University of York

Centre for Health Economics

PhD Opportunity

We are looking for exceptional individuals to apply for a funded PhD opportunity at the Centre for Health Economics (CHE). This studentship is part of the research programme of the Economic Methods of Evaluation in Health and Social Care Interventions (EEPRU). EEPRU is funded through the National Institute for Health Research's Policy Research Programme, and undertakes work for the Department of Health and Social Care and arm's-length bodies including NICE and NHS England. We are offering a studentship in the following topic area:

Economic evaluation of policies to tackle antimicrobial resistance

Antimicrobial resistance (AMR) is a major global health concern. The UK government has recently published a 5-year national action plan and 20-year vision outlining how the UK can contribute to containing and controlling AMR by 2040. This stresses the importance of reducing rates of bacterial infections, targeting use of existing antibiotics and incentivising the development of new technologies including new antibiotics and diagnostics.[1,2] A wide range of policy options is available to achieve these objectives including use of clinical support tools to guide appropriate prescribing, periodic review of antibiotic usage for patients in hospital, modifying recommended regimens for antibiotic use, use of diagnostics to identify whether infections are bacterial or viral and whether they are likely to respond to different antibiotics, as well as infection reduction measures ranging from hand washing campaigns to changes to the built environment.

Prioritisation of efforts to reduce AMR should be informed by an assessment of the likely costs and benefits of different policy options. However, this is challenging as the pathways through which these interventions impact on patients and the general public differ from those typically considered within economic evaluation. In particular, there is a need to characterise impacts beyond the treated patient as policies modify infection rates and rates of resistant infections amongst the wider population. There may be important trade-offs to characterise, for example some policy options may have detrimental impacts in the short term for patients with bacterial infections, but have beneficial long-term effects on the trajectory of AMR. Recent work has shown that, in principle, it is possible to quantify these wider costs and benefits for new antimicrobials[3], however there has been limited work to date characterising the costs and benefits of interventions to reduce AMR.

The aim of this PhD is to further develop methods for the economic evaluation of policies aimed at reducing AMR. The PhD could focus on a range of topics within this broad area including: using decision modelling and evidence synthesis to assess the value of alternative policies, characterising uncertainty around the likely long-term effects of policies using statistical forecasting or elicitation methods, approaches to managing uncertainty including delayed introduction of policies or commissioning further research, and approaches to incentivising the development of new technologies. The PhD is likely to involve methodological and applied elements, and close collaboration with researchers within CHE who are researching in the area of AMR.

The ideal candidate will have (or be about to complete) a Master's degree in economics or a specialization within economics, with a substantial quantitative component. Knowledge of decision analytic modelling methods and of the principles and methods for the economic evaluation of health care interventions would be beneficial, as would an interest in modelling of infectious diseases.

Supervisory team: Beth Woods, Marta Soares, Mark Sculpher

References

(1) Department of Health and Social Care. Policy paper: UK 5-year action plan for antimicrobial resistance 2019 to 2024. 2019. Available from: https://www.gov.uk/government/publications/uk-5-year-action-plan-for-antimicrobial-resistance-2019-to-2024

(2) Department of Health and Social Care. Policy paper: UK 20-year vision for antimicrobial resistance. 2019. Available from: https://www.gov.uk/government/publications/uk-20-year-vision-for-antimicrobial-resistance

(3) Rothery, C.; Woods, B.; Schmitt, L.; Claxton, K.; Palmer, S.; Sculpher, M. Framework for value assessment of new antimicrobials. Policy Research Unit in Economic Evaluations of Health & Care Interventions, York. September 2018. Available from: http://www.eepru.org.uk/de-linking-reimbursement-of-antimicrobials-from-volumes-sold-assessing-alternative-arrangements-and-implications-for-nice-appraisal/.

Supervision and research environment

The successful candidate will be supervised in CHE and will be registered through the Department of Economics and Related Studies or the Department of Health Sciences at the University of York. This is an opportunity to work in close contact with researchers in one of the most successful health economics research groups in the UK. CHE has a leading international reputation, and is one of the world's largest health economics research centres. Its mission is to undertake "high quality research that is capable of influencing health policy decisions". The Centre attracts some of the best and brightest people in the field in the form of PhD students and visitors from overseas, creating a vibrant research environment. The University of York is widely recognized as one of the leading research universities in the UK and is also at the top of the teaching quality rankings.

CHE has an Athena SWAN Silver award which recognises our commitment to good practice in recruiting, retaining and supporting the careers of women. We strive to provide a supportive culture and family friendly work environment and to offer equal opportunities to all staff members. We seek to ensure the policies and procedures in the department are fair and support good work practices for everyone.

The award

The award will cover academic fees at the UK/EU rate plus a maintenance stipend for 3 years (£15,009 in 2019/20). Non-EU/UK students will be expected to meet the cost of the difference between the UK/EU rate and the International (non-EU) rate.

Students are welcome to register full-time or part-time.

Eligibility criteria

To register in the Department of Economics, the ideal candidate will have (or be about to complete) a master's degree in economics or a specialization within economics, with a substantial component in econometrics or a related quantitative subject. The English language requirement is IELTS: 6.5, with no less than 6.0 in each component.

To register in the Department of Health Sciences, please note the English Language requirement is a total IELTS score of at least 7 (or equivalent) with a minimum score of 6.5 in each component of the test.

Process for application

Applications should be received no later than 9 June 2020 before 16.00h (UTC)**.**

Applications should be made using the University of York on-line application process which can be accessed using the following link. http://www.york.ac.uk/study/postgraduate/apply/. Select PhD in Economics on the application form, in order to be registered in the Department of Economics and Related Studies. Alternatively, select PhD in Health Sciences to be registered in the Department of Health Sciences. Insert reference **CHE EEPRU AMR PHD2020** in "How studies will be funded" field. Please also provide a curriculum vitae and two academic references. In addition, you should upload an outline of your intended approach to the area of research, noting the potential methods or approaches that could be used (Note that for this particular studentship you are only required to submit up **to 500 words in PDF** format). If you have already published academic papers, one of these may also be uploaded.

Interviews

Shortlisted candidates will be interviewed (by ZOOM). Interviews take place on Tuesday 7th July 2020.

At interview, candidates will be expected to give a short presentation on their proposed project including relevant literature, potential data sources and applicable methods. It should also focus on their plans for the studentship for which they have applied and the skills they would bring to their doctoral research.