Academy sees recruitment of talented graduates as an absolute priority. It commends the Recruitment Campaign now initiated by the **Royal College of Psychiatrists** and encourages the College to afford the highest priority to delivering this ambitious programme.

Recommendation 2: Improve career pathways for medical graduates aspiring to a career in academic psychiatry

- Deaneries (and their future equivalents in LETBs) and Foundation Schools** responsible for organising and administering **foundation programmes** should ensure that those interested in psychiatry (and other clinical neurosciences) have access to neuroscience foundation packages that combine psychiatry placements with placements in other relevant disciplines. Clinical training opportunities must be of uniformly high quality. Additional **academic foundation posts** should be created from existing 'non-academic' foundation posts if supply fails to meet increasing demand.
- Deaneries and their future equivalents in LETBs, HEIs and those who fund clinical academic training programmes** must encourage flexibility to allow trainee academic psychiatrists to move easily in and out of programme and balance clinical training with acquisition of research experience. They should also ensure that academic trainees work in academic centres for a major proportion of their clinical training. At the very least, these individuals should always be under the supervision of consultants with a strong

interest in research and development of the next generation of academic psychiatrists.

- The Academy welcomes the development of integrated clinical academic training schemes such as the clinical lectureships offered by NIHR and SCREDS. It encourages **UK Health Departments and universities** to continue to provide strong support for such schemes and encourages **research-funding organisations** to continue to provide competitive external funding for trainees wishing to take time out-of-programme to undertake research for a doctorate. In the drive for maximum flexibility, **NIHR** is encouraged to reconsider its intention to require psychiatry trainees to have completed a PhD or MD before they can be appointed to a clinical lecturer post.

Increasing and improving research opportunities for academic psychiatrists

Recommendation 3: Improve research capacity in clinical academic psychiatry

UK spending on research into mental health remains disproportionate to the burden of mental illness. Increasing the number of trainee academic psychiatrists who can compete successfully for research fellowships and clinical lectureships is essential for capacity building. Trainee academic psychiatrists have similar or better success rates than those in other specialties when competing for such opportunities, so new schemes dedicated specifically to academic psychiatry are not at present necessary. The onus is on **established clinical academic psychiatrists** to engage and recruit trainees of the highest quality, support them through the fellowship application process and nurture their career development. The Academy sees great merit in linking research fellowships (at all levels) with strong academic centres or collaborative networks to support the scientific endeavours of the individuals concerned.

Recommendation 4: Ensure that trainee clinical academic psychiatrists carry out doctorate research in optimal settings

Clinical academic psychiatrists/scientists

who advise and supervise PhD and MD students must ensure that trainees work in the environment most appropriate to their programme and one that is committed to excellence, favours multi-disciplinary interaction and provides excellent supervision and mentorship. Aspiring clinical academic psychiatrists must be encouraged to seek out the very best research supervisor(s) for their doctoral studies and work in outstanding centres.

Recommendation 5: Provide excellent mentoring for trainees

Mentoring is critical in supporting aspiring clinical academic psychiatrists. The Academy intends to continue its established one-to-one mentoring scheme for post-doctoral clinical academics. It is also concerned that all clinical academic trainees should have a mentor throughout their training. With this in mind it recommends that **university departments of psychiatry** and **centres of neuroscience excellence** work with immediate effect to ensure that local mentoring, career advice and support is available for all trainee academic psychiatrists. Trainees may also benefit from interdisciplinary mentorship to match broader neuroscientific interests that extend into areas such as epidemiology, endocrinology, molecular genetics, neuroimaging and experimental psychology.

To address 'mentoring gaps' while trainees are in transition between various phases of training, the **Royal College of Psychiatrists** is encouraged to take a lead role in developing a specialty-specific network of academic psychiatry champions across the UK who can advise and mentor aspiring academic psychiatrists at all stages of their career.

Recommendation 6: Ensure that clinical academic psychiatry has a balanced workforce that is able to develop and deliver mental health services

Organisations concerned with the medical workforce across the UK and the **'Shape of Training Review'** must take full account of the need to maintain strong clinical academic specialties, including psychiatry, when reshaping the medical workforce to meet the changing needs of patients and health services. Workforce planning must take account of the uneven distribution of centres of excellence and academic training opportunities across the UK. Workforce demands must be carefully balanced with the learning needs of all trainees and the particular needs of clinical academic trainees must be safeguarded.

Government, HEIs, the NHS and research funding organisations must collaborate to ensure that clinical academic training numbers are balanced by opportunities for advancement to senior clinical academic posts. The Academy commends the continuing work of the **Medical Schools Council** in monitoring the UK clinical academic workforce. Future monitoring will need to take into account the likelihood of changes in service configuration and delivery, the particular issues facing hard-pressed specialties within psychiatry, and the potential impact of a new molecular taxonomy of mental illness on training and research needs.

Recommendation 7: Enhance the international standing of UK research in clinical science by realising the full potential of centres of excellence and collaboration between them

The UK Government and organisations that fund biomedical research must maintain a strategic approach to the funding of internationally competitive centres of excellence for teaching, training and research in the neurosciences, including psychiatry.

Increased collaboration between **neuroscience centres** in the UK and overseas is strongly

encouraged, particularly where this can strengthen research programmes and facilitate the career development of trainee academic psychiatrists.

Research centres and institutions must enhance their profile, articulate their research strategies and publicise their facilities and research through conferences, publications and web-links so as to serve as beacons for aspiring academic psychiatrists.

Better integration of psychiatry and its training programmes with other disciplines relevant to mental health

Recommendation 8: Remove unhelpful and constraining boundaries between psychiatry and related specialties through a pragmatic and evolutionary approach to developing novel integrated training programmes

The Academy fully supports the need to challenge inappropriate boundaries between specialties as our understanding of mental illness and its prevention, diagnosis and treatment improves. In this context it encourages those responsible for disease taxonomy to reconsider classifications of mental disorder that draw an inappropriately rigid line of demarcation between disorders of the mind and disorders of the brain. It also strongly urges the **Royal College of Psychiatrists, other relevant Royal Colleges and those responsible for postgraduate training** to strive for closer integration of training between psychiatry and a range of specialties relevant to mental health as boundaries between existing specialties become blurred by biomedical advance. The move to closer integration of training must be underpinned by a renewed emphasis on the science base relevant to mental illness. The Academy firmly believes that opportunities for integrated training need to be provided for all trainees and not just those pursuing a career in clinical academic psychiatry.

As a readily achievable and highly desirable step on the road to training integration, the Academy is warmly disposed to the possibility of psychiatry trainees gaining experience in other medical rotations or a defined specialty such as neurology (at up to ST1–2 level) during core training (option one). The Academy encourages the **Royal College of Psychiatrists, other relevant Royal Colleges and deans/postgraduate training organisations** to collaborate in formalising this option. An alternative route for trainees seeking cross-training would be to do so on a prospectively approved out-of-programme basis.

The Academy also urges the **Royal College of Psychiatrists, other relevant Royal Colleges, professional associations and those responsible for postgraduate training programmes** in various parts of the UK to explore the introduction of a new sub-specialty that would allow psychiatrists to

have (say) two years of training in a related specialty important for their clinical academic development (option four). It considers that this could provide the best take-off point for an evolutionary process that will benefit patients with mental illness, improve the training and career satisfaction of professionals, and strengthen mental health research. Although this review is directed primarily at strengthening academic psychiatry, it cannot be over-emphasised that any new sub-specialty training programme should be available to all trainee psychiatrists and that the approach is likely to prove attractive for those training in specialties other than psychiatry. The Academy believes that clinical academic psychiatry will be best served by pursuing this goal through a pragmatic evolutionary process that avoids inappropriate lengthening of training, is underpinned by clear justification for change, and has defined objectives and opportunities for career advancement.

Annex I Working group membership

Working group members participated in a personal capacity, not as representatives of the organisations listed.

Chair

Sir David Carter FRSE FMedSci, Emeritus Professor of Surgery, University of Edinburgh and Formerly Chief Medical Officer of Scotland

Members

Professor Jeremy Hall, Professor of Psychiatry, University of Edinburgh

Professor Paul Harrison, Head of Translational Neurobiology, University of Oxford

Mr Peter Hutchinson, Senior Surgical Fellow, University of Cambridge

Professor Shitij Kapur FMedSci, Dean, Institute of Psychiatry, King's College London

Professor Christopher Kennard FMedSci, Head, Department of Clinical Neurology, University of Oxford

Professor Geraint Rees FMedSci, Director, Institute of Cognitive Neuroscience, University College London

Professor Trevor Robbins CBE FRS FMedSci, Head of the Department of Experimental Psychology, University of Cambridge

Professor Sir Simon Wessely FMedSci, Vice Dean, Academic Psychiatry, Institute of Psychiatry King's College London

Observers

Professor Nicholas Craddock FMedSci, Department of Psychological Medicine and Neurology at the Cardiff University School of Medicine and Treasurer of Royal College of Psychiatrists.

Dr Gavin Malloch, Programme Manager for Addiction & Mental Health, Medical Research Council.

Professor Jim Neilson, Dean of NIHR Faculty Trainees.

Dr John Williams, Head of Neuroscience and Mental Health, Head of Clinical Activities, Wellcome Trust.

Secretariat

Dr Kathryn Adcock, Policy Secondee from the Wellcome Trust

Laurie Smith, Policy Manager, Academy of Medical Sciences

Dr Suzanne Candy, Director of Biomedical Grants and Policy, Academy of Medical Sciences

Annex II Review group membership

This report was reviewed by an external panel appointed by the Council of the Academy of Medical Sciences. Reviewers were asked to consider whether the report met the terms of reference, and whether the evidence and arguments presented in the report were sound and supported the conclusions. Reviewers were not asked to endorse the report or its findings.

Sir Patrick Sissons FMedSci (Chair)

Emeritus Regius Professor of Physic, University of Cambridge

Professor Susan Wray FMedSci

Professor of Physiology, University of Liverpool

Professor Michael Owen FMedSci

Head of the Department of Psychological Medicine and Neurology, Cardiff University

Annex III Stakeholder engagement

As part of our engagement with the community we consulted several key stakeholders and held a workshop. We recognise that many of the individuals below have more than one role and it should be noted that since the programme of engagement some roles may have changed.

We thank the following people for providing comment in the development of this report:

Professor Sue Bailey, President, Royal College of Psychiatrists

Professor Dame Fiona Caldicott DBE FMedSci, Chair of the Oxford University Hospitals NHS Trust

Dr Rudolf Cardinal, psychiatry trainee who undertook a MB/PhD, University of Cambridge

Dr Stuart Carney, Deputy National Director, Foundation Programme Office

Professor Clair Chilvers, Co-founding Trustee at Mental Health Research UK, Mental Health Research UK

Dame Sally Davies FMedSci, Chief Medical Officer, Department of Health

Professor Paul Fletcher FMedSci, Bernard Wolfe Professor of Health Neuroscience, University of Cambridge

Professor John Geddes, Professor of Epidemiological Psychiatry, Oxford

Professor Bernadette Hannigan, Director of R&D and Chief Scientific Advisor, Northern Ireland Health and Social Care Research and Development, Public Health Agency

Dr Duncan Henderson, Associate Postgraduate Dean (Foundation), NHS Education Scotland

Dr Thomas Insel, Director National Institute of Mental Health, NIMH/NIH Bethesda

Professor John Krystal, Chair, Department of Psychiatry, Yale University

Professor Stephen Lawrie, Director of PsySTAR, University of Edinburgh

Professor Glyn Lewis, Professor of Psychiatric Epidemiology, University of Bristol

Professor David Linden, Professor of Translational Neuroscience, Cardiff University

Professor Anne Lingford-Hughes, Professor of Addiction Biology, Imperial College London

Professor Simon Lovestone FMedSci, Professor of Old Age Psychiatry, King's College London

Professor Pierre Magistretti, Brain Mind Institute, EPFL, Lausanne

Dr Hamish McAlister-Williams, Reader in Clinical Psychopharmacology, Newcastle University

Professor David Ross, Assistant Professor of Psychiatry & Associate Residency Program Director, Yale University

Professor Martin Rösser FMedSci, Professor of Clinical Neurology, University College London

Sir John Savill FRSE FMedSci, Chief Executive, Medical Research Council

Professor Lindsay Thomson, Professor of Forensic Psychiatry, University of Edinburgh

Professor Tony Weetman FMedSci, Chair, Medical Schools Council

We thank the following people for attending the workshop held at the Academy of Medical Sciences, 41 Portland Place, London W1B 1QH, on 10 September 2012. Some of the attendees additionally provided comment for the development of this report.

Dr Paul Baker, Foundation School Director, North Western Deanery, Foundation Programme Office

Dr Paul Buckley, Director of Education, General Medical Council

Professor Ed Bullmore FMedSci, Professor of Psychiatry, University of Cambridge

Dr Wendy Burn, Dean, Royal College of Psychiatrists

Professor Alistair Burns, Professor of Old Age Psychiatry, University of Manchester

Dr Lisa Cotterill, Director, Trainees Coordinating Centre, National Institute of Health Research

Dr Vivienne Curtis, Higher Training Programme Director (General Adult), The Maudsley Training Programme, King's College London

Dr Mary Docherty, Academic Clinical Fellow, Maudsley and King's College London

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Dr Catherine Elliott, Head of Clinical Research Support and Ethics, Medical Research Council

Dr Geraint Fuller, President Elect, Association of British Neurologists & Royal College of Physicians

Professor Derek Gallen, Chair, COPMed

Prof Ian Goodyer FMedSci, Professor of Child & Adolescent Psychiatry, University of Cambridge

Dr Amy Iversen, Senior Clinical Lecturer in Academic Psychiatry (Consultant liaison psychiatrist), King's College London

Professor Peter Jones FMedSci, Professor of Psychiatry, University of Cambridge

Dr Ian Jones, Reader in Perinatal Psychiatry, Cardiff University

Cynthia Joyce, Chief Executive Officer, Insight

Dr Clare Oakley, trainee representative on the RCPsych's Academic Faculty, King's College London

Dr Vicky Osgood, Secretary of the Independent Review of the Shape of Training, Assistant Director, Postgraduate Education, General Medical Council

Dr James Pickett, Senior Research Manager, Alzheimer's Society

Dr Mike Watson, Former Director, NHS Education Scotland

Professor Peter White, Professor of Psychological Medicine, Barts and The London School of Medicine and Dentistry

Professor Peter Woodruff, Chair, Academic Faculty, Royal College of Psychiatrists

Professor Adam Zeman, Professor of Cognitive and Behavioural Neurology, University of Exeter

Annex IV Abbreviations and acronyms

ABN	Association of British Neurologists
ACF	Academic Clinical Fellowship
CAT	Clinical Academic Training
CCT	Certificate of Completion of Training
CL	Clinical Lecturer
CNGG	Cardiff MRC Centre for Neuropsychiatric Genetics and Genomics
CSF	Clinician Scientist Fellowship
CT 1-3	Core Training years one to three
DSM	Diagnostic and Statistical Manual of Mental Disorders
F1, F2	Foundation Training years 1 and 2
FTE	Full-time equivalent
GMC	General Medical Council
HEI	Higher Education Institution
IAT	Integrated Academic Training
ICD	International Classification of Diseases
IPN	Integrated Programme in Neuroscience
LETB	Local Education and Training Board
MPET	Multi Professional Education and Training
MRC	Medical Research Council
MSTP	Medical Scientist Training Program
NES	NHS Education Scotland
NHS	National Health Service
NIH	National Institutes of Health
NIHR	National Institute for Health Research
NIMH	National Institute of Mental Health
PsySTAR	Psychiatry, Scottish Training and Academic Research
RAE	Research Assessment Exercise
RCPsych	The Royal College of Psychiatrists
SCREDS	Scottish Research Excellence Development Scheme
SFC	Scottish Funding Council
SINAPSE	Scottish Imaging Network: A Platform for Scientific Excellence
ST 4-6	Specialty Training years four to six
UOA	Unit of Assessment
UOA9	Unit of Assessment Nine (i.e. Psychiatry, Neuroscience and Clinical Psychology)



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