Title of PhD project / theme	**Does care after acute kidney injury improve outcomes?**
Supervisory team	Professor Dorothea Nitsch Associate Professor Laurie Tomlinson Dr Masao Iwagami Professor Koya Ariyoshi (Nagasaki University)
Brief description of project / theme	Acute kidney Injury (AKI) is defined as an acute loss of kidney function in the context of other health events, e.g. severe infections, sepsis, or cardiovascular events. Typically such events occur more frequently in older people who often have multiple diseases and resulting polypharmacy, or people who have underlying chronic kidney disease (CKD). A subset of AKI is thought to be only attributable to drug toxicity (e.g. chemotherapy, nephrotoxic antibiotics). However, in most cases there is a combination of drugs and a health condition that may negatively affect kidney perfusion. For example, a patient with heart failure may receive ACE-Inhibitors, and diuretics and this patient then develops gastro-enteritis and is admitted with dehydration and resulting AKI. During the acute phase of AKI potentially contributory drugs usually get paused. However, there is no knowledge on the risks and benefits of stopping a drug thought to contribute to AKI but which is known to improve outcomes for people with a given health condition. Both Japan and the UK have ageing populations, and especially in Japan there are high numbers of people affected with CKD who are at particularly high risk of AKI. This PhD proposal will investigate whether aspects of care and drug therapy after AKI improve long-term outcomes in this population. The PhD will involve a systematic review of current evidence, analyses of electronic health data from the UK, and corresponding analyses of Japanese health data to inform policy and practice.
Particular *prior* educational requirements for a student undertaking this project	The student should have done an MSc in epidemiology or equivalent.
Skills we expect a student to develop/acquire whilst pursuing this project	• Systematic review and critical appraisal • Study design • Data management • Data analysis statistical skills for large electronic health records • Pharmacoepidemiology • Health Service Research methods