3 Year PhD Studentship available for September 2019

Department: Cardiovascular Sciences & Health Sciences

Supervisors: Dr William Toff (Cardiovascular Sciences) w.toff@le.ac.uk, Prof Keith Abrams (Health Sciences) keith.abrams@le.ac.uk & Prof Laura Gray (Health Sciences) lg48@le.ac.uk

Eligibility: UK/EU applicants only

Project Title: Evaluating use of national databases of routinely collected data as an alternative to direct patient contact for clinical trial design, follow-up & generalisability

Project Description:
The UK TAVI trial is an ongoing multi-centre randomised controlled trial to assess the clinical effectiveness and cost-utility of TAVI, compared with conventional surgical aortic valve replacement, in patients with severe symptomatic aortic stenosis, who are at intermediate or high operative risk. The trial involves 34 UK centres and has recruited a total of 913 patients, who have been randomly assigned to receive either TAVI or surgical aortic valve replacement. Patients are being followed annually for a minimum of five years to assess mortality (the primary outcome) and a variety of secondary clinical outcomes including stroke, re-intervention, myocardial infarction and pacemaker implantation.

The early trial follow-up at 6 weeks and one year is conducted face-to-face during routine clinic attendance and annual follow-up thereafter is by telephone contact with research nurses at the clinical centres. There are considerable cost and resource implications of clinic attendance when not required for clinical reasons and even telephone follow-up is potentially burdensome for patients and consumes a considerable amount of staff time. There are additional costs involved in documenting and uploading data to trial databases and in validating and cleaning the uploaded data. National databases, such as those administered by NHS Digital, including the Office for National Statistics (ONS) mortality data and Hospital Episode Statistics (HES), and corresponding databases in the devolved nations may offer an alternative means to track key clinical outcomes in trials such as UK TAVI [1].

We propose to implement database follow-up in parallel with the ongoing clinic and telephone follow-up to assess whether database follow-up alone would be sufficiently accurate to assess the key clinical outcomes for the trial and provide the basis for a robust cost-effectiveness analysis. This will provide invaluable evidence to guide the design of
future trials and may provide scope for considerable cost-savings for research funders and the NHS.

The PhD would comprise the following components; Review of the use and evaluation of routine data for facilitating patient follow-up in clinical trials; comparison of one year follow-up in the TAVI trial with that obtained from routine data sources; evaluation of whether routine data sources would enable shorter-term follow-up to be collected more efficiently and cost-effectively & evaluation of whether routine data sources could enable trial results to be generalised to a broader patient population, e.g. older patients than those included in the UK TAVI trial, using re-weighting methods [2].


Funding details:
The College of Life Sciences (CLS) HDRUK Studentship will provide a tax-free stipend at RCUK rates (£15,009 for 2019/20) and UK/EU fees for 3 years.

Entry requirements:
Applicants are required to hold/or expect to obtain a data science related UK Bachelor Degree 2:1 or better (e.g. Computer Science, Bioinformatics, Biostatistics), and preferably also a similar MSc qualification. The University of Leicester English language requirements apply where applicable.

How to apply:
You should submit your application using our online application system.

Apply for a PhD in Cardiovascular Sciences Research

In the funding section of the application please indicate you wish to be considered for a CLS HDRUK Studentship

In the proposal section please provide the name of the supervisor and project you want to be considered for – please list both your first and second choices.

Project / Funding Enquiries: Dr William Toff w.toff@le.ac.uk

Application enquiries to pgradmissions@le.ac.uk
Closing date for applications: 3rd April 2019

Interviews are likely to be week commencing 8th or 15th April 2019