

Health Economics Unit

Welcome to the Summer 2016 edition of HEUnews!

Although this year has accelerated towards the summer months without much sign of the summer weather, the pace of academic activity within HEU has established a sunny outlook for the months (and years) ahead as we welcome new staff, new roles, new students and new research.

We are thrilled to welcome new PhD students Hannah, Henry and Samuel to the team (see below). These three full time students are joined by HEU's own existing staff members, **Carol McLoughlin** and **Katie Breheny** who have taken up new research associate roles, with parallel PhD opportunities provided by the success of the NIHR Career Development Fellowships of HEU's **Hareth Al-Janabi** and **Emma Frew**. We are also delighted to congratulate Emma on her internal promotion to Reader within the Unit. We welcome too, our new Research Fellow in Health Economics, **Hasan Basarir**, who has been appointed to the Institute of Translational Medicine health economics post (page 3).

Inside, the research focus introduces two new research projects. **Louise Jackson** is adding to HEU's sexual health portfolio of work and further pursuing her interests in screening and sexual health by leading with the STEPS study (page 2). Meanwhile **Lazaros Andronis** is consolidating his interests with further research on the cost-effectiveness of endovascular treatments for severe limb ischaemia with the Basil-3 trial.

Finally, in this issue we look ahead to September and Birmingham's hosting of The International Society on Priorities in Health (ISPHC) conference and hope to see you there. Looking further ahead to January 2017 and we request that you save the date for HEU's hosting of the Health Economists Study group Meeting. Hopefully we will have enjoyed some sunshine before then...



Tracy Roberts, Head of Unit

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What's new in HEU...

Three new PhD students join the ranks...



Hannah Bromley is undertaking a Universitas21 PhD studentship to explore the utilities and disutilities associated with the over-diagnosis and over-treatment of ductal carcinoma in situ (DCIS) of the breast. The studentship represents a collaboration between the Universities of Birmingham and Melbourne. The supervision team are: **Prof Tracy Roberts**, Dr Dennis Petrie (Melbourne) and consultant surgeons Prof Adele Francis (Birmingham) and Prof Bruce Mann (Melbourne). Hannah will fly out to Melbourne for 18 months in 2017.

Henry Nwankwo's PhD is funded through a College of Medical and Dental Sciences studentship. His topic 'The impact of different trajectories of dying on the opportunity for a good death' builds upon research conducted during a recent ERC funded study on end of life care, led by Prof Jo Coast. His research will explore through a think-aloud technique, the feasibility of using the ICECAP-SCM on patients with end-stage organ failure. Henry is supervised by Professors Fiona Irvine and Joanna Coast, Dr Cara Bailey and **Dr Phil Kinghorn**.



Samuel Nkansah Frempong's PhD will focus on the health economics of diagnostic testing in his home country of Ghana. Specifically, the PhD will explore the factors relevant to Ghanaian patients when on a testing pathway and the extent to which the inclusion or omission of 'patient preference' for test information, unrelated to treatment consequences, impacts on cost-effectiveness estimates. Samuel's supervisors are: **Dr Pelham Barton**, Dr Andrew Sutton and Dr Clare Davenport. Funding is from The Government of Ghana through the Ghana Education Trust Fund.



Research on the cost-effectiveness of endovascular treatments for severe limb ischaemia

One in every 2000 people in the UK will be diagnosed with severe limb ischaemia (SLI) each year; and this rate is rising as a result of the ageing population, increases in diabetes, and continuing high rates of smoking. Without treatment, up to one in four patients will die within 12 months and a further one in three will require major limb amputation.

The 'standard of care' treatment for patients with limited disease in the femoro-popliteal arteries has been plain balloon angioplasty (PBA) with the use of 'bail-out' (bare metal) stenting (BMS) if required. More recently, drug coated balloons (DCB) and drug eluting stents (DES) have entered the market and are widely used around the world. These treatments release various drugs which act on the vessel wall and are believed to reduce the risks of the artery narrowing down or blocking off again. However, there is uncertainty around the effectiveness and cost-effectiveness of DCB and DES, which are much more expensive than PBA+/-BMS. In light of these uncertainties, the NIHR HTA has recently funded a large randomised controlled trial, the **BASIL-3 trial**.



Lazaros

Answering these questions will enable the NHS to ensure that care provided to patients represents the most appropriate use of the available public resources. Towards this aim, **Dr Lazaros Andronis** is tasked with designing and undertaking an economic evaluation to determine the most cost-effective endovascular treatment.

The BASIL-3 trial aims to recruit 861 participants from over 50 hospitals within the UK. Although the trial is still in its very early stages, it has already opened four hospital sites and recruited five trial participants, with the first patient being randomised in January 2016. More information, including the trial protocol, is available from www.bham.ac.uk/basil3

The STEPS study (Screening and testing preferences in sexual health): understanding young people's preferences

Louise Jackson is leading a new research project examining how changes in service provision influence choices about whether to screen for sexually transmitted infections (STIs) and where to screen. The co-applicants are **Tracy Roberts** and **Hareth Al-Janabi** from HEU and Jonathan Ross from University Hospitals Birmingham NHS Foundation Trust. The research is funded by the Sexually Transmitted Infection Research Foundation (STIRF) and Queen Elizabeth Hospital Birmingham Charity. STIs have important impacts on sexual and reproductive health and young people continue to experience the greatest burden of STI infection. STI screening has changed fundamentally over the last few years with the introduction of screening in a wider range of settings such as GP surgeries, community based pharmacies, and via the internet.

Very few studies have been conducted which are concerned with measuring people's preferences for STI screening and testing. The evidence which does exist has mainly been carried out with people who already use sexual health services and has not fully incorporated ethnic minority groups. This research project aims to include the views of a range of ethnic groups and those who do not currently access screening services.

The research will involve both qualitative and quantitative techniques. Firstly, in-depth interviews will be carried out with around 40 young people in community, primary care and specialist settings to identify the factors that are particularly important to young people. This will be followed by a questionnaire survey involving around 1000 young people to measure their screening preferences.

The results will help to improve our understanding of young people's preferences for screening in different settings. This research will contribute to the development of Birmingham's new sexual health system and will also have national and international application. More information about the project is available at www.birmingham.ac.uk/steps



Louise



'Priorities coming home' - The International Society on Priorities in Health (ISPHC) is bringing its 11th biennial meeting to the University of Birmingham 7-9 September 2016.

Pelham's Pen



A woman takes her pet duck to the vet's, and tells the vet that her beloved pet is not well. The vet nods silently, and begins to examine the motionless animal on his table.

After just a few seconds the vet turns to the woman and says "I'm sorry, madam, but your duck is dead." The woman screams "What? You've barely examined him! Is there anything else you can do? I'm sure he's just unwell!" The vet sighs, goes out of the room, and returns with a Labrador. The dog prods the duck with its paw, but the duck does not move. Then the dog walks back over to the vet and nods its head.

The vet leads the dog out of the room and comes back with a cat. The cat sniffs the duck up and down before nodding to the vet; the duck does not move. The vet leads the cat out of the room and returns with a bill.

The vet hands the woman the bill and tells her, "I'm sorry, madam, but your duck is dead, there's really nothing more we can do." The woman seems to accept the fate of her beloved pet but is outraged when she sees the bill. "120 pounds??" she exclaims. "120 pounds for just telling me my duck is dead?" "Well, madam, it would only have been 20 pounds if you had taken my word for it, but the lab test and cat scan cost extra."

Have you heard...

...about our grant successes?

Philip Kinghorn has been successful in securing an MRC funded New Investigator Grant. The project, titled "Investigating deliberative methods for setting a monetary capability threshold in the context of social care and public health", started on 1 May 2016. The three year project will establish a monetary threshold for use with the ICECAP-A capability measure. Two phases of public deliberation will be used to establish: a sufficient level of capability, and a monetary threshold for an improvement in wellbeing, equivalent to a year of sufficient capability. There will also be a comparison of the societal deliberative value elicited from the public with (i) a societal deliberative value elicited from policy-makers; and (ii) an aggregated monetary value based upon individual (non-deliberative) values.

Lazaros Andronis is the lead health economist in the BISTRO trial (BioImpedance Spectroscopy To maintain Renal Output), which was recently funded by NIHR HTA to assess the clinical and cost effectiveness of bioimpedance-guided fluid management in patients undergoing haemodialysis. The study is led by Professor Simon Davies at Keele University. More information on the trial and its aims can be found on the NIHR website: www.nets.nihr.ac.uk/projects/hta/1421601

Tracy Roberts is the lead health economist for a new NIHR programme grant titled "Improving the sexual health of heterosexual people and men who have sex with men by preventing transmission of sexually transmitted infections and reducing undiagnosed HIV: a mixed methods programme of research". The Programme is led by Prof Claudia Estcourt (Glasgow Caledonian University). The programme started on 1 April 2016.

Pelham Barton and **Cristina Penalzo** are among the applicants on a recently awarded grant for the Metoclopramide and selective oral decontamination for Avoiding Pneumonia after Stroke (MAPS-2) Trial. This is a trial of treatments for the prevention of pneumonia in patients with dysphagia after an acute stroke. The project is led by Professor Christine Roffe at the University Hospital of North Staffordshire and is due to start on 1 July 2016.

Staff news



Congratulations to **Emma Frew** on her promotion to Reader this summer. Emma will be mainly working on a NIHR-funded project, working closely with Birmingham City Council, exploring the use of economics for public health

decision making and on the economics of childhood obesity. Emma also collaborates on a number of research projects focused on the treatment and prevention of obesity, working with colleagues both within the UK and internationally, to understand the determinants of childhood obesity and the impact on children's health and wellbeing.

We welcome **Hasan Basarir**, who joins HEU as a Research Fellow for the Institute of Translational Medicine (ITM). Hasan graduated with a PhD in Economics from the University of York in 2011, and previously worked at the University of Sheffield



(SchARR) and for Evidera. His principal research interests relate to decision analytic modelling, econometrics and statistical analyses and economic evaluations conducted alongside clinical trials. The ITM post within HEU is a new initiative and will involve Hasan working in close collaboration with the Queen Elizabeth Hospital, Birmingham Children's Hospital and the Women's Hospital.



Carol McLoughlin will be undertaking a PhD alongside her position working with **Dr Hareth Al-Janabi** on Hareth's NIHR Career Development Fellowship. Carol's PhD will address key methodological challenges relating to the inclusion of care-related quality of life effects in economic evaluation. Carol is being supervised by Hareth and **Dr Illias Goranitis** (University of Birmingham).

Selected recent publications

Al-Janabi H, Nicholls J, Oyebode J, The need to "carer proof" healthcare decisions, *BMJ* 2016. DOI: 10.1136/bmj.i1651

Coast J, Huynh E, **Kinghorn P**, Flynn T, Complex Valuation: Applying ideas from the complex intervention framework to valuation of a new measure for end of life care, *PharmacoEconomics* 2016. DOI: 10.1007/s40273-015-0365-9

Blazenby J et al on behalf of the BLUEBELLE Trial Team including **Andronis L**, Do dressings prevent infection of closed primary wounds after surgery? *BMJ* 2016. DOI: 10.1136/bmj.i2270

Duarte R, **Andronis L**, Lenders M, de Vos C, Quality of life in patients with painful diabetic neuropathy following treatment with spinal cord stimulation, *Quality of Life Research* 2015. DOI 10.1007/s11136-015-1211-4

Ensor J, Riley RD, **Jowett S**, **Monahan M** et al on behalf of the PIT-STOP collaborative group, Prediction of risk of recurrence of venous thromboembolism following treatment for a first unprovoked venous thromboembolism: systematic review, prognostic model and clinical decision rule, and economic evaluation, *Health Technology Assessment* 2016. DOI: 10.3310/hta20120

Foster NE, Bishop A, Bartlam B, Ogollah R, Barlas P, Holden M, Ismail K, **Jowett S**, Kettle C, **Kigozi J**, Lewis M, Lloyd, Waterfield J, Young J, Evaluating Acupuncture and Standard care for pregnant women with Back pain (EASE Back): a feasibility study and pilot randomised trial. *Health Technology Assessment*. 2016; DOI: 10.3310/hta20330

Goranitis I, Coast J, **Al-Janabi H**, Latthe P, **Roberts TE**, The validity and responsiveness of the ICECAP-A capability-well-being measure in women with irritative lower urinary tract symptoms, *Quality of Life Research* 2016. DOI 10.1007/s11136-015-1225-y

Keeley T, Coast J, Nicholls E, Foster NE, **Jowett S**, **Al-Janabi H**, An analysis of the complementarity of ICECAP-A and EQ-5D-3 L in an adult population of patients with knee pain, *Health and Quality of Life Outcomes* 2016. DOI: 10.1186/s12955-016-0430-x

Koufopoulou M, Sutton AJ, **Breheny K**, **Diwakar L**, Methods Used in Economic Evaluations of Tuberculin Skin Tests and Interferon Gamma Release Assays for the Screening of Latent Tuberculosis Infection: A Systematic Review, *Value in Health* 2016. DOI: 10.1016/j.jval.2015.11.006

Popplewell MA, Davies H, Jarrett H, Bate G, Grant M, Patel S, Mehta S, **Andronis L**, **Roberts T**, Deeks J, Bradbury A, on Behalf of the BASIL-2 Trial Investigators, Bypass versus angio plasty in severe ischaemia of the leg - 2 (BASIL-2) trial: study protocol for a randomised controlled trial, *Trials* 2016. DOI 10.1186/s13063-015-1114-2

Rachaneni S, McCooty S, Middleton LJ, Parker VL, Daniels JP, Coomarasamy A, Verghese TS, Balogun M, **Goranitis I**, **Barton P**, **Roberts TE**, Deeks JJ, Latthe P on behalf of the Bladder Ultrasound Study (BUS) Collaborative Group, Bladder ultrasonography for diagnosing detrusor overactivity: test accuracy study and economic evaluation, *Health Technology Assessment* 2016. DOI 10.3310/hta20070

Sanghera S, **Barton P**, Bhattacharya S, Horne AW, **Roberts TE**, on behalf of the PRE-EMPT research group, Pharmaceutical treatments to prevent recurrence of endometriosis following surgery: a model-based economic evaluation, *BMJ open* 2016. DOI: 10.1136/bmjopen-2015-010580

Katie Breheny will be undertaking a PhD alongside her position working with **Dr Emma Frew** on Emma's NIHR Career Development Fellowship. Katie's PhD will explore the costs of implementing school based obesity prevention interventions. It will also use mixed methods to examine the contribution of individual and environmental factors.



Katie's supervisors are Dr Emma Frew (HEU), Professor Jo Coast (University of Bristol) and Dr Iestyn Williams (HSMC, University of Birmingham).



International Visitor

In March we were delighted to welcome Marian Hernon to HEU for a 2 week international placement. Marian, who is a PhD student at University College Dublin, was funded by the SPHeRE PhD programme to visit the unit on an international placement. Her PhD explores the economic consequences of self-management for chronic musculoskeletal pain conditions. Whilst at HEU, Marian worked closely with Sue Jowett, Ray Oppong and Jesse Kigozi to learn more about economic evaluation methods including costing and decision modelling in osteoarthritis and back pain. We would like to wish Marian the best of luck with the rest of her PhD.

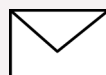
Save the date! HESG Winter 2017

HEU will host the Winter meeting of the Health Economists' Study Group in central Birmingham 4th-6th January 2017. The main conference venue will be Jury's Inn and the conference Dinner will be hosted at the Council House, Birmingham. Early bird registration and the call for abstract submissions will open in August 2016.

MSc Programmes and associated short courses

HEU runs two separate but allied MSc programmes: MSc Health Economics and Health Policy and MSc Health Economics and Econometrics. Both programmes explore the key principles and theories upon which health economics is based as well as developing practical skills for the conduct of empirical work.

- ◆ The MSc in **Health Economics and Health Policy** is particularly suited to people currently working in the health care sector who wish to improve their understanding of health economics; and graduates who wish to pursue a career in health economics.
- ◆ The MSc in **Health Economics and Econometrics** is offered in collaboration with the Department of Economics. The NIHR have awarded three studentships for talented students with a first degree in economics. The programme is differentiated primarily by its compulsory modules in Microeconomics and Econometrics.
- ◆ Selected modules are also accessible as **short courses**, see website for details.



For more information visit: www.birmingham.ac.uk/healtheconomics or email healtheconomics@contacts.bham.ac.uk