This article summarises the academic medical career pathways available and details the structure, application processes and expected output for each. It includes the perspectives of two doctors who have had experiences of the academic training programme at different stages.
Highlight: Abstracts from the 4th International Academic and Research Conference 2014, Manchester, UK

The Anatomy and Pathogenesis of Tendinous Interconnection between Flexor Tendons in the Musician’s Hand

The First National Undergraduate Conference for Clinical Anatomy (NUCCA)

Use of Mixed Teaching Modality: Pakistani Medical Students’ Perspective

Wireless Sensor Networks in Health Care Applications

Integrated Academic and Clinical Training Programmes in the United Kingdom

Management of Paediatric Trauma in Siblings with Pyknodysostosis: A Case Report

Synchronous Colorectal Cancers: A Case Report and Review of Literature.
Introduction

The World Journal of Medical Education and Research (WJMER) (ISSN 2052-1715) is an online publication of the Doctors Academy Group of Educational Establishments. Published on a quarterly basis, the aim of the journal is to promote academia and research amongst members of the multi-disciplinary healthcare team including doctors, dentists, scientists, and students of these specialties from around the world. The principal objective of this journal is to encourage the aforementioned, from developing countries in particular, to publish their work. The journal intends to promote the healthy transfer of knowledge, opinions and expertise between those who have the benefit of cutting edge technology and those who need to innovate within their resource constraints. It is our hope that this will help to develop medical knowledge and to provide optimal clinical care in different settings. We envisage an incessant stream of information flowing along the channels that WJMER will create and that a surfeit of ideas will be gleaned from this process. We look forward to sharing these experiences with our readers in our editions. We are honoured to welcome you to WJMER.
Integrated Academic and Clinical Training Programmes in the United Kingdom

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Abstract

This article summarises the academic medical career pathways available and details the structure, application processes and expected output for each. It includes the perspectives of two doctors who have had experiences of the academic training programme at different stages.

Key Words

Academic Clinical Fellowship, Academic Foundation Programme, Foundation Programme

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The Foundation Programme

The Foundation Programme (FP) is a two-year training programme comprised of six, 4-month placements in a variety of medical and surgical specialties (also known as tracks). Currently, upon completion of the first year of FP, trainees receive full registration with the General Medical Council (GMC).

FP jobs are obtained through a competitive national selection process. Applicants register on the Foundation Programme Application System (FPAS), apply to a UoA (Unit of Application, otherwise known as Deaneries) and rank the tracks available according to their own personal preferences. Trainees must complete an application form which is comprised of different components and scored out of a maximum of 100 points. The score that an applicant receives determines which UoA and track they are allocated to, with the more competitive track requiring higher scores to secure. Tracks are usually selected to include a placement in the specialty you are interested in. This is not because it is essential to have experience working within the specialty you apply for, but it can certainly be beneficial. If the track does not contain the relevant specialty, it is possible to use study leave to do taster weeks, and/or projects that demonstrate your commitment to the specialty you are interested in.

The Academic Foundation Programme

The Academic Foundation Programme (AFP) is a form of the FP that includes dedicated time for research. This can be organised as one of your 4-month placements, or as time protected each week or month throughout all 6 placements, to conduct research. The project that an AFP trainee undertakes can be research, audit, medical education, or leadership and management-based. AFP opportunities exist in a wide range of specialties and there is great variability between the types of academic placements offered between UoAs.

Both the AFP and the FP lead onto the acquisition of the Foundation Achievement of Competence Document (FACD) (refer to figure 1).

Completion of an AFP puts trainees in a strong position to continue research alongside their clinical work, and apply for an Academic Clinical Fellowship (ACF). It is not however a pre-requisite and trainees can evidence commitment to the ACF during the FP, particularly if you are aware of this from the outset and are organised.

The AFP is competitive to obtain and is currently awarded through a similar process of national selection to the FP, except that there is an additional interview. During the interview process, you are given the opportunity to discuss your previous work, impress the panel with your plans for the job if you get it, and try and convince them you have what it takes. Although academic trainees are well supported, an AFP does require you to be independent, organised and self-motivated. The panel wants to be convinced that if they select you, you will make the most of the opportunity and,
ideally, that you will want to take your interest in integrated academic and clinical opportunities further and apply for an ACF.

The National Institute of Health Research Academic Clinical Fellowship
Application to a National Institute of Health Research Academic Clinical Fellowship (NIHR ACF) is again by national selection and requires attending both an ACF interview and one for the core training post in the speciality you are interested in. The ACF is a ‘run-through’ post i.e. ACF trainees do not need to apply for an ST post after completion of core training. This means that there is no other application process before obtaining the coveted Certificate of Completion of Training (CCT).

As a NIHR ACF you are again provided with the unique opportunity to work in both clinical and academic medicine. In the first three years, 25% of the time is protected for research activity. As this equates to approximately 3 months per year, for three years, this leads to a Masters in Research (MRes) degree upon completion. The remaining seventy five per cent of the time is devoted to clinical training as a core trainee. Each deanery will have a list of the specialties that are available for NIHR ACF opportunities which can range from cardiology to public health and as with AFP the availability depending on which UoA in the country you are allocated to.

When considering an ACF remember that although clinical work continues, the core training takes a year longer to complete, and the reduced intensity can make it difficult to learn in craft specialties such as surgery. These posts are ideal for those who are passionate about the speciality they want to go into, and already have a sub-speciality interest they would like to do research on. It takes plenty of motivation, perseverance and support to apply, be successful and balance research and clinical life.

PhD Opportunities
ACFs are strongly encouraged to submit a proposal for a PhD, usually based on their previous research projects. If accepted, ACF trainees then interrupt clinical training and engage in full-time research as PhD candidates. This usually takes place after the completion of core training and before the ST grade (but some ACFs do decide to commence their PhDs after their second year of core training.) A PhD can typically last between 3-4 years after which the trainee resumes clinical training and – providing he or she has passed their membership exams and successfully defended their thesis, can apply to become an Academic Clinical Lecturer (ACL).

Academic Clinical Lectureship
The ACL, like the ACF, has both an academic and clinical component albeit the expectations are obviously higher (i.e. the number of publications you are expected to publish in peer-reviewed journals, presentations you deliver in international conferences etc.) The duration of the ACL is five years and upon completion and acquisition of the CCT, trainees can then apply for consultant jobs and senior lecturer positions and professorships with an academic institution.

Conclusion
The academic route provides protected time in order to carry out research alongside continued clinical training. The run-through nature from the ACF means that time out to conduct research full-time is possible and encouraged. It requires commitment and hard work to excel in both research and clinical duties, whilst continuing your professional and personal development.

Integrated academic and clinical programmes provide a fantastic opportunity to present your research findings in international conferences, provide you with a platform to network and collaborate with eminent scholars and colleagues and to develop your knowledge and interest in your chosen speciality. As a trainee in an integrated academic and clinical programme you can conduct important cutting edge research that can make a real positive difference to patient care. It also provides numerous opportunities for personal growth, skill acquisition and self-development.
Medical Student MBChB/MBBS
+/- intercalated degree (i.e. MRes, BSc)

Foundation Programme (FP) (2 years)

Academic Foundation Programme (AFP) (2 years)

Foundation Achievement of Competence Document (FACD)

CT1-CT3
Academic Clinical Fellowship (ACF)
Masters in Research (Mres) (3 years)

ST4-ST8
Academic Clinical Lectureship (ACL) (5 years)

Consultant/Senior Lecturer

Honorary Consultant/Professorship

Figure 1: Flowchart Illustrating Trajectory of the Academic Clinical Training in the UK (Incorporating the NIHR ACF)
North Western Deanery Academic Clinical Fellowship (ACF) Fill Rate as at 7th March 2012

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Number of Posts</th>
<th>Number of Applications</th>
<th>Competition Ratio</th>
<th>Number of accepted applicants</th>
<th>Number of Posts Remaining</th>
<th>Fill rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACF Anaesthesia (Lancaster)</td>
<td>1</td>
<td>1</td>
<td>1:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Cardiovascular Medicine</td>
<td>1</td>
<td>42</td>
<td>42:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Clinical Genetics</td>
<td>1</td>
<td>3</td>
<td>3:1</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>ACF Clinical Oncology</td>
<td>1</td>
<td>2</td>
<td>2:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Dermatology</td>
<td>1</td>
<td>14</td>
<td>14:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Emergency Medicine</td>
<td>1</td>
<td>7</td>
<td>7:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Gastroenterology**</td>
<td>1</td>
<td>4</td>
<td>4:1</td>
<td>0</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>ACF Medical Education excluding surgical specialties</td>
<td>1</td>
<td>18</td>
<td>18:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Obstetrics &amp; Gynaecology</td>
<td>2</td>
<td>35</td>
<td>35:1</td>
<td>2</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Occupational Medicine</td>
<td>1</td>
<td>1</td>
<td>1:1</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>ACF Paediatrics</td>
<td>1</td>
<td>14</td>
<td>14:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Psychiatry</td>
<td>1</td>
<td>12</td>
<td>6:1</td>
<td>2</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Respiratory Medicine</td>
<td>1</td>
<td>14</td>
<td>14:1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Rheumatology</td>
<td>1</td>
<td>24</td>
<td>24:1</td>
<td>0</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>ACF Rheumatology (Lancaster)</td>
<td>1</td>
<td>5</td>
<td>5:1</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Table 1:* **ACF in Gastroenterology at ST3 level is being re-advertised. You can apply via https://www.nwpgmd.nhs.uk/acf_ataglance until Wednesday 21st March 2012.

*For International Medical Graduates (IMG) and for trainees who have an equivalent to the FACD, the process may be different to that described in this article. For information on this and further information in general please refer to the following website: http://www.nihrcc.nhs.uk/intetacatrain/acfs
Introduction: As a Foundation Doctor I was part of the Academic Foundation Programme (AFP) in the North West Deanery. This meant that my first 4 month job in my second year (FY2) was dedicated to research. The application process was a formal interview which revolved mainly around my academic interests and aspirations. I was keen to get an AFP post to allow me time to develop my basic research skills, complete a substantial project which I could present and publish, and develop other skills such as teaching and leadership.

Specialty Interest: Since medical school I have wanted a career in Urology. I therefore wanted an AFP that allowed me to conduct research in this area. I worked closely with my supervisor and his team to plan and set up the project I ultimately carried out. This was vital to allow me to run an approved and interesting research pilot study. I was conscious I wanted to continue to develop my surgical skills and knowledge as well, and my team were supportive about this.

Academic Output: I obtained a Core Surgical post themed in Urology after my AFP. The research I carried out has been presented in regional and national conferences and is currently being written up for publication. It is worth remembering that the output from research is not immediate, particularly if it involves a number of people.

I gained a valuable insight into research during my AFP and enjoyed being in control of my own project. However, I did miss the patient interaction of clinical work. This is one reason I did not pursue an Academic Clinical Fellow post, although I continue to do clinical research alongside my training and may take formal time out in the future.

I believe that careful planning and patience is the key to a successful project and placement, and would highly recommend the experience to anyone with a passion for research or their specialty.

About the authors: Miss Laura Derbyshire Academic Foundation Trainee 2010-2012

Introduction: I entered the conventional Foundation Programme in Pennine Acute Trust in August 2011 and obtained the FACD (FACD in full please) in August 2013. (Any specific time devoted to research?) I have recently been appointed National Institute of Health Research Academic Clinical Fellow in Psychiatry with Manchester University. I am also a core trainee in psychiatry in Central Manchester University Hospital Trust.

Areas of Interest: I consider my interests wide-ranging and eclectic and I have published articles in the following areas: the health humanities (particularly autobiographical narrative and psychopathology), the portrayal of mental illness in film, literature and the media, broadening participation, the mental health of doctors, mental healthcare policy/provision in conflict areas and the association between bipolar disorder and the artistic temperament. I have been fortunate enough to present my research findings in conferences all over the world (Montreal, Tel Aviv, Cambridge, London and New Jersey).

ACF in Psychiatry: “As psychiatrists we straddle a unique blend of science and humanity. Bridging the social, medical and neurosciences, we strive to improve the mental health of individuals, families and societies, and provide strong leadership throughout the care pathway.”

Sue Bailey, President of the Royal College of Psychiatrists

I chose the ACF in Psychiatry as I felt that this was the specialty that I was most suited for in terms of my skill-set, my passion to fathom human emotion, thought and behaviour and also my personality traits and character. The attractions of clinical psychiatry are also well documented by Damanhuri et al (1) and Sivasubramanian (2) in the literature. Dr Kamran Ahmed, founder of the UK’s first ever medical film festival Medfest and author of the Royal College of Psychiatrists Morris Markowe Award Winning article entitled, ‘Beards and Bow Ties’ also describes how intellectually stimulating and rewarding being a psychiatrist is (3).

Academic Psychiatry is at the frontier of health sciences research. Recent advances in the neurosciences in particular have led to exciting novel technologies in the diagnosis and treatment of many neuropsychiatric illnesses and hence academic psychiatry offers a plethora of research challenges and opportunities.

About the authors: Dr Ahmed Hankir NIHR ACF Psychiatry
The World Journal of Medical Education & Research (WJMER) is the online publication of the Doctors Academy Group of Educational Establishments. It aims to promote academia and research amongst all members of the multi-disciplinary healthcare team including doctors, dentists, scientists, and students of these specialties from all parts of the world. The journal intends to encourage the healthy transfer of knowledge, opinions and expertise between those who have the benefit of cutting-edge technology and those who need to innovate within their resource constraints. It is our hope that this interaction will help develop medical knowledge & enhance the possibility of providing optimal clinical care in different settings all over the world.