

Welcome to the latest edition of HEUnews...

In this Christmas issue, we report progress on our global research collaborations, and introduce new ones. A substantial component of HEU's current research portfolio focuses on health issues in lower middle income countries (LMICs); but it's not all about global research - as HEU colleagues Ray and Jesse are global capacity building initiatives too (see below).

Inside, HEU's Sue and Zainab update us on the Global Atrial Fibrillation research and Mwayi introduces one of the NIHR Global Surgery Unit projects that cannot escape a COVID focus. In addition, HEU's Ellie and myself, are pleased to be part of the team exploring interventions for the prevention of post-partum haemorrhage in LMICs, funded by the Bill and Melinda Gates foundation.

Notwithstanding the current challenging times for education and travel, HEU are delighted to welcome its new cohort of students and pay tribute too, to our departing cohort and welcome them as new Alumni. We also welcome recent PhD alumni Tuba Saygın Avşar to the team. We hope our newsletter readers will engage with our call for guest Pelham's Pen contributors (...it works well in Have I Got News for you).

Consolidating this global themed issue, I am very pleased to report my own appointment to the role of Director of Global Engagement for the College of Medical and Dental Sciences, from January 2021.



Finally, HEU is absolutely thrilled to end this most challenging year with the exciting news that our colleague, Professor Emma Frew has just been awarded an NIHR Professorial Fellowship – the first ever to be awarded to a health economist. We are therefore thrilled to throw the staff spotlight on Emma. Congratulations Emma – we are very proud indeed.

Merry Christmas everyone.

Tracy Roberts

Have you heard?

Raymond Oppong and **Jesse Kigozi** have been awarded a health economics capacity building grant in low- and middle-income countries (LMICs). Awarded by the Institute for Global Innovation and Institute of Advanced studies, the grant is to strengthen health economics capacity in Ghana.

Specifically, the project will address the general lack of training in health economics in universities in LMICs and limited use of health economic evidence in decision making amongst health policy makers in Ghana, identified through a previous International Engagement Grant.

Raymond and Jesse will be partnering with academic and non-academic colleagues in Ghana to build capacity in applied health economics methods and research for policy impact. The grant will initially focus on applied work within (i) the economics of antimicrobial resistance and (ii) the economics of chronic disease in Ghana. The grant will also focus on three methodological aspects of health economics (i) applied methods of cost-effectiveness analysis (ii) effectiveness analysis of healthcare systems and policies and (iii) translating evidence into policy making.



In our Winter 2018 issue of *HEUnews*, we reported on **Sue Jowett's** role in an NIHR-funded GlobalHealth Research Group on Atrial Fibrillation (AF) management ("AF Reach").

The work aims to explore issues related to the detection and management of AF, whilst building research capacity and long-term collaborations with China, Brazil and Sri Lanka. Here we provide an up-date on current health economics work to estimate the cost-effectiveness of AF case-finding strategies (systematic population-based screening, systematic targeted screening and opportunistic screening) in the Northern Province of Sri Lanka. HEU's **Zainab Abdali** has joined the team, and Sue and Zainab are working with Dr Kumaran Subaschandren from the University of Jaffna in Sri Lanka. Case finding involves going into the community with a portable ECG (AlivCor) which connects to a smart phone. The study will screen for AF in 10,000 individuals aged 50 and over. All suspected AF cases are then reviewed by a cardiologist for confirmation.

The first stage of the analysis will be a cost-effectiveness analysis to determine the cost of each strategy and number of cases detected, to estimate the cost per additional true case detected. The second stage, using decision modelling, will explore the potential long-term cost-utility of the case-finding strategies using quality-adjusted life years (QALYs) as the main outcome. A key aspect of this modelling is to ensure the patient pathways of AF management after detection are specific to the Sri Lankan context.

Chlorhexidine mouthwash preliminary model



Postoperative pneumonia is one of the most common adverse effects after abdominal surgery. It is associated with high healthcare costs and mortality rates. Due to the emergence of COVID-19, it is expected that postoperative pneumonia incidence rates will increase. Preoperative mouthwash has been shown to reduce incidence of postoperative pneumonia. However, the evidence is limited to patients undergoing cardiac surgery. In low and middle-income countries (LMICs) it can be challenging to undertake cost-effectiveness analyses due to factors such as lack of data availability.

HEU's **Mwayi Kachapila, Mark Monahan, Raymond Oppong** and **Tracy Roberts** have developed a preliminary health economics model to explore the potential cost-effectiveness of preoperative chlorhexidine mouthwash at reducing pneumonia incidence among abdominal surgery patients in South Africa. The model has been built in collaboration with clinicians from NIHR Global Health Research Unit on Global Surgery.

The results of the analysis will inform future research to assess the cost-effectiveness of preoperative chlorhexidine mouthwash at reducing pneumonia in LMICs.

What's new in HEU?

Bill and Melinda Gates Foundation funded research

Postpartum haemorrhage (PPH), defined as blood loss of more than 500 mL, is the leading cause of maternal death worldwide. PPH is a major concern in low-resource countries where a mother dies from PPH every six minutes. The impact of a mother's death on survival of the new born child and welfare of the wider family is significant. In 2012, the World Health Organisation (WHO) issued guidance for managing PPH, but compliance is limited, there is a lack of early detection of PPH and delayed or inconsistent use of interventions for PPH management.

HEU's **Eleanor Williams** and **Tracy Roberts** are providing health economics input to the E-MOTIVE trial, led by Professor Arri Coomarasamy from the Institute of Metabolism and Systems Research (University of Birmingham). E-MOTIVE, funded by the Bill and Melinda Gates Foundation, is multi-country, parallel cluster randomised trial that will be conducted across 5 low-and-middle-income-countries (Kenya, Tanzania, Nigeria, South Africa and Sri Lanka). It aims to evaluate implementation of the E-MOTIVE intervention: a bundle comprised of evidence-based technologies and strategies, aimed at changing local healthcare providers' behaviour for PPH management and increasing compliance with WHO recommendations. The HEU team will explore the cost-effectiveness of the E-MOTIVE intervention for management of PPH, compared with usual care strategies.

Spotlight on... Emma Frew NIHR Research Professorship recipient

Professor **Emma Frew** graduated from the Business School at University of Strathclyde in 1997 before completing an MSc from University of York in 1998 followed by a PhD in Health Economics from the University of Nottingham in 2003.

Emma joined the Health Economics Unit at Birmingham in 2002 starting as a research assistant undertaking reviews of evidence for NICE and conducting trial-based economic evaluations. In 2015, she was awarded an NIHR Career Development Fellowship with a focus on how economic evidence is used in local authority settings with a particular interest in using economic evidence to tackle childhood obesity.

It is this research alongside national policy roles that led to the development of a new research programme recently funded by a NIHR Research Professorship. Working across five workstreams, and in close collaboration with West Midlands local authorities and commercial and education providers, a new Centre for Economics of Obesity Research will be created that will generate economic evidence for obesity policy that spans health and non-health sectors, and develop capacity for health economics alongside obesity policy.

HEUnews asked Emma...

Where did you grow up?

West Kilbride, Scotland

If you're happy to share it, do you have a fear of anything?

Sharks – traumatised as a child watching JAWS!

Tell us something about yourself, that people may not know?

I was once air-lifted by the Coast Guard when our sailing boat got into difficulty during a hefty storm off the West Coast of Scotland.

Do you have any hobbies or play any sports?

Anything that involves the outdoors!



Staff News

We welcome **Tuba Saygin Avşar**, who joins HEU as a Research Fellow,



after successfully completing her PhD in Health Economics here at the University of Birmingham.

Tuba's PhD research was concerned with the economic evaluation of smoking cessation interventions targeted at pregnant women who smoke. Tuba has completed two masters programmes on healthcare management and is interested in decision-analytic modelling and healthcare policy.

Tuba will be working with HEU's **Louise Jackson** on an NIHR funded project, which is led by Dr David Moore (Institute of Applied Health Research). The project aims to explore the clinical and cost effectiveness of left ventricular assist devices (LVAD) in patients who are unsuitable for heart transplantation. The research will involve the development of an economic model to estimate the cost-effectiveness of LVAD compared to medical therapy for long-term treatment of advanced heart failure.

Welcome to our 'new' MSc students

A warm welcome to our new students who have just commenced their studies with us! This year we have students from a range of countries that include China, Greece, India, Nigeria, Pakistan, Saudi Arabia and Turkey. We are delighted that the start of the new academic year has gone well and that the first weeks of teaching have been successful. Although things are a little different this year, with teaching taking place both online and on campus, it is great to see that there is still the same enthusiasm and commitment from our students and staff. We look forward to the year ahead and continuing to get to know you all even better.

With the start of a new year, we also say goodbye to the students who have now completed their postgraduate programmes. What a year it has been! We have been so impressed with the quality of work you have all produced and are very proud of all your academic achievements. Please keep in touch – we really love hearing all your news and updates. We wish you all the very best for the future and wish you every success!

Pelham's Pen

Following the retirement of Dr Pelham Barton, and given the popularity of Pelham's Pen over the years, we thought that there may be some budding scribes amongst our readership who are willing to pick up the gauntlet (pen). **Hence, we are launching a new section in future issues of HEUnews featuring guest contributors.**

Please send your submissions to: heubirmingham@contacts.bham.co.uk stating whether you are happy for your name to accompany your contribution.

In the meantime, we have chosen one of our favourites from the archive...

Two clinicians and two Health Economists are travelling together by train to a conference. When they meet at the station, the economists ask the clinicians how many tickets they have bought. The clinicians say "two" and the economists say "we have only bought one between us". The clinicians are puzzled by this, but the economists say that all will become clear on the train. When the ticket collector comes in sight, the economists get up and lock themselves into the toilet. When the ticket collector knocks on the toilet door, the economists pass the ticket under the door, the ticket collector stamps it and passes it back, and thus the two economists travel on one ticket.

On the return journey, the four of them again compare notes at the station. This time, they find that the clinicians have followed the economists' example and only bought one ticket, but the economists have not bought a ticket at all. Again, the economists say that all will become clear on the train. When the ticket collector appears, the two clinicians lock themselves into a toilet. One of the economists knocks on the toilet door, picks up the ticket passed through by a trusting clinician, and then the two economists go and lock themselves – with the ticket – in another toilet.

Moral: Do not use economists' techniques unless you really understand them.

Selected recent publications

Al-Janabi H, Coles J, Copping J, **Dhanji N**, **McLoughlin C**, Murphy J, Nicholls J. Patient and Public Involvement (PPI) in Health Economics Methodology Research: Reflections and Recommendations. *The Patient - Patient-Centered Outcomes Research* 2020. DOI: 10.1007/s40271-020-00445-4

Kinghorn P, **Afentou N**. Proxy responses to ICECAP-A: Exploring variation across multiple proxy assessments of capability well-being for the same individuals. *PLoS ONE* 2020. DOI: 10.1371/journal.pone.0236584

Okeke Ogwulu CB, Goranitis I, Devall AJ, Cheed V, Gallos ID, Middleton LJ, Harb HM, Williams HM, Eapen A, Daniels JP **Coomarasamy A**, **Roberts TE**. The cost-effectiveness of progesterone in preventing miscarriages in women with early pregnancy bleeding: an economic evaluation based on the PRISM Trial. *BJOG* 2020. DOI: 10.1111/1471-0528.16068

Roddy E, Ogollah R, **Oppong R**, Zwierska I, Datta P, Hall A, Hay E, Jackson S, **Jowett S** et al. Optimising outcomes of exercise and corticosteroid injection in patients with subacromial pain (impingement) syndrome: a factorial randomised trial. *British Journal of Sports Medicine* 2020. DOI: 10.1136/bjsports-2019-101268

PhD Research

Diwakar, L, Cummins, C, **Roberts, T**. Understanding parent preferences for NHS paediatric allergy services. *Clin Exp Allergy* 2020. DOI: 10.1111/cea.13712

Hall JA, **Jowett S**, Lewis M, **Oppong R**, Konstantinou K. The STarT Back stratified care model for non-specific low back pain: a model-based evaluation of long-term cost-effectiveness. *Pain* 2020. DOI: 10.1097/j.pain.0000000000002057