

TIGERS Early/Mid-Career Researcher Capacity Building Plan - DRAFT

Executive Summary

This plan outlines a structured and inclusive approach to building research capacity among early and mid-career researchers (E/MCRs) through the TIGERS platform trial. It aims to address critical gaps in trial methodology, statistics, precision medicine, and leadership, with a focus on sustainability, equity, and international collaboration.

TIGERS capacity-building working group members:

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Background

Developing and delivering platform studies requires specific expertise in all aspects of trial design and delivery. As such we recognize the need to build capacity to deliver these trials, especially within the field of precision medicine in critical illness. In a recent survey by our team, 46% of respondents cited lack of methodological expertise as a barrier to implementing platform trials. We have identified three major challenges: declining numbers of clinical academics⁵⁹, limited opportunities for non-medical clinical academics⁶⁰, and a shortage of relevant methodology expertise⁶¹.

The urgent need to address declining numbers of clinical academics within the UK (<https://www.ukri.org/news/report-calls-for-action-to-tackle-decline-in-clinical-researchers/>) and build clinical academic research capacity is widely recognised. Research training is considered “an essential component in the creation of a high-quality specialist workforce for ICM” (<https://www.ficm.ac.uk/documents/academic-training-in-icm/overview>), with only 2% of ICM doctors-in-training intending to pursue a career in clinical academia (https://www.ficm.ac.uk/sites/ficm/files/documents/2021-10/workforce_data_bank_2021_-_for_release.pdf). In Australia, building researcher capability and impact has been identified as one of 4 key priorities of the NHMRC International Engagement strategies (<https://www.nhmrc.gov.au/about-us/news-centre/ceo-statement-global-health-research-and-international-collaboration>).

One of the key challenges to building this capacity is the lack of career pathway support, including professional mentoring programs, in some areas. Almost three in five of the respondents from a recent large survey of clinician researchers in Australia had not participated in a professional mentoring program. (https://www.nhmrc.gov.au/sites/default/files/documents/reports/21651_nhmrc_-_survey_of_clinician_researchers_report_ff_1.pdf). Clinical academics from a non-medical background (e.g. nurses, allied health professionals) in particular, face limited career pathways compared to their medical counterparts, with fewer funded positions, leadership opportunities, and structured development programs. This lack of opportunity matters

because these professionals bring essential expertise in nursing, allied health, and patient care that is critical for multidisciplinary research and improving outcomes. Without equitable support, the research workforce risks losing diverse perspectives that drive innovation and ensure findings are relevant and implementable across the whole health system.

At a practical level, there is a need to broaden the pool of trials methodologists and statisticians who can enable delivery of increasingly complex trial designs, exemplified by TIGERS. Traditional training pathways do not adequately prepare clinicians or statisticians for the demands of adaptive trials, which involve real-time decision-making, interim analyses, and sophisticated modelling. Without targeted investment, research teams risk delays, inefficiencies, and missed opportunities to identify effective therapies.

This need to build clinical trial expertise and capacity exists across the disciplines and professional groups who conceive, design and deliver clinical trials. We have identified the specific need to develop (a) trial methodologists and statisticians, (b) to build capacity in precision medicine trials, and (c) clinical researchers from non-medical healthcare backgrounds such as nursing and allied health, as well as clinical academics from a medical background.

Our proposal includes a structured approach to building clinical trials capacity which will ensure the sustainability of the TIGERS platform trial as well as training individuals to lead their own trials in future. TIGERS will address these gaps with specific TIGERS fellowships to develop (a) trial methodology and statistical expertise, (b) capacity in precision medicine trials, (c) clinical researchers from both medical and non-medical backgrounds, including nursing and allied health and d) fostering international collaboration, training and development.

Overview of TIGERS fellowship opportunities

Our capacity building budget will allow us to provide training fellowships across the UK and Australia.

In the UK these will be:

1. Medical clinical academic at 0.25 WTE for ~18 months (ECR)
2. Non-medical clinical academic at 0.25 WTE for ~18months (ECR)
3. Junior statistician at 0.25 FTE for grant duration (E/MCR)

In Australia these will be:

1. E/MCR Research Fellow at 0.3 EFT for 4.5 years
2. 2x E/ MCR Statisticians 0.25 (EFT for 4.5 years)
3. Academic consumer fellow 0.12 EFT for 4.5 years

We have sought to target these opportunities to ECRs because we believe our training programme will have the greatest impact in equipping them for future success. This might include preparing them for future career development awards from prestigious, national funders which we anticipate will be clinical trials focused. This early experience will provide them with a strong baseline of training and experience which to build on throughout their careers, whilst the networking opportunities within TIGERS will enable them to develop their own network of peers and collaborators.

Posts have been funded at 25% FTE in the UK to allow successful applicants to access the NIHR Academy (<https://www.nihr.ac.uk/career-development/nihr-academy>). We will encourage TIGERS Fellows to use the training opportunities we provide as a steppingstone to leading future domains within the trial. However, we recognize that not all Fellows will wish to do this, and we will provide ongoing mentorship and collaboration to those who may wish to use their trials leadership experience to lead their own clinical trials.

Application and Selection Process

All posts will be competitively appointed (coordinated by the capacity building leads) via an open application process which aligns with NIHR Academy/ANZIC RC processes, to include a written application and interview. We will work with our EDI leads, informed by local and national guidelines, to ensure that TIGERS fellow posts are attractive and accessible to a diverse and inclusive pool of applicants in keeping with our EDI policy (available at <https://tigerstrial.org>). For example, we will use social media and work with organisations such as the UK Critical Care Research Group, Intensive Care Society, British Association of Critical Care Nurses, The Australian Clinical Trials Alliance, and the Australia and New Zealand Intensive Care Society and the Clinical Trials Group to ensure maximal equity of access for all early career researchers. Distribution of opportunities will also be provided to non-clinician researchers via professional networks (e.g. UKCRC and NHMRC Research Translational Centers networks).

Recruitment Timeline

We aim to recruit the first TIGERS fellows as soon as possible after grant activation, to take up post as close as possible to grant activation. This will allow active participation in the initial phases of trial development and set up, to maximize training opportunities. Throughout the lifespan of the platform, we will recruit new Fellows as new interventions are introduced, supported by the additional funding required to introduce these interventions.

Training Opportunities

These training positions will be supplemented by a dedicated training support fund (between £2-3000 per annum / AUD \$ 3000-4000 per Fellow), which will enable successful TIGERS Fellows to undertake training to support their required area of development. Specific areas of focus will include (1) trial methodology and statistics and (2) precision medicine, with additional bespoke training for each fellow, designed in

collaboration between the Fellow, the capacity building leads and the nominated mentor. As such it is not possible to provide an exhaustive list of the training courses supported but we will leverage the expertise of the TIGERS co-applicants' institutions and other national/international courses. Examples of potential training courses include:

- Monash University Precision Medicine Course:
<https://www.monash.edu/medicine/scs/research/precision-medicine>
- The George Institute for Global Health Short Course Research Training Programs
<https://www.georgeinstitute.org/about-us/centre-for-research-evidence-and-skills-training-crest/crest-research-training>
- Edinburgh University Data Science in Stratified Healthcare and Precision Medicine course
<https://shortcourses.ed.ac.uk/course/data-science-in-stratified-healthcare-and-precision-medicine>
- Imperial Clinical Trials Unit Contemporary Clinical Trials Course:
<https://www.imperial.ac.uk/clinical-trials-unit/training-/contemporary-clinical-trials-course-online/>
- Imperial Patient Experience Research Centre Public involvement in health-related research Masterclass
<https://www.imperial.ac.uk/patient-experience-research-centre/ppi/ppi-training/public-involvement-in-health-related-research-masterclass/>
- Monash University Consumer and Community Involvement Training: A Beginner's Guide for Researchers and Health Professionals
<https://www.monash.edu/medicine/mchri/training/courses/consumer-and-community-involvement>
- Edinburgh Critical Care Research Methods Course
<https://usher.ed.ac.uk/anaesthesia/events/edinburgh-critical-care-methods-dec-2025>
- UK-CRC "How to be a Great Chief Investigator for Clinical Trials"
<https://ukcrc-ctu.org.uk/how-to-be-a-great-chief-investigator-for-clinical-trials-one-day-workshop/>

TIGERS Fellows will be encouraged and supported to attend major international meetings e.g. www.criticalcarereviews.com (UK) <https://criticalcarereviews.com/meetings/ccr-down-under> (Australia).

The training and support provided will be in line with the principles outlined within the Researcher Development Concordat (<https://researcherdevelopmentconcordat.ac.uk/>).

Experiential Learning

A key component of the capacity building will be the experiential learning gained from being embedded within the TIGERS platform that will complement the learning gained from attending training courses and conferences. To deliver this training we will harness the expertise of the institutions collaborating within the TIGERS trial. TIGERS Fellows will be supported by the theme lead for their chosen area of development. As these mentors are based across several institutions, we anticipate that Fellows will remain within their home institution and work remotely as part of the TIGERS team.

TIGERS Fellows will join the platform trial management group, where they will gain experience in delivering an international clinical platform trial. Furthermore, based on their individual training needs, we have identified several core themes of training (see below) that can be delivered. Fellows will be expected to take on a co-leadership role in their chosen field for the duration of their fellowship, where they will be mentored by an experienced co-investigator. These roles will allow Fellows to experience a leadership role within an international trial whilst being supported by a senior academic. Having such a position will allow the Fellow the opportunity to take responsibility for aspects of trial delivery (e.g., drafting trial documents, chairing meetings, collating data on new interventions) which will provide a more rounded training experience than being a passive observer.

UK:

1. Bayesian trials statistics and methodology (Phillips, Imperial Clinical Trials Unit))
2. Precision medicine (Antcliffe (Imperial), Knight (Oxford), Davenport (Sanger Institute), Shankar-Hari (King's College London))
3. Trials leadership (Silversides, McAuley - Queen's University Belfast, Gordon (Imperial))
4. PPI (Hays – University College Dublin)
5. Dissemination – (MacSweeney – Queen's University Belfast / Critical Care Reviews)

Australia:

1. Trial methodology, including statistics (Webb, Higgins ANZIC RC, Monash University)
2. Precision medicine (Venkatesh, The George Institute, University of NSW)
3. Trials Leadership (Burrell, Hodgson, Webb ANZIC RC, Monash University)
4. Mentorship training program for PPI (Nichol, Hammond Sepsis Australia, The George Institute, University of NSW)

Mentorship

Each TIGERS Fellow will be provided with 1:1 mentorship from a named senior member of the TIGERS team.

Recognition of Contributions

The team aims to: (1) maximise the contributions of early/mid-career researchers to the trial, (2) mentor them to become the future leaders and (3) fully recognise their contribution to this process. We will use the CRediT (Contributor Roles Taxonomy) system,

<https://credit.niso.org/> as the basis for recognising contributions to research outputs. This describes each contributor's specific contribution to any output. The team will ensure that everyone who contributed to the trial is appropriately recognised, independent of their career stage.

Building the TIGERS Community

We aim to build an international community of TIGERS Fellows and TIGERS researchers. We will do this using the following activities:

- Annual TIGERS investigators forum where ECRs, site PIs, and others will be encouraged to propose secondary hypotheses to explore
- Regular free-to-attend educational webinars for research teams at sites and affiliates, for TIGERS investigators to share knowledge in relevant fields e.g. sepsis, clinical trials, and precision medicine. This will build broad capacity within and beyond the grant (and investigators).

NIHR Academy Integration

TIGERS Fellows in the UK will be eligible for NIHR academy membership, giving access to opportunities for career development (<https://www.nihr.ac.uk/career-development/nihr-academy/nihr-academy-member-benefits>), for example access to the NIHR Future Focused Leadership and Mentoring Programmes, the NIHR reviewer development scheme, and networking opportunities, for example the Academy Members' Conference.

Host Institution Engagement

We anticipate that Fellows will continue to be employed by their home institution and work remotely as part of the TIGERS team. However, they will be embedded as far as possible within one of the core institutions delivering the trial as appropriate to their training needs. This will allow them to maximize career development and networking opportunities, for example, virtual attendance at lab or research meetings, provision of local career development support (such as courses provided by the Imperial Early Career Researcher Institute <https://www.imperial.ac.uk/early-career-researcher-institute/>) and support for face-to-face research visits. This approach will be facilitated by the provision of an honorary contract between the Fellow and their host institution where needed.

Additional Capacity Building Initiatives

The TIGERS trial team is committed to developing research capacity in platform trials, precision medicine, trial delivery and critical care. As such we will embrace opportunities to enhance research capacity on top of those funded within the initial grant call.

1. Associate PI Scheme (UK)

Firstly, we will ensure that TIGERS is registered for the NIHR Associate PI (API) scheme to build capacity for local research delivery. As well as the training provided as part of the scheme we will host TIGERS-specific webinars specifically for TIGERS APIs in the UK and Australia to facilitate shared learning and build a network of TIGERS APIs.

2. Doctoral training opportunities

We will use the infrastructure and resources developed through the TIGERS platform to support future PhD projects and pre and post-doctoral fellowships. For example, clinical data from completed interventions and bio-samples collected during the trial could provide pilot data for applications or the basis of new research projects. Specifically, Queen's University of Belfast and the George Institute in NSW have each committed to fund a PhD studentship, reflecting a commitment to successfully support clinical trial capacity building within this platform trial.

3. Other network engagement

We will have an open invite to all ICM ACFs / ACLs in the UK and equivalent in Australia to join trial groups as observers and to contribute as subcommittee members.

4. Future funding

The need for continued capacity building will be considered in future funding applications for extending the platform and introduction of new interventions. As this is a landscape that will evolve, we will take a flexible approach to the types of posts supported. We will undertake active horizon scanning to ensure that we are aware of emerging gaps in the skills and roles needed to deliver precision medicine platform trials in critical care and can provide appropriate training opportunities.

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