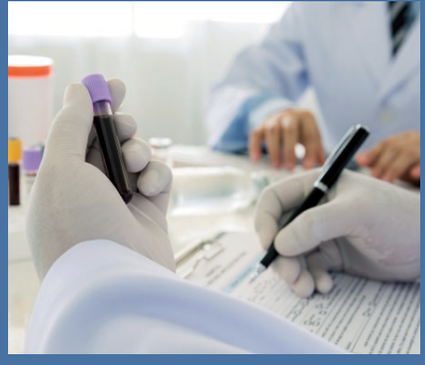
NIAA

National Institute of Academic Anaesthesia

10 YEARS 2008–2018

# Guidance on academic training in anaesthesia and perioperative medicine



2018

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# Overview

Academic training is essential for the future of the specialty of anaesthesia, and the provision of opportunities to gain research training is a priority for the National Institute of Academic Anaesthesia (NIAA). One of the 19 recommendations of the Shape of Training report (2013) stated that 'appropriate organisations, including postgraduate research and funding bodies, must support a flexible approach to clinical academic training'. Research has also been highlighted as a core responsibility of the NHS in The Health and Social Care Act (2012).

The National Institute for Health Research (NIHR) provide a research career pathway for clinicians through the NIHR Integrated Academic Training (IAT) programme for Doctors and Dentists. The NIHR highlight that:

- Where committed clinical academics make career choices early in their training, they are provided with the tools and environment in which they can flourish.
- We provide all trainees with exposure to a culture of research, so that they have the opportunity to acquire the skills to be research active NHS consultants, if desired.
- We allow alternative entry to a clinical academic career at later points in the training narrative for able individuals who come to research late.

In order to meet these objectives, we suggest that academic training opportunities in anaesthesia can be dived into four categories:

1. Core training in research for all trainees
2. Exposure to research at a local level (e.g. institutional or regional research fellowships, and trainee network projects)
3. Training posts that explicitly recruit aspiring clinical academics, and provide them with time to develop research plans and funding applications at pre and post-doctoral levels (e.g. NIHR Academic Clinical Fellowships (ACF) and Clinical Lectureships (CL), respectively)
4. Higher degree training through a University (Masters, MD and PhD)

Funding and support for research may be sought from:

- Local funding (e.g. NHS, commercial and private sources)
- The NIHR IAT programme for ACF and CL posts
- Substantive Research Training Fellowships from recognised funding bodies (for doctoral research)

The purpose of this document is to clearly set out the current research opportunities available to trainees and provide a resource for those wishing to pursue a career in academic anaesthesia.

**Academic training is essential for the future of the specialty of anaesthesia**

# Core academic training

Core training in research methodology and governance is outlined in Annex G of the *Curriculum for a CCT in Anaesthetics* (2010). The competencies contained within Annex G are divided into basic, intermediate, higher and advanced; whilst not compulsory for the completion of a CCT in Anaesthetics these competencies provide a framework for those interested in research. Those trainees wishing to understand more about clinical research are encouraged to complete a Good Clinical Practice (GCP) course. GCP training is an international standard that outlines how all clinical research should be conducted, covering ethical, scientific and practical aspects of research. It is prerequisite for anyone wishing to conduct clinical research.

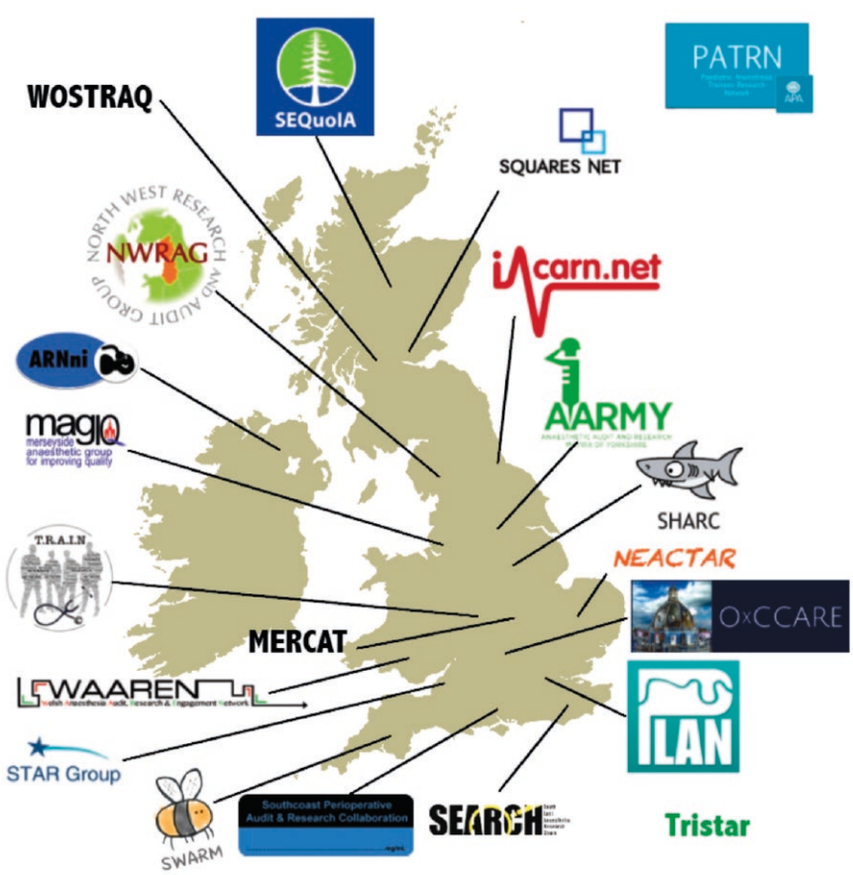
# Local ad hoc academic training

These valuable, but unregulated, opportunities are common in many hospitals around the UK. Some posts are supported by local departments and others through private sector salaries. They may be linked to a Fellowship position, which are also currently unofficial/unregulated. Many of these posts offer excellent exposure to research for periods of 6 to 12 months. Usually the trainee is attached to a mentor and assigned a research project for the duration of their attachment. Information about these opportunities may be found locally through Training Programme Directors or Senior Researchers.

# Trainee network activity

There are now trainee audit and research networks covering most areas of the UK, incorporating the majority of its hospitals. Local network projects and larger national projects offer the opportunity to get involved in audit and research in a meaningful way. Whilst formal training is rare, getting involved in a trainee-led project will provide invaluable experience.

The Research and Audit Federation of Trainees (RAFT) oversees the activity of all the local networks and coordinates national projects that involve all the networks working together. Information about RAFT and the local networks can be found on their website: www.raftrainees.com.




*Map of UK Trainee Research Networks.*
***Source:*** *RAFT*

# Formal academic training

Excellent academic training is provided within established formal systems such as the NIHR IAT programme and University higher degree courses (MD and PhD).

## *NIHR Integrated Academic Training*

In England the NIHR fund an academic training scheme for trainee doctors that spans the whole of their training. During specialist training the early stage position is the academic clinical fellow (ACF) scheme, and the later stage is the clinical lecturer (CL) scheme. Details of posts can be found by contacting Health Education England (HEE) Local Education and Training Boards (LETBs). The four LETBs are London and the South East; Midlands and East; North; and South. Each of these is further subdivided by region. Information may also be obtained from the Universities hosting IAT posts.

Whilst these posts are only available in England, equivalent schemes exist in the devolved nations. The Scottish Clinical Research Excellence Development Scheme (SCREDS) provides a similar integrated training pathway enabling training for academic clinicians. The Health Research Board Irish Clinical Academic Training (ICAT) Programme is a an all Ireland national programme for clinician scientists based at six major Irish universities and their affiliated hospital groups. The Wales Clinical Academic Track (WCAT) fellowship programme aims to equip clinical academic trainees with a range of knowledge and skills required to compete as independent investigators in the modern area of translational research.

Both NIHR specialty schemes are designed to integrate with clinical training, by creating a partnership between the appointing University, the LETB and individual Trusts. ACF and CL posts are awarded to eligible Universities in partnership with their HEE and local NHS organisations. Currently the annual number of posts awarded is approximately 250 ACFs and 100 CLs, with the allocation for anaesthesia being 8 ACFs and 3 CLs in 2016/17.

**It is important to understand that NIHR ACF and CL posts exist in addition to the normal complement of clinical training posts**

These schemes are fully funded by the NIHR, and this funding goes directly to the Deanery/Trust for ACF posts, and to the appointing University for CL posts. In additional there are some locally funded ACF positions that are structured the same as the centrally funded NIHR posts. The funding supports 100% of the trainee's base salary. The amount of time allocated for research is 25% for ACFs and 50% for CLs. The funding also covers management costs of the scheme locally, a yearly bursary for the trainee to attend scientific meetings and funding for ACFs to access locally organised academic training programmes. The funding supports both the academic and clinical components of training, however, it does not include additional banding. It is important to understand that NIHR ACF and CL posts exist in addition to the normal complement of clinical training posts, with the specific aim of ensuring that the clinical training for these individuals is delivered in a flexible way, so as to ensure that they emerge as well trained clinicians, while still allowing them to pursue their academic aspirations.

Some trainees may have completed an Academic Foundation post earlier in their training (during Foundation Years), while others may not. Although the IAT programme is designed as an integrated academic training pathway, there is no necessity to have completed earlier stages in order to apply for later stages in the pathway. For example, there is no need to have completed an ACF post to apply for a CL post. The overall aim of the IAT programme is to provide structured training opportunities for doctors with the potential to become leaders in clinical or basic science research; education and training; and innovation, knowledge transfer and enterprise. During their research training, it is expected that individuals obtain a higher degree and secure independent funding to continue their academic career beyond CCT. The IAT programme is an opportunity that should not be overlooked.

Time spent in the NIHR IAT programme will be counted within training, but it is likely to take longer to reach CCT. Both schemes (ACF and CL) are designed to be flexible and the length of the positions can be extended to accommodate part-time trainees.

## Academic Clinical Fellow scheme

The purpose of the ACF scheme is to gain pre-doctoral exposure to research and acquire the skills and experience necessary to achieve funding for a higher degree (MD or PhD). This is undertaken during clinical training and is designed to avoid compromising concomitant clinical training. ACF post are usually awarded in ST 1-3, but tends to be at ST3 for anaesthesia. The post lasts for a maximum of three years, the idea is that the trainee uses their allocated research time (25% of total) to make the necessary preparations for undertaking a higher degree, and in particular, obtain the funding for a Clinical Research Training Fellowship to support such doctoral studies (usually at PhD level). The transition to the higher degree position should then be a smooth one. It is possible to undertake an ACF post if you already have a higher degree, in this case the time should be used to continue post-doctoral work and secure funding for the future. Some candidates may choose to undertake a taught research course during their ACF time, such as a Masters in research methodology.

There is considerable variation throughout the country as to how research time is allocated during the ACF period. It may be undertaken in a number of blocks, as one uninterrupted period or integrated into a weekly schedule. Any approach must take account of local arrangements, clinical training needs, and the optimal organisation of research time for any individual academic trainee. The supernumerary funding for these posts should be used to facilitate the last of these three aims without allowing clinical training to suffer. It is highly desirable that, providing clinical training needs do not dictate otherwise, all of the clinical training is undertaken at the trainee's academic base hospital.

It is often necessary for trainees to have succeeded in the Primary FRCA before entry to the scheme, and ACFs tend to complete the Final FRCA during the course of their three year training period. It is generally highly advisable for ACFs to obtain their Final FRCA before starting their doctoral research training, both because this allows consolidation of clinical skills before a period of predominantly non-clinical training, and also because it is extremely difficult to prepare the exam during the course of a PhD training Fellowship.

## Clinical Lecturer scheme

CL posts are usually awarded to those at ST 4 and above. The expectation is that those candidates applying for a CL will have, or be close to achieving, a higher degree. These posts can be held for a maximum of four years, and consist of only 50% clinical training time that is automatically counted towards CCT. However, training is meant to be competency-based rather than time based, and where local trainers are happy that appropriate competencies are being achieved, not all of the research time needs to be discounted in terms of achieving CCT. The time should be used to allow an individual to develop their research ideas and aim to secure funding for the next stage of their academic career, typically through an application for a Clinician Scientist Grant. Candidates should consider how their academic career will look post-CCT and the various options available to support research as a consultant. Both the ACF and CL schemes are designed to accommodate those in less than full time training.

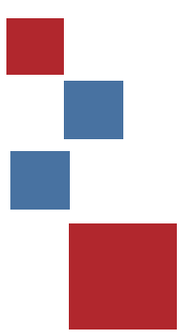
## Higher degree training

Trainees may wish to opt for an out of programme experience (OOPE) in order to undertake a higher degree. This may be a taught Masters (MSc), research MD, or PhD.

## Masters

There are a number of Masters level University degree courses that provide teaching in subjects relevant to research, such as research methodology and clinical trials. These types of courses provide an excellent foundation for a career in research and are especially helpful for those without any research experience. Many of them are modular, distance-learning courses so are suited to those in clinical training or in an NIHR ACF programme. The cost of this degree will often have to be covered by the Trainee but funding schemes are available to subsidise or completely pay for Masters level training.

**Candidates should consider how their academic career will look post-CCT and the various options available to support research as a consultant**



## *MD and PhD*

One of the commonest pathways for trainees to obtain a comprehensive training experience in academic anaesthesia is to undertake an MD or PhD. An MD is generally two years, whilst a PhD tends to be three (if either is undertaken full time). Deciding between the two requires some thought and will depend upon your training needs, career aspirations and amount of time you are able to devote to research during training. It can be difficult to decide between them, so seek advice from senior academics. It is usually possible to change from one to another once you have started but this will be dependent on your University's rules and regulations, so check with them first.

There are several factors to consider prior to commencing an MD/PhD:

- Institution (university ± hospital)
- Department
- Subject area / research question
- Feasibility of proposed project
- Supervisors (primary and secondary)
- Funding (for salary, registration fees and research costs)
- Availability of courses and training to facilitate your research
- Arranging time out of programme with your local Training Prorgamme Director

It is advisable to spend time looking at the options available to you and take advice from as many people as possible before making any decisions. Speak to potential supervisors and their students to get an idea of whether they are the right mentor for you. By the end of your MD/PhD time you will be expected to write a substantial thesis that will need to be examined by oral defence, so choosing a subject that interests you is highly recommended.

Early discussion with your local Training Programme Director (TPD) is also essential, in order to coordinate your time out of the training programme.

**Deciding between an MD and a PhD can be difficult and will depend upon your training needs and career aspirations. Seek advice from senior academics**

# Research funding

Funding an MD/PhD can be challenging. Two key elements of funding must be considered: your salary, and the research project. Both must be adequately accounted for otherwise the project is at risk of failure. Funding can range from a large grant covering all aspects of the research to a small project grant covering only the essentials of the research. Discussions with potential supervisors will identify if funding is already available to support the proposed research project, or whether it needs to be sought via a grant.

In the absence of full research salary from a grant, in some regions of the country (particularly London) trainees have obtained a salary from working in a private sector hospital for one or two days a week to provide this. Whilst not ideal, this option does allow individuals to pursue an academic pathway in the absence of large-scale funding. Some academic institutions have set up partnerships with private hospitals to facilitate this and great successes have come of them.

Many hospitals have a local charity fund that can be applied for to fund smaller projects or add additional funds to a grant from elsewhere.

Funding opportunities may be sought from a wide range of grant awarding bodies and charities, a brief list is outlined here, but this is far from exhaustive. Take the time to research the options available to you.

- Medical Research Council: https://www.mrc.ac.uk/funding/browse/
- National Institute for Health Research: https://www.nihr.ac.uk/funding-and-support/current-funding-opportunities/
- National Institute of Academic Anaesthesia: https://www.niaa.org.uk/CurrentOpportunities
- Rosetree Foundation: http://www.rosetreestrust.co.uk/funding-researchers/
- The Academy of Medical Sciences: https://acmedsci.ac.uk/grants-and-schemes
- The Health Foundation: http://www.health.org.uk/funding-and-fellowship-opportunities
- Wellcome Trust: https://wellcome.ac.uk/funding

Funding opportunities may also exist that are for specific disease but that may relate to your project, for example:

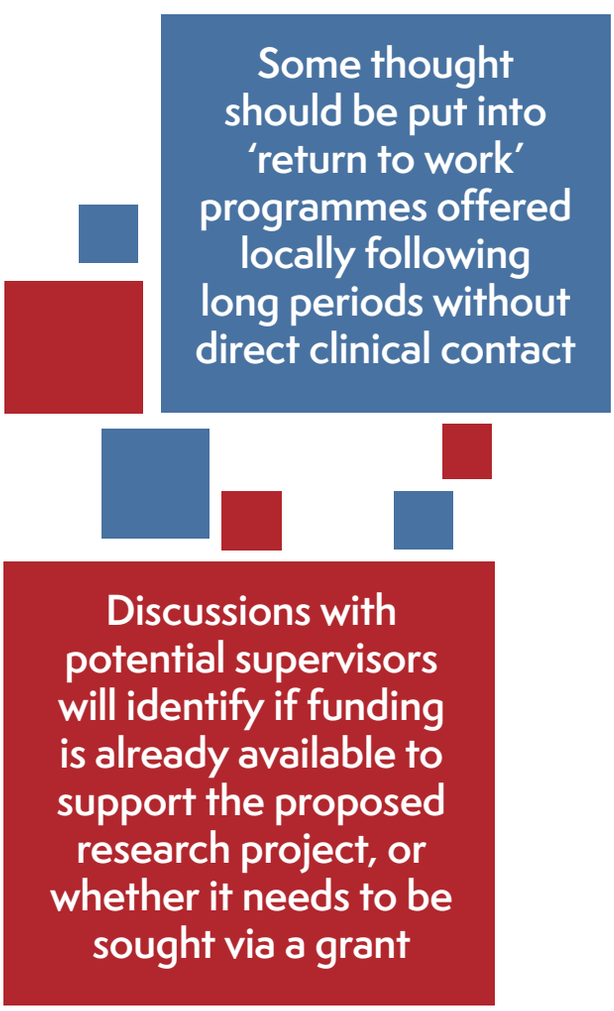
- British Heart Foundation: https://www.bhf.org.uk/research/information-for-researchers/what-we-fund
- Cancer UK: http://www.cancerresearchuk.org/funding-for-researchers/our-funding-schemes
- Diabetes UK: https://www.diabetes.org.uk/Research/For-researchers/Apply-for-a-grant/

# Other things to consider

You should think about how long you wish to take out from clinical training to engage in research. In addition to this, some thought should be put into 'return to work' programmes offered locally following long periods without direct clinical contact.

Maintaining skills during prolonged research attachments can be challenging, so some intermittent clinical work may be advisable during these times. Keep in touch (KIT) days can often be organised before returning to work fully.

Depending on the format of funding and salary arrangements, be sure you have a good understanding of the situation for maternity/paternity leave and contributions towards your NHS pension scheme. The British Medical Association offers advice on implications of taking and OOPR on pension and maternity pay after returning to NHS.




# Resources & Reading

*CCT in Anaesthetics*. Annex G: Teaching and training, academic and research (including audit), quality improvement, and management for anaesthesia, critical care and pain medicine (2010): http://www.rcoa.ac.uk/CCT/AnnexG

GCP training: https://www.nihr.ac.uk/our-faculty/clinical-research-staff/learning-and-development/national-directory/good-clinical-practice/

*FICM Guidance for Training in ICM* (2015): https://www.ficm.ac.uk/sites/default/files/Guidelines%20for%20Training%20Units%20in%20ICM.pdf

Health and Social Care Act (2012): https://www.gov.uk/government/publications/health-and-social-care-act-2012-fact-sheets

NIHR Integrated Academic Training Programme for Doctors and Dentists: https://www.nihr.ac.uk/funding-and-support/funding-for-training-and-career-development/training-programmes/integrated-academic-training-programme/

The Scottish Clinical Research Excellence Development Scheme (SCREDS): http://www.scotmt.scot.nhs.uk/specialty/scottish-academic-training-(screds).aspx

The Health Research Board Irish Clinical Academic Training (ICAT) Programme: http://icatprogramme.org

The Wales Clinical Academic Track (WCAT) fellowship programme: https://www.walesdeanery.org/specialty-training/academic-medicine/wcat

Research and Audit Federation of Trainees (RAFT): http://www.raftrainees.com

Academic Clinical Fellowships (on the British Medical Association website): https://www.bma.org.uk/advice/career/applying-for-training/what-are-academic-clinical-fellowships

Local Education Training Boards (LETBs): https://www.bma.org.uk/advice/career/applying-for-training/find-your-deanery

GASAgain: https://www.rcoa.ac.uk/GASAgain, https://www.rcoa.ac.uk/document-store/career-breaks-and-returning-work

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Churchill House, 35 Red Lion Square, London WC1R 4SG

020 7092 1726 | info@niaa.org.uk | www.niaa.org.uk | @NIAAResearch

Guidance compiled by **Dr Dan Martin**, NIAA Academic Training Coordinator



**Information correct as at June 2018**