

Out Of Programme Research: Time out, or time gained?

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Will Fishley is an ST8 in Trauma and Orthopaedics in the Northern Deanery. He has previously taken time out of programme for research, and completed a PhD at the University of York. He was awarded the BOA/ORUK Research Fellowship in 2022. His subspecialty interest is in knee surgery.



Puvan Tharmanathan is a senior research fellow (Associate Professor) and experienced methodologist at the Trials Unit at the University of York. He is and has been co-investigator on a range of studies across various clinical areas and in methodological studies, particularly as relates to Trials Within Cohorts.

Research has an increasingly important role in orthopaedics, underpinning advances in techniques, implant design, and patient outcomes. Whilst not every orthopaedic surgeon needs to be leading primary research, there is growing recognition that surgeons require the ability to critically appraise evidence, contribute to research, and support innovation. Consequently, research is an important component of surgical training, and demonstration of involvement in research remains a requirement for Certification of Completion of Training¹.

Out Of Programme Research (OOPR) offers trainees with a particular interest an opportunity to engage in research full-time, without the competing demands of clinical training. A key factor in accessing OOPR is the availability of funding. Research fellowships, such as those offered jointly by the British Orthopaedic Association and Orthopaedic Research UK (BOA/ORUK)², provide funding for trainees undertaking research and a higher degree.

However, surgical training is inherently time-sensitive, with development closely tied to cumulative clinical exposure and the compounding effect of experience on the acquisition of operative skills. Time spent in OOPR could be perceived as a departure from the primary trajectory of training, with concerns regarding loss of technical momentum and delayed progression. For many trainees, the decision to pursue OOPR is therefore framed by a conflict between a desire for more time to build research experience and skills, and concerns about a negative impact of 'time out' of surgical training.

My OOPR

My (WF) first formal research training was during my medical degree where I took a year out to complete an intercalated Masters of Research (MRes) degree. When it came to applying for the Foundation Programme and Core Surgical Training, I considered academic training pathways, but decided at that time that I wanted to focus on my clinical development. However, I remained interested in research and when an opportunity arose for OOPR early in my registrar training, this was one that I jumped on and began my OOPR period halfway through ST4. I intended to take two-years out of programme, which was complicated by the COVID-19 pandemic and I was soon recalled to full-time training, temporarily pausing my degree and OOPR until I was able to resume this again around 10-months later. When I did then ultimately finish my OOPR time, I completed my PhD alongside clinical training over the next two-years. >>

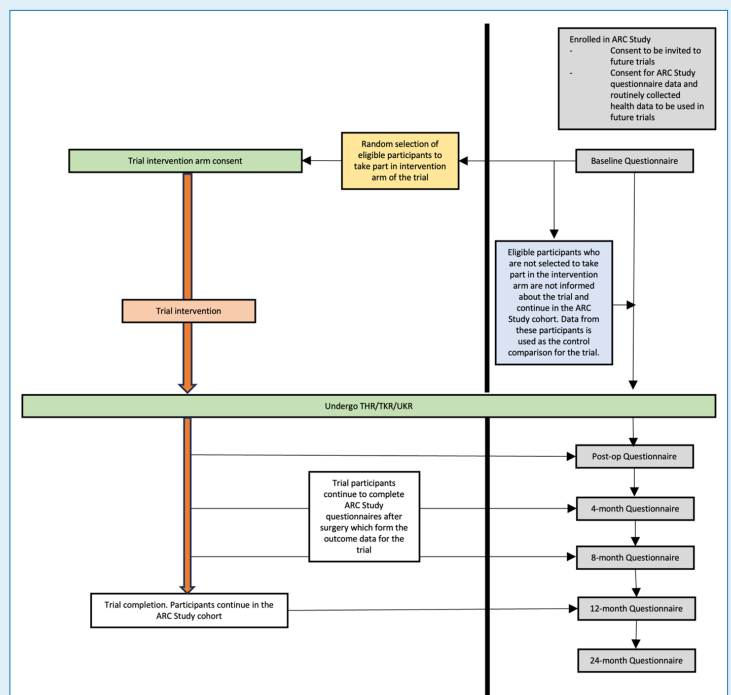


Figure 1: A flowchart demonstrating an example of a trial embedded in the ARC Study using 'Trials Within Cohorts Methodology'.



Professor Joy Adamson

is an experienced methodologist at the Trials Unit at the University of York, and has a broad range of methodological expertise, encompassing trials; epidemiology; qualitative methods and mixed method research. Joy is a Royal College of Surgeons Chair in Surgical Trials and Health Sciences.



Professor Mike Reed

is a trauma and hip and knee arthroplasty surgeon at Northumbria Healthcare NHS Foundation Trust. He leads Trauma and Orthopaedics at Northumbria, working with a team of 31 talented colleagues. He leads clinical trials for industry and NIHR, and works academically with the University of York.

The ARC Study

During my OOPR period, I designed and established the Arthroplasty Research Cohort (ARC) Study³, a national cohort study of patients undergoing hip and knee replacements. It utilises a 'light-touch' design with enrolment through the study website (www.arcstudy.org.uk) and all consent and data collection completed electronically using online questionnaires. Recruitment has been supported with an online and social media advertising campaign, enabling patients from anywhere in the United Kingdom to join the study. The data collected will provide further insight into outcomes after surgery. However, the ARC Study and associated consent process has also been carefully designed to support future trials embedded within the cohort using complex trial methodology, such as 'Trials Within Cohorts' (TWiCs)⁴, (Figure 1).

My PhD

Alongside my clinical research, I completed a PhD at the University of York. My thesis was constructed around developing a process to identify and prioritise research targets for future trials embedded within the ARC Study. This will ensure the efficient use of the ARC Study through delivering trials that are relevant, impactful and important to patients.

Considerations for planning OOPR

Application

OOPR requires a high-level of planning well in advance of the start date. Any application requires an academic supervisor and clear research plan, so identifying these should be the first step for most trainees. This then requires discussion with the Educational Supervisor and Training Programme Director, before a formal application is submitted, usually at least six-months before the intended start

time. The application requires approval both locally by the deanery and by the Joint Committee on Surgical Training⁵.

Funding

Securing funding can be one of the most challenging aspects of OOPR, and indeed research in general. I was fortunate that there was a funding opportunity available to support my research initially, but then needed to find further funding for a second year of OOPR time. I am very grateful to the BOA and ORUK for providing me with the research fellowship that enabled me to do this. Other funding opportunities include those offered by the Royal Colleges and by other societies and charities, or as part of larger research grants. All of these are competitive, and require significant planning and work to secure the funding. Funders will be looking for an individual to invest in, but are also looking for a well-designed and worthwhile project, in the right setting, with good surrounding research support and supervision.

Timing

The right time to undertake OOPR will be different for each trainee and vary depending on each person's clinical and professional progression and their personal life. Equally, it may be dictated by when a research project and funding opportunity is available. Starting my OOPR in ST4 felt like a good time for me, having gained some level of comfort being a registrar and feeling I had built a good foundation of operative skills, but was still able to return to training and rebuild clinical confidence with plenty of time left before CCT. Others will prefer to take OOPR time later in training once they have completed the FRCS exams and have already developed a higher level of competence and experience.

Duration

The duration of time out of training will again vary according to each trainee's personal preference, clinical training requirements and stage of training, the research project, and if they are completing a higher degree. I chose to take two years out of training to establish my clinical research and start my PhD, and then returned to training to complete my PhD alongside full-time clinical work. Some will choose to take three years OOPR, which is offset against more time away from the training programme and a requirement to find funding to sustain that period.

Benefits of time OOPR

My time OOPR brought with it a huge range of experiences and benefits to me both as a surgeon and more widely:

Skills: I developed skills and experience in designing clinical research and complex trial methodology, ethics applications and the

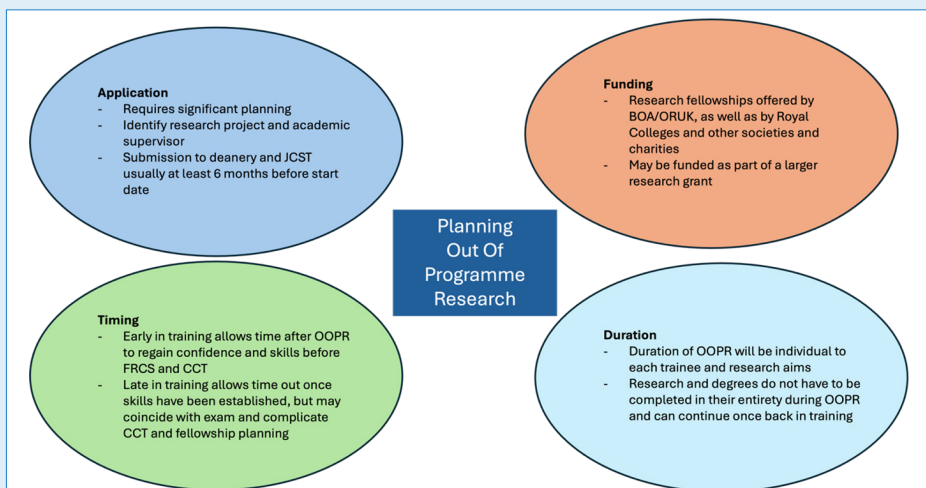


Figure 2: Considerations for planning OOPR.

management of a clinical study. Alongside this, my PhD gave me a broad range of other research skills including in systematic reviews and research prioritisation.

Additional research training: Through my PhD at the University of York, I was able to undertake additional taught modules including in statistics and evidence synthesis. The opportunity to be formally taught on these topics felt like a real privilege, which is rarely available within clinical training.

Career progression: OOPR time should help to support future academic development and lead to further research opportunities both as a trainee and as a consultant. Completion of research and a higher degree may also stand out in any fellowship or consultant application, but particularly in roles where there is an academic component. A research doctorate is required to apply for Academic Clinical Lectureship positions⁶.

Other research: During my OOPR time, I found people approached me with other research opportunities that were outside the remit of my clinical research or thesis. OOPR highlighted me to others as a trainee interested in research, and also meant I had the flexibility in my time to be able to complete these other projects alongside my OOPR work.

Collaboration: I met and worked alongside multiple other academics and researchers through my clinical research, the university and in other projects, and have built a network of research contacts to support collaboration in future work.

Personal: OOPR can give some respite from the constant cycle of training, regularly changing hospitals and commuting. For me, I found I worked as much I did when in training, but had more freedom and flexibility in how I managed that workload. OOPR didn't just give me time, but also the headspace to think and immerse myself in research, rather than trying to fit this in alongside clinical work with an already tired and at times saturated brain. It also gave me time and opportunity to consider the shape of my future career and my chosen subspecialty.

Disadvantages of time OOPR

OOPR will not be the right option for every trainee, and the decision to take time away from training will be individual to each person. Some of the possible or perceived disadvantages to OOPR are discussed below:

Falling behind: Inevitably, taking OOPR time delays CCT and you will watch trainees who were of equivalent grade finish training,

start fellowships and obtain consultant posts before you do. However, I didn't feel I regressed in my own clinical abilities during OOPR time, which was largely due to continuing on an on-call rota and still attending some operating lists where possible. This time, whilst not comparable in concentration or intensity to time in training, has still added to my overall level of experience, and contributed to my clinical and surgical progression.

Unpredictability: Often, multiple different components need to align to complete a project, some of which may be beyond your control. Depending on the source, research support and funding can change or be withdrawn unexpectedly. After the COVID-19 pandemic, my original research project was no longer viable, which necessitated starting again in identifying a project and formulating a new PhD plan around this.

Financial: OOPR can undoubtedly have a financial impact, extending training time and reducing overall time on the consultant pay scale. Depending on the source of funding, research time may also come with a pay cut, but research funding such as the BOA/ORUK fellowship minimise this by covering the base salary of a trainee, which can be supplemented through being part of an on-call rota or additional locum shifts.

Balance: I hadn't anticipated how hard I would find it to maintain balance between my work life and home life whilst on OOPR. Working from home on both large, long-term research projects and my PhD, I found it difficult to separate this from my personal life at the end of the day or the week. I often had the feeling of work hanging over me, compared to clinical work where there is a better-defined transition when you leave work on a Friday evening.

Returning to training: Perhaps unsurprisingly, returning to full time training after OOPR and finishing my PhD alongside this often felt like I was working at 150%, using time in evenings and weekends for the next couple of years. Whilst I managed to make this work for me, it undoubtedly impacted on my personal life, and was compounded by heading immediately into FRCS preparation straight after submitting my thesis. I would not discourage others from doing the same, but would advise them to be realistic about what this actually entails and to seriously consider where that time will need to come from.

Conclusion

OOPR provides the space and time to gain extensive and sustained experience in research, develop a broad range of research

skills and undertake a higher degree. Whilst this is time out of the training programme, I really feel this was time that I gained, adding to and enhancing my overall training and presenting opportunities I otherwise would not have had. My OOPR time has not only added to my career progression academically, but also my wider professional and personal development.

Key points

- OOPR offers time for trainees to undertake high level research. For most, this will also include completing a higher research degree.
- The benefits of OOPR can extend far beyond an additional degree or publications, supporting broad skill acquisition, 'real world' research experience and wider professional development.
- OOPR time requires substantial planning well in advance of the intended start date and the timing and duration of this should be carefully considered.
- Funding to support time OOPR is available through the BOA/ORUK research fellowship, and similar funding streams from other organisations.

For more information on the ARC Study, please visit the study website (www.arcstudy.org.uk) or contact William Fishley (william.fishley@nhs.net). ■

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