

Welcome to this edition of HEU news!

In this issue we are pleased to share good news about a variety of achievements of HEUs staff and students and hope this is a welcome diversion from the global news of fires, floods and flu (absolutely not flu I know - COVID-19 - the alliteration was an additional minor distraction!).

In staff news, we are very proud of **Nafsika** and **Nishit** and their respective NIHR pre-doctoral fellowship awards (see below). We welcome **Mwayi** from Malawi, **James** from our own PhD programme and **Ellie** from our MSc programme (see pages 3 & 4). We are thrilled that HEU's **Emma Frew** has achieved a well-deserved promotion to Professor, and we are absolutely delighted that **Hareth** has been awarded a Wellcome Trust investigator grant (page 3), complete with a mini-team of his own.

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Our research news focuses on public health issues, but again, a distraction from that which is dominating world news. **Emma Frew** and colleagues report on the Daily Mile study. The Daily Mile is an intervention which may prove to be a cost-effective component in the strategy to reduce obesity in children – especially girls. HEU's **Sue Jowett** and **James Hall** are working with the School of Geography, Earth and Environmental Sciences here at UoB on the West Midlands Air Quality Improvement Programme.

Last, but not least – we are always extremely proud of our students – since the last issue we have celebrated two graduation ceremonies and are thrilled to welcome these two cohorts to our alumni family. Congratulations and welcome all.

To quote Hill Street Blues (sadly I'm old enough!) "Let's be careful out there!"



Tracy Roberts
(Head of Unit)

Have you heard...

...about our NIHR Pre-doctoral fellowship awards?



Nafsika Afentou and **Nishit Dhanji** have been awarded NIHR Pre-doctoral fellowships to undertake training to further their research careers and develop PhD proposals.

Nafsika will explore food insecurity in the UK and its impact on food consumption and dietary habits. Nafsika will undertake a study-visit to the University of Glasgow, where she will be hosted by Professor Emma McIntosh in the Health Economics & Health Technology Assessment Unit (HEHTA). Her training plan will also see her attending external courses on decision analytic modelling and applied methods of cost-effectiveness analysis. In addition, Nafsika will contribute to the health economic analysis of two applied projects on childhood obesity. Nafsika is supervised by HEU's **Emma Frew** and Dr Sara Hassan from the City Region Economic and Development Institute.

Nishit will be analysing the impact that providing informal care has on modifiable lifestyle factors such as sleep, exercise and smoking. Building on this, he will develop and test an econometric model using publicly available panel datasets. Nishit's training plan will see him taking external courses in advanced econometrics. Findings from Nishit's research will highlight whether family carers will require particular support with modifiable health risk behaviours, as well as identifying causal pathways between caring and health. He is supervised by HEU's **Hareth Al-Janabi** and Professor Fiona Carmichael from University of Birmingham's Business School.

Can The Daily Mile™ help prevent childhood obesity?

Physical activity programmes such as The Daily Mile™ can be part of the way that schools deal with childhood obesity, but need to be part of a much wider population strategy designed to tackle this challenge. HEU's **Emma Frew** and **Katie Breheny** (now at University of Bristol), along with colleagues from the University of Birmingham, Birmingham Services for Education, and Birmingham City Council, recently published the results of the 'Daily Mile Trial' in the *International Journal of Obesity*. This research showed that over twelve months, children who regularly took part in The Daily Mile had signs of gaining less excess weight when compared to children who did not participate. Whilst the effect was small at the individual level, it could have an important impact at the population level.



The study also found evidence suggesting that the Daily Mile might be more effective in girls compared to boys. Although the authors were not certain of the reasons why this was the case, they do know that as girls get older, they become less active compared to boys. The Daily Mile might therefore have more potential for impact on girls, when compared to boys. The study also estimated the cost-effectiveness; it was found that over 12 months The Daily Mile cost on average £47 per child and was cost-effective in the whole sample, and highly cost-effective in girls.

These results were featured on BBC News Midlands Today and on The Naked Scientists Radio Interview, available to listen here: [Should kids run a mile a day?](#)

West Midlands Air Quality Improvement Programme



Air pollution has substantial impacts upon public health, and imposes direct and indirect economic costs. Across the UK, the mortality burden from outdoor air pollution amounts to around 40,000 deaths per year, with economic costs of over £20bn. WM-Air, the West Midlands Air Quality Improvement Programme, is a £5m project funded by the Natural Environment Research Council's Regional Impact from Science of the Environment (RISE) initiative.

The project, led by the School of Geography, Earth and Environmental Sciences at the University of Birmingham, contains several linked strands, including real-time air quality monitoring and predictive modelling of future pollution levels. The health strand, led by the Institute of Applied Health Research, aims to assess health impacts, with health economics a key component. **Sue Jowett** is the health economics lead on the project, with **James Hall** undertaking the model-based analysis. The work, building on existing economic modelling by Public Health England, will predict the impact of policies to combat air pollution (such as Clean Air Zones) on health, health and social care costs and quality of life, and will also estimate cost-effectiveness. Diseases are modelled over the life course, including conditions such as respiratory disease, cardiovascular disease, dementia and low birth weight.

The overall aim of WM-Air is to support regional decision making and enable stakeholders to reduce the impact of air pollution in the West Midlands. Therefore a 'user-friendly' version of the economic model will be made available to stakeholders to allow them assess the potential impact of their proposals on population health and health service utilisation.

What's new in HEU?...

...Hareth Al-Janabi is awarded a Wellcome Trust Investigator grant



Hareth has recently been awarded a prestigious 4 year Wellcome Trust Investigator Award – to study how schools and workplaces invest in mental health promotion and how this can be best supported by evidence and policy.

Schools and workplaces play a profound role in shaping an individual's mental health and increasingly invest substantial resource in 'health' activities. However, these organisations were not traditionally geared to deliver 'health'.

The project will focus on four aspects of the process of investing in mental health promotion (i) perceived responsibility for mental health promotion; (ii) resource needs; (iii) decision-making processes; and (iv) use of evidence. The work will use a range of research methodologies, including Q-methodology, cognitive interviews, and process-tracing.

Hareth will be based part-time in the University of Birmingham's Institute of Mental Health, working with a range of internal and external collaborators, including the Midlands Engine. The Wellcome Award will be transformative for Hareth's research, allowing him to develop a research group on this topic, funding several positions including post-doctoral researchers and PhD students.

Ultimately Hareth hopes the work will develop new insights into schools and workplaces as 'health-producing' organisations and a transformation in our understanding as how evidence and economic can support schools and workplaces to allocate resources efficiently and equitably and promote good mental health. This programme of work will be a new direction for Hareth, but he's very much looking forward it!

Pelham's Pen

Often when I travel on trains these days, I hear announcements saying that if I see something that is not quite right, I should inform a member of the train crew or contact British Transport Police. All I can say is that it is a good thing I no longer mark student assignments while I am travelling on trains.

Welcome to James

Hall, who joins HEU as a Research Fellow, after completing a PhD in Health Economics, awarded by Keele University, with supervision by HEU's Sue Jowett. James will be working on two projects, both with Sue. The first is a two year Natural Environment Research Council funded project, led by Professor William Bloss from the School of Geography, Earth and Environmental Sciences at the University of Birmingham (see page 2). James will also be updating a previously published NIHR HTA funded economic model, assessing the cost-effectiveness of home-based non-invasive ventilation (NIV) for patients with end-stage COPD.



Welcome to Mwayi

Kachapila, who joined HEU as a Research Associate last summer. Mwayi graduated from the University of Leeds with an MSc in Health Economics in 2017. Prior to joining HEU, Mwayi worked for the Ministry of Health in Malawi as a Health Economist for six years. He is working with HEU's **Tracy Roberts** and **Mark Monahan** on the Global Surgery Collaborative Initiative, funded by the NIHR Global Health Research Unit. Currently, Mwayi is working on exploring the cost-effectiveness of pre-operative chlorhexidine mouthwash in reducing post-operative pneumonia. The analysis is based on abdominal surgery patients in low and middle income countries.



Congratulations to Professor Emma Frew

on her promotion to Professor. Emma joined HEU in March 2002 and since then has maintained a research interest in cost-benefit analysis and measuring childhood outcomes for economic evaluation. In 2015, she secured a NIHR Fellowship to refine health economics methods to facilitate public health decision making and to generate economic evidence to inform obesity policy. Emma leads on a research programme on the economics of obesity - this requires collaboration with national and international academic colleagues, as well as with the retail sector, local government, and the education sector.





Many congratulations to those students who graduated from our MSc programmes at the Summer and Winter 2019 ceremonies.

We hope that you will stay in touch and let us know about your future achievements.



Selected publications

Al-Janabi H, McLoughlin C, Oyebode J, Efstathiou N, Calvert M. (2019) Six mechanisms behind carer wellbeing effects: A qualitative study of healthcare delivery. *Social Science & Medicine*. DOI: 54.5450/j.socscimed.6453.556726

Bromley HL, Mann B, Petrie D, Nickson C, Rea D, Roberts TE. (2019) Valuing preferences for treating screen detected ductal carcinoma in situ. *European Journal of Cancer*. DOI: 54.5450/j.ejca.6453.43.460

Frew E & Breheny K. (2019) Methods for public health economic evaluation: A national Delphi survey of English and Welsh local authority public health decision makers. *Health Economics*. DOI: 54.5446/hec.7350

Goranitis I, Lissauer DM, Coomarasamy A... Roberts TE. (2019) Antibiotic prophylaxis in the surgical management of miscarriage in low-income countries: a cost-effectiveness analysis of the AIMS trial. *Lancet Global Health*. DOI: 54.5450/S6658-109X(19)30336-5

Grant S, Hodgkinson J, Schwartz C, Bradburn P, Franssen M, Hobbs FDR, Jowett S, McManus RJ, Greenfield S. (2019) Using mHealth for the management of hypertension in UK primary care: an embedded qualitative study of the TASMINT4 randomised controlled trial. *British Journal of General Practice*. DOI: 54.7733/bjgp53X148929

Kinghorn P. (2019) Using deliberative methods to establish a sufficient state of capability well-being for use in decision-making in the contexts of public health and social care. *Social Science & Medicine*. DOI: 10.1016/j.socscimed.2019.112546

Seamer P, Brake S, Moore PV, Mohammed M, Wyatt S. (2019) Did Government Spending Cuts to Social Care for Older People Lead to an Increase in Emergency Hospital Admissions? An Ecological Study; England 2005 to 2016. *BMJ Open*. DOI: 10.1136/bmjopen-2018-024577

Student to staff profile:

Eleanor Williams

Eleanor completed the MSc in Health Economics and Econometrics as a full time student in the 2018-2019 academic year, and was presented with an award for Academic Excellence in Postgraduate studies. Before starting the MSc, Ellie completed an MA (Hons) in Economics at the University of Glasgow. Ellie joined HEU as a member of staff in January 2020.



Why did you choose the course?

Health economics was my favourite module during my undergraduate degree and I knew then that I wanted to study the area further. I chose the course at Birmingham because I liked the mix of modules from both HEU and the Economics Department. I was also familiar with some of the research produced by HEU staff from my previous studies, and I liked the idea of being taught by some familiar names from the field.

What did you enjoy most about the MSc?

I found the modelling module particularly interesting, and really enjoyed both the practical sessions and the assignment, which involved us building our own model using real data.

What was your dissertation topic?

Sleep duration and health: a panel analysis of the UK Household Longitudinal Study. The findings indicated that sleeping for less than 7 hours or more than 8 hours per night may negatively impact numerous aspects of mental and physical health.

What have you gone on to do since finishing the course?

Since graduating I have joined HEU as a research associate. I will be working with **Tracy Roberts** on the NIHR funded ROCKETS project, which aims to identify, refine and validate tests and risk prediction models that estimate the probability of having ovarian cancer for post and premenopausal women with suspected ovarian cancer.

What do you think you will be doing four or five years from now?

Most likely a PhD!