

The Scottish Academic Foundation Year Programme: what, why and how?

GP Currie¹, S Messeder², K Walker³



The Foundation Programme is well established in the UK and serves as the generic training scheme into which newly qualified doctors enter after gaining a medical degree. Although individual programmes have many differences, the range of competencies needing to be fulfilled to progress is uniform across Scotland and the rest of the UK. Some final year medical undergraduates may apply for the Academic Foundation Programme; this is designed to facilitate exposure to academic medicine over and above the clinical experience offered to Foundation Year doctors. This paper describes characteristics of the Academic Foundation Programme in general, with a particular focus on Scotland, which is one Foundation School.

Keywords: academic medicine, foundation year doctor, foundation year programme

Declaration of interests: No conflict of interests declared

Correspondence to:

G Currie
NHS Education for Scotland
(North Region)
Forest Grove House
Foresterhill Road
Aberdeen AB25 2ZP
UK

Email:

graeme.currie@nhs.net

Background

The UK-wide Foundation Programme, established in 2005, is designed to be a 2-year generic training opportunity and forms the keystone in the bridge between medical school and specialist or general practice training. Foundation Year (FY) doctors are exposed to a variety of specialties usually consisting of 4-month blocks across both years.¹ During FY1, junior doctors are given supervised responsibilities with an emphasis on the care of the acutely unwell patient. On satisfactory completion, they are recommended for full General Medical Council registration. In FY2, the core knowledge, skills and attitudes gained in the preceding year are consolidated and it facilitates increasing, although still closely supervised, responsibility. In both years, junior doctors are continually assessed against competencies outlined in the curriculum with evidence recorded in individual e-portfolios.

Concerns relating to poor financial reward, bureaucracy, work/life balance, increased length of training, poor leadership, reduced job security and challenges of mixing academic and clinical commitments have been suggested as possible reasons behind medical graduates not pursuing an academic career.^{2–4} In an attempt to overcome some of these barriers, various initiatives have been set up within the UK with the aim of encouraging recruitment into academic medicine. The Academic Foundation Programme (AFP) is one such endeavour and came into existence in 2005. It allows highly motivated final year medical undergraduates to apply for bespoke programmes which allow them to gain additional

insight, inspiration and experience into academia and other areas of medicine.^{5,6}

What are the aims of the Academic Foundation Programme?

The overarching aim of the AFP is to provide opportunities over two years for some FY doctors to develop academic, teaching or leadership/management skills; this is in addition to acquisition of the core competencies expected to be fulfilled during the two foundation years. In other words, as well as achieving the standards outlined in the generic Foundation Programme curriculum (akin to all other FY doctors on purely clinical programmes), academic FY doctors are expected to develop fundamental skills, knowledge and attitudes to inspire them to become the researchers, medical educators or medical managers of the future. Although all AFPs have their own bespoke design, nature of clinical attachment and geographical location, they share the common purpose of gaining core skills in order to become a competent medical practitioner along with exposure to key skills in other areas of medicine.

Who coordinates the Academic Foundation Programme?

The various activities associated with the AFP are typically coordinated by a designated academic lead who has an association with the local university plus a Foundation Programme Director, ideally with some form of academic background and/or higher training/experience in education,

¹Scottish Academic Foundation Programme Lead, ³Scottish Foundation School Director, NHS Education for Scotland (North Region), Aberdeen, UK; ²Academic Foundation Year 2 Doctor, Aberdeen Royal Infirmary, Aberdeen, UK

management or research. Together, these senior doctors can usually help with access to university libraries, academic seminars, relevant university-run courses (such as statistics, critical appraisal, research methodology), and research facilities and teams.

Shortly after starting the FY in August, academic FY doctors should be appointed an academic mentor to help manage the research/teaching/quality improvement/management/leadership project undertaken, although some may establish contact prior to starting their post. The academic mentor(s) (either self-selected by the FY doctor, or allocated based on interests or placement) should be tasked with overseeing the project(s), providing advice and direction as required, and helping facilitate visible output. Whether or not the academic mentor is an NHS consultant working within any of their 4-month attachments or even a practising clinician is unimportant, but what is important is that they have a proven track record in the specific field that the academic FY doctor wishes to gain experience in, and have firm beliefs in the benefits of the programme.

Who should apply for an Academic Foundation Programme?

Many traits are important in potential academic FY doctors, with passion, drive and enthusiasm being vital. In particular, applicants should ask themselves if they wish to explore a specific research topic, enhance their skills relating to medical education or become exposed to and learn more about medical management/leadership. Previous research experience is useful, and although an additional or intercalated university degree can be helpful in the shortlisting process, it is not a prerequisite and no guarantee to successful appointment. Nevertheless, given that entry into AFPs is competitive, successful candidates are more likely to have 'stand out' items on their application form such as university awards, presentations at meetings, or peer reviewed publications.

Applicants should be aware that being an academic FY requires hard work and dedication, sometimes at the expense of pursuing usual past times and hobbies, with less 'recreational time' compared to those of their non-academic peers. It also needs to be borne in mind that becoming a competent, capable and compassionate medical practitioner lies at the heart of all FY programmes. Keeping up to date with assessments, attending teaching and clinical meetings, engaging with the educational process and providing evidence in the e-portfolio are vitally important. Given that only some AFPs incorporate dedicated time within placements for pursuing academic activities, it is important that applicants have a good clinical grounding and possess effective time management skills to fulfil all requirements within the e-portfolio.

What is the application process?

The UK-wide Foundation Programme Office coordinates the employment of medical school graduates in all FY

programmes. Prior to application, medical undergraduates in both UK and non-UK medical schools need to ensure they are eligible to apply.⁷ AFP applications take place concurrently with standard FP applications. An Academic Unit of Application (AUoA) is a group of one or more foundation schools which have joined together for the purposes of processing AFP applications; students can apply for up to two AUoA (of which Scotland is one). Wales and Northern Ireland also have their AUoA co-terminus with their Foundation School. There are 12 AUoAs in England, some of which are co-terminus and some of which are conglomerations, e.g. London is only one AUoA for AFP. Each AFP application is dealt with separately,⁸ while each AUoA has its own shortlisting and interview process. The AFP application score is used in an algorithm to allocate applicants to the individual programme which the applicants have already ranked in order of preference.

Additional educational achievements can be provided in the application; these are more wide-ranging than those for the typical FP, and may include prizes, presentations and publications. Some AUoAs request students complete 'white space' questions with regard to areas such as teaching, learning and research experience. All AUoAs shortlist applicants and invite them to interview. The interview consists of a minimum of 50% clinical content and the remainder relates to academia. There are currently AUoA 60 AFP programmes in Scotland across the four regions (North, East, South East and West). The average annual number of applications is 200 with 90 being shortlisted for interview. Candidates considered suitable for appointment are matched to a programme based on their choice and availability; offers are made prior to allocation to Foundation School. Once appointed to an AFP, individuals are removed from the main FP application process.

What should Academic Foundation Year doctors achieve?

There is no singular aim of the AFP. Moreover, depending on whether scientific research, medical education or management/leadership is the main focus of the academic FY doctor, the overall aims and achievements will vary. Nevertheless, it is almost universally expected that academic FY doctors should submit and present original work to at least local, but preferably national and/or international, meetings. Conferences can also serve as useful venues to establish academic contacts and discuss collaborative projects, nurture ideas and network with others with similar interests and passions. It is ideal if a completed project is published in a peer-reviewed journal; knowing the processes involved in publication are transferrable skills and invaluable.

Academic FY doctors are allocated the same number of study leave days as their non-academic peers; this amounts to 30 days in FY2 but most of it is taken up with the mandatory delivered educational programme. Study leave is permitted at the discretion of the department in which the academic FY doctor is working and needs to be approved by their foundation programme director.

Deanery (city)	Dedicated academic time within FY1	Dedicated academic time within FY2	Posts in hospitals outwith primary city	No. trainees in each FY
North (Aberdeen)	No	No (although some posts involve 4 months in medical education)	Possible (Raigmore Hospital, Inverness or Belford Hospital, Fort William)	15
East (Dundee)	No	Yes (4 months in all posts dedicated to research, medical education or leadership)	Possible (Perth Royal Infirmary)	6
South East (Edinburgh)	No	No (although dedicated academic time available in 6 competitive posts)	Yes (Borders Hospital, Melrose, Victoria Hospital, Kirkcaldy or St John's Hospital, Livingston)	18
West (Glasgow)	No	No (although protected time in medical education in some posts)	No	21

Table 1 Similarities and differences between Academic Foundation Programmes across the four Scottish deaneries

Across the two years, academic FY doctors should also try to establish themselves locally and raise their profile as someone interested in scientific research, teaching and/or medical management/leadership. In some programmes it is possible for individuals to pursue a further qualification such as a certificate or diploma in research skills, medical education or management. Although some universities or programmes may offer a discount on course fees, full funding is generally not set aside for this purpose. Some academic FY doctors may join professional organisations (although most carry an annual subscription rate) in an attempt to raise their personal profile and help identify further opportunities within their areas of interest; examples include the Academy of Medical Educators, the Association for the Study of Medical Education and Faculty of Medical Management and Leadership.

Scottish Academic Foundation Programmes

Since 2005, the number of academic FY doctor posts available in Scotland has risen from 54 to 60. This represents 7% of the 846 available FY programmes across Scotland. The proportion of AFP posts in AUoAs throughout the UK varies from 5% to 25%. All AFPs are linked to a university; in Scotland these are the Universities of Aberdeen (North), Dundee (East), Edinburgh (South East) and Glasgow (West).³

All academic FY1 rotations comprise of clinical rotations to allow doctors to fully embed in clinical work, while in some deaneries, allocated research time is provided in FY2. Although placements are mainly in secondary care, they may take place in community settings or within medical education. Depending on region, the geographical area where the AFP is delivered varies considerably. Some posts can be based completely outwith the primary university city (such as in the North), while in others some rotations incorporate

attachments to district general hospitals. Some of the similarities and differences between different Scottish AFPs are shown in Table 1.

How are Academic Foundation Programmes evaluated?

There is currently no formal system in place whereby the AFPs with the Scottish Foundation School can be evaluated as a whole or compared. How academic FY doctors from year to year view programmes is equally uncertain. However, one limited questionnaire-based study evaluated the role played by AFPs in influencing the desire to pursue a career in academic medicine.³ Of 92 doctors currently enrolled in or who had completed an AFP, most (77%) wished to pursue a career in academia. Being well informed about academic careers ($p = 0.005$) and having a higher degree ($p = 0.013$) were linked to an increased desire to continue in academia.

Data pertaining to the overall academic output of doctors (such as number of presentations, publications) and whether or not individuals proceed to higher degrees and/or pursue a medical career incorporating research, medical education or medical management (compared to non-academic FY doctors) are not readily available. The success of any programme can only be gauged by evaluating both 'softer' outcome measures such as opinions and attitudes of all stakeholders regarding the process, and 'harder' outcome measures such as scientific output and subsequent career pathways.

What happens after the Academic Foundation Programme?

After successfully completing an AFP, some doctors may realise that such a career pathway is not suited to them. However, it is hoped and expected that the majority of doctors completing the programme decide to pursue a career in

academic medicine, education or management. How this is undertaken can vary considerably. For example, following an AFP some doctors may apply to core training in their desired broad discipline with the intention of pursuing a higher degree (MD or PhD) at a later time, perhaps after having secured a national training number. Others may consider a 'more linear' academic training opportunity within Scotland and apply to the Scottish Clinical Research Excellence Development Scheme. This provides a pathway by which doctors can engage in research along with integrating clinical academic training; these are funded by NHS Education for Scotland and Scottish universities. Entry is typically at specialist trainee or core trainee 1 level, and successful applicants generally have 80% of time allocated to clinical duties and 20% for academia. Individuals involved with the Scottish Clinical Research Excellence Development Scheme may go out of programme to gain a higher degree and return to a clinical lectureship post. There are other pathways in the rest of the country, which in England is more seamless than Scotland.

Personal testimony by a current Academic Foundation Year 2 doctor

Why did you apply for an AFP?

At university I had the opportunity to undertake a BSc that involved writing a dissertation on an original research project. I enjoyed the challenge of applying scientific knowledge, writing up results and learning about the application from bench to bedside. This new-found interest was further cemented by my experience in research as a final year medical student where my supervisor gave me the opportunity to collaborate and lead a multicentre research project. I applied to the AFP as I wanted further experience in research to determine if a career in academia was suitable for me.

What have you achieved during your AFP?

During my time as an AFP doctor I have been involved in teaching medical students in small group tutorials and in practical skills stations. I have undertaken a Postgraduate Certificate in Medical Research Skills through the University of Aberdeen which allowed me to formalise my research skills. I have also been involved in carrying out an original research project requiring the recruitment of participants to trial and presenting these results in local meetings. This has helped me understand the recruitment process and the importance of ongoing research in order to challenge and improve my existing clinical knowledge.

The good bits

The AFP is a 'passport' into the university and ongoing research opportunities. I have discovered enjoyment of teaching and been able to pursue this further. I now have a better understanding in the role of evidence-based medicine and this new appreciation has allowed me to understand why patients are managed in a certain way. Additionally, it has given me the skills to challenge my own clinical practice by having the ability to ask a question and equip me with the skills to find the answer. Within Scotland, one particular

advantage is the close network of academics. I have found that I am treated as an individual, which has helped me to pursue my own interest within medicine, as well as feeling supported.


The bad bits

Organising yourself and having the ability to prioritise are key. Having the opportunity to explore teaching and research interests is great but also means I have had to learn to balance my outside interests alongside my work commitment. Opportunities within the AFP are only as good as you make them. It is left to the individual academic FY doctor to pursue academic interests and to arrange the teaching of medical students.

What do you plan to do after your AFP?

The AFP has given me a taste of the different possibilities of academia including research, teaching and further education. After the AFP I aim to apply to the core academic training programme to continue to explore my interest and new-found experience within academic medicine.

Summary

AFPs represent an exciting opportunity for enthusiastic and determined FY doctors for whom the benefits include personal development and fulfilment. In addition they are a vehicle by which to increase the popularity of careers in academic medicine. Application occurs during the final year of medical undergraduate studies and places are competitive. Robust longitudinal data are required in order to evaluate individual programmes within deaneries and also to compare the Scottish Foundation School with programmes in other parts of the UK. Only then, can outcomes of AFPs be properly ascertained and suitable modifications to the process made. 

References

- 1 UK Foundation Programme. <http://www.foundationprogramme.nhs.uk/pages/home> (accessed 6/2/18).
- 2 Bucklin BA, Valley M, Welch C et al. Predictors of early faculty attrition at one Academic Medical Center. *BMC Med Educ* 2014; 14: 27.
- 3 Lyons OTA, Smith C, Winston JS et al. Impact of UK academic foundation programmes on aspirations to pursue a career in academia. *Med Educ* 2010; 44: 996–1005.
- 4 Alexander H, Lang J. The long-term retention and attrition of U.S. Medical School Faculty. *Association of American Medical Colleges* 2008; 8: 4. <https://www.aamc.org/download/67968/data> (accessed 6/2/18).
- 5 NHS Scotland. *Scottish Medical Training. Academic Foundation*. <http://www.scotmt.scot.nhs.uk/foundation/academic-foundation.aspx> (accessed 6/2/18).
- 6 Bodagh N, Meechan C, Woodland P. The academic foundation programme: a new foundation for academic medicine. *Br J Hosp Med* 2017; 78: C110–C112.
- 7 UK Foundation Programme. *Eligibility information*. <http://www.foundationprogramme.nhs.uk/pages/fp-afp/eligibility-information> (accessed 6/2/18).
- 8 UK Foundation Programme. *Academic training*. <http://www.foundationprogramme.nhs.uk/pages/fp-afp/how-to-apply/academic-training> (accessed 6/2/18).