**PhD student opportunity – clinical trials in prosthetic joint infection**

Preliminary name of project

Epidemiology and management of prosthetic joint infection in Australia and New Zealand

Institution

University of Newcastle

Location

Newcastle, NSW, with collaborative work in Perth and other centres

Principal Supervisor

Josh Davis (ID physician, JHH and UoN)

Co-supervisors

i) Laurens Manning (ID physician, FSH and UWA); ii) David Dewar (orthopaedic surgeon, JHH/UoN)

Suitable applicants

This project would suit a clinician with an interest in clinical research, particularly those training or qualified in infectious diseases, orthopaedic surgery or rheumatology.

Brief background to project

Over 100,000 prosthetic hip or knee joint replacements are performed in Australia each year, approximately 2% of which become infected. Prosthetic joint infection (PJI) is a common problem which places a huge personal and economic burden on society. Despite this, there is little high quality clinical evidence to guide management, with <1,600 patients combined ever randomised in RCTs concerning management of PJI. Profs Davis and Manning, with the [ASID CRN](https://www.asid.net.au/groups/clinical-research-network) network of sites and investigators, recently completed the [PIANO study](https://academic.oup.com/ofid/article/7/5/ofaa068/5837061), a 783-patient prospective observational study on the epidemiology, management and outcomes of PJI in ANZ. This set the scene for ROADMAP, an international adaptive platform RCT addressing various crucial management questions in PJI, which we also lead, and will randomise 2,500 patients from ~50 sites across Australia, NZ, Canada and the UK.

Outline of research plan

The student will join the ROADMAP study group which consists of ID physicians, orthopaedic surgeons, statisticians and other experts. The key elements of their PhD could include some or all of:

1) Long term follow-up of PIANO patients (6-10 years down the track); 2) Convening several consumer focus groups of survivors of PJI to inform the development of patient-centred outcome measures for clinical trials in PJI; 3) Setting up a global PJI pathogen biobank of bacterial isolates and designing some in-vitro projects using this valuable collection; 4) Contributing to the design and running of the ROADMAP trial. There is the opportunity to get involved in several other related studies and for the student to design their own further studies to complement the above.

Key skills and opportunities to be gained from this PhD project

Clinical epidemiology, clinical trials design and analysis, qualitative research +/-lab bacteriology

Timeline

Start 2023, 3-4 years full time (paid work up to 0.2FTE allowed). Part-time also possible.

Funding

The research will be funded by the HMRI infection research program. Salary support for full-time students will come from an NHMRC application, with bridging from the SMPH or HMRI program would be expected to apply for an NHMRC scholarship for salary support.

Email to discuss further

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