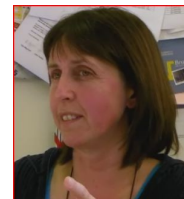


# Health Economics Unit

## Welcome to the first Health Economics Unit newsletter!

For those of you who don't know us, we are a thriving team of health economists and modellers within the University of Birmingham. We have exciting and innovative research programmes, both methodological and applied, and aspects of our public health and women's health programmes are presented in this first newsletter. We also have a strong capacity development programme which covers undergraduate economics teaching, teaching to medical students, a full Masters degree in Health Economics and Health Policy, and a doctoral programme.



One of the very real strengths of the Unit is its location in a rapidly changing and expanding School of Health and Population Sciences enabling strong multi-disciplinary research collaborations and providing the basis for our economics and modelling to be fully integrated with appropriate clinical, statistical, qualitative and psychological expertise. The School has a vision of excellence in all its activities - certainly something that we strive for within the Unit, and that I very much hope you will see reflected throughout this newsletter. I hope that you will enjoy

reading the newsletter and will look forward to receiving the next edition.

Jo Coast

Head of HEU

## What's new in HEU...

**ERC funding:** We are delighted to have been awarded prestigious European research funding in the form of a €1 million ERC Starting Grant to **Jo Coast** to conduct a capability-based programme of work on the economics of end of life care. The contracting process for this work was completed in March 2011 and the work began in April 2011.

**MRC Fellowship:** We are extremely pleased that **Hareth Al-Janabi** has been awarded an MRC Early Career Fellowship in the Economics of Health to pursue his proposal: "Measuring and modelling the spillover effects of healthcare interventions". Hareth will analyse outcome data on Parkinson's disease and the after-effects of meningitis to investigate the degree to which poor patient health 'spills over' to impact on family members. Econometric modelling will be used to disentangle the factors associated with changes in health and wellbeing for family members (especially informal carers). Hareth will also examine the potential for predictive modelling of carer health/wellbeing for use in economic evaluation. The fellowship will be based at HEU between 2011 and 2014, with Hareth being supervised by Jo Coast and mentored by Cam Donaldson. Hareth will also be undertaking research visits to Erasmus University, Rotterdam and the University of York, to train in, and apply, econometric modelling methods.

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## Measuring outcomes for childhood obesity



Childhood obesity is associated with poor health in childhood and psychosocial problems such as poor self-esteem, anxiety and depression. The aim of the WAVES (West Midlands Active Life Styles and Health Eating in School children) trial is to prevent overweight and obesity in 6-7 year old children by implementing a combination of physical activity components and nutritional support within the school setting. The intervention takes a population approach, and whilst it may result in weight reduction among children who are overweight or obese, the primary aim is to prevent weight gain among children with normal weight.

**Alastair Canaway** and **Emma Frew** have completed a pilot study with the primary aim of determining the most appropriate utility-based outcome instrument to use in this child-population sample. The pilot study assessed the acceptability, feasibility and reliability of the CHU-9D and the EQ-5D-Y using a sample of 160 children spread across 6 primary schools from across the West Midlands. The results showed that both instruments were similar in terms of feasibility, reliability and construct validity, however the CHU-9D appeared to be the superior option with respect to content validity and the recall period. This work was presented at the HESG meeting at the University of Bangor in June 2011. The results of the pilot study mean that the CHU-9D has been selected as the primary outcome measure for the economic component of the definitive trial. As the benefits of preventing obesity are likely to go beyond a health-related outcome (such as QALYs), Alastair and Emma have also designed the evaluation to measure willingness to pay (WTP) information elicited from both ex-ante (before exposure to the intervention) and ex-post (having experienced the intervention) perspectives. The WTP data will be elicited from parents using a variety of formats as part of a sub-study in the last year of the trial, and will ultimately be used as part of a formal cost-benefit analysis that will estimate the net-benefit of the intervention.



## Heavy menstrual bleeding

Heavy Menstrual Bleeding (HMB) is a common problem which affects approximately 1.5 million women in England and Wales and causes 1 in 20 women of reproductive age to consult their GP.

It accounts for 20% of gynaecology outpatient referrals and can cause significant distress to women by affecting their performance at work as well as social activities, and leads to a measurable reduction in quality of life. After graduating with distinction from the MSc in Health Economics and Health Policy undertaken at HEU in October 2010, **Sabina Sanghera** started her PhD work to explore the most appropriate method of outcome assessment for HMB under the supervision of **Tracy Roberts** and **Emma Frew**. HEU researchers recently carried out a model based economic evaluation that compared surgical treatments for HMB with a medical option, Mirena®, an intrauterine contraceptive device which can reduce menstrual loss by local release of progestogen (see Roberts et al. BMJ 2011). The main cause of uncertainty was found to be the utility values used. In a separate study HEU researchers, led by Tracy are set to carry out the economic evaluation for the Birmingham based ECLIPSE trial, which is a large UK funded (NCCHTA) trial that will provide evidence on whether Mirena® is preferable to standard oral treatments for heavy menstrual bleeding. Three outcome instruments used in the ECLIPSE study are the EQ-5D, the Shaw Menorrhagia questionnaire and the Short Form 36. These instruments represent some of the most common methods of measuring outcomes, however, there is much to suggest that none of them are totally appropriate for capturing all the impact of the disease on a woman's quality of life. Sabina's PhD work will explore the suitability of other approaches. She is considering using either the ICECAP-A index of capability or taking a welfarist approach using willingness to pay.



## Seminar Series

The **Health Economics Unit** runs a monthly seminar series which began in April 2009. Since its inception, 21 speakers from around the UK and Europe have presented their work. Recent speakers have included: Andrew Street, University of York who spoke on NHS productivity and Efficiency; Claire Hulme, University of Leeds talking on the opportunity costs of informal care; and Giovanni Fattore, Università Bocconi, Milan talking on Performance Management and Goal Ambiguity.

Dates and speakers have been allocated for the new seminar series which starts in September 2011 and speakers will include:

12 October  
Oliver Rivero-Arias  
(University of Oxford)

10 November  
Steve Morris  
(UCL)

If you would like to attend any of these seminars, please contact Helen Evans.

## Have you heard... ...about the ICECAP Workshop?

On 15<sup>th</sup> and 16<sup>th</sup> February 2011, the Health Economics Unit hosted a successful two-day workshop on "Using the ICECAP measures in trials and economic evaluation". For those not familiar with the instruments, the ICECAP (ICEpop CAPability) measures were developed as instruments to assess the broader quality of life impacts of health and social care for use in economic evaluation. Both ICECAP measures (ICECAP-O, for older people and ICECAP-A, for the general adult population) are self-complete measures of wellbeing. They cover 5 attributes: security/stability, attachment, control/autonomy, role/achievement and enjoyment). Drawing on Sen's capability approach, the ICECAP measures conceptualise wellbeing as capability to do/be the things that are valued in life. More information on the ICECAP measures can be found at [www.icecap.bham.ac.uk](http://www.icecap.bham.ac.uk).

The ICECAP workshop was funded through a grant from the MRC's Hub for Trials Methodology Research (HTMR) and attracted 34 participants from a wide range of institutions in the UK and overseas (Netherlands, Australia, Canada, USA). Participants included individuals involved in developing the ICECAP tools, individuals using the ICECAP measures in trials and economic evaluation, trials experts from the MRC HTMR and individuals with an interest in the measurement of human capabilities. Most participants presented, discussed or chaired a paper. The presentations outlined the properties of ICECAP measures (such as feasibility and validity) across a diverse range of trials. Methodological talks identified important issues for further investigation in terms of the completion, valuation and anchoring of the ICECAP measures. The key issues to emerge from the discussions were around the use of the measures for economic evaluation, and how to gain a better understanding of the non-health gap that the ICECAP measures can fill.

## Staff news...

We are pleased to announce the conferment on **Pelham Barton** of the title of Reader in Mathematical Modelling with effect from 1 March 2011. Pelham has been a member of the Health Economics Unit since 1998, and became Senior Lecturer in 2007. In his time in the Unit, he has become an internationally recognised authority on the use of modelling for the economic evaluation of healthcare interventions. Pelham leads the team of modellers within HEU and has made substantial contributions to the Unit's teaching. His research work includes methodological development and applied research across a wide range of clinical areas.



Congratulations to **Hema Mistry** who recently completed her PhD in Health Economics on "Economic issues associated with the operation and evaluation of telemedicine", which examined three key methodological issues (selection bias, patient costs and quality-adjusted life years). These issues were explored within a context of



providing telemedicine as part of an antenatal screening programme for pregnant women with risk of a fetal cardiac anomaly. The award was conferred in July 2011 at Brunel University. Publications from the thesis include: Systematic review of studies of the cost-effectiveness of telemedicine and telecare: changes in the economic evidence over twenty years *Journal of Telemedicine and Telecare*, (in press).

We are delighted that **Raymond Oppong** will now be working as part of the collaboration with Keele University and their Arthritis



Research UK Primary Care Centre. The Health Economics Unit has a formal contract with Keele to provide health economics support and partnership in design, management and analysis of projects in their portfolio of musculoskeletal work. Ray has previously worked on GRACE, a Europe-wide EU funded project looking at antibiotic resistance in lower respiratory tract infections and has replaced David Whitehurst, who has moved on to pastures new and taken up a post at the University of British Columbia, Vancouver.

## Capacity building news...

**Third year undergraduate teaching:** In 2010/11 for the first time, HEU offered an optional module in Health Economics to third-year undergraduate economics students. The module was designed to provide an introduction to the various key concepts within health economics with the intention of introducing the students to the discipline and motivating them to choose to study health economics at postgraduate level and to ultimately pursue a career in health economics. The module was split into five parts covering: Introduction to Health Economics; Demand for health and health care; Market Failure; Health care systems; Cost-benefit analysis. Twenty two students successfully undertook the module in 2010/11 and 75 are registered for 2011/12.

**MSc Health Economics & Health Policy and associated short courses:** The MSc HEHP is ideal for new graduates hoping to pursue a career in health economics or for those currently working in the health care sector who wish to develop skills in health economics. The course explores the key principles and theories upon which health economics is based as well as developing practical skills for the conduct of empirical work. It provides a programme of carefully developed modules, with a number also provided as individual short courses:

- Introduction to Health Economics
- Policy and Economics of Health Care Delivery
- Economic Evaluation in Health Care
- Modelling for Health Economics

To learn more about the MSc or about the short courses, visit [www.mds.bham.ac.uk/healthconomics](http://www.mds.bham.ac.uk/healthconomics), contact Helen Evans 0121 414 7694 or email [healthconomics@contacts.bham.ac.uk](mailto:healthconomics@contacts.bham.ac.uk)

**Doctoral studentships:** We are delighted to welcome two new doctoral students who will be beginning their studies in 2011/2012, conducting research on *A qualitative analysis of the model building process* and on *Capturing family benefits of end of life care for resource allocation*.



*Graduation Day, July 2011*

## Selected recent publications

**Al-Janabi H, Flynn TN, Coast J.** Development of a self-report measure of capability wellbeing for adults: the ICECAP-A. *Quality of Life Research*, 2011, DOI: 10.1007/s11136-011-9927-2

**Barton PM, Andronis L, Briggs A, McPherson K, Capewell S.** Effectiveness and cost effectiveness of cardiovascular disease prevention in whole populations: modelling study. *BMJ*, 2011, DOI: 10.1136/bmj.d4044

**Jowett S, Bryan S, Mant J, Fletcher K, Roalfe A, Fitzmaurice D, Lip GYH, Hobbs FDR.** Cost effectiveness of Warfarin versus aspirin in patients older than 75 years with atrial fibrillation. *Stroke*, 2011, DOI: 10.1161/STROKEAHA.110.600767

Lovibond K, **Jowett S, Barton P**, Caulfield M, Heneghan C, Hobbs FDR, Hodgkinson J, Mant J, Martin U, Williams B, Wonderling D, McManus RJ. Modelling the cost-effectiveness of different options for the diagnosis of high blood pressure in primary care. *The Lancet*, 2011, DOI: 10.1016/S0140-6736(11)61184-7

**Roberts TE, Tsourapas A, Middleton LJ, Champaneria R, Daniels JP, Cooper KG, Bhattacharya S, Barton PM.** Hysterectomy, endometrial ablation, and levonorgestrel releasing intrauterine system (Mirena) for treatment of heavy menstrual bleeding: cost effectiveness analysis. *BMJ*, 2011, DOI: 10.1136/bmj.d2202

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