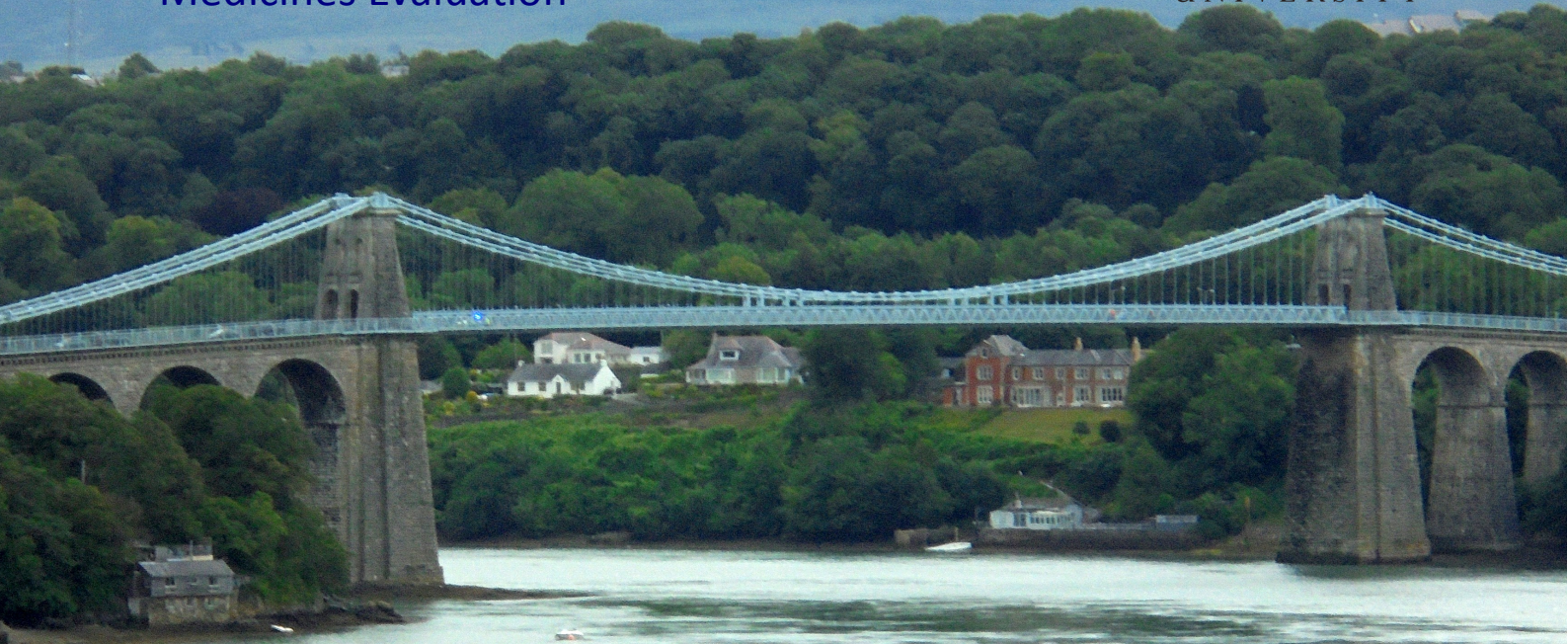


# CHEME

Centre for Health  
Economics and  
Medicines Evaluation



PRIFYSGOL  
**BANGOR**  
UNIVERSITY



## Summer 2015

### Welcome to the Summer 2015 newsletter of the Centre for Health Economics and Medicines Evaluation (CHEME)

In this issue, we focus on key achievements and research activities at CHEME during the first six months of 2015.

Highlights include: Celebrating the impact of the Welsh Health Economics Support Service (WHESS) over the last 5 years; the North Wales Medicines Research Symposium; the Impact of Housing on Health and Well-being symposium; and a spotlight on the CATCH and Girls Active projects.

More information on research, teaching and NHS support activities is available from our website: [cheme.bangor.ac.uk](http://cheme.bangor.ac.uk) or contact our administrator Ann Lawton: [cheme@bangor.ac.uk](mailto:cheme@bangor.ac.uk). Follow us on Twitter @CHEMEBangor and @ProfRTEdwards.

**Dyfrig Hughes & Rhiannon Tudor Edwards**

CHEME CO-DIRECTORS

### INSIDE THIS ISSUE...

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CHEME PhD student Eira Winrow presenting her research on housing stock improvement at the Impact of Housing on Health and Well-being Symposium



## SPOTLIGHT ON RESEARCH...

### Girls Active

The Public Health research stream at CHEME is working with partners from Universities of Leicester, Stirling and Loughborough, funded by NIHR PHR, to undertake an economic evaluation alongside an RCT of the Girls Active programme. The 2010 PE and School Sport Survey of schools in England showed an alarming drop in participation as girls become teenagers: only 15% of girls aged 17-18 took part in at least three hours of PE and school sport each week compared to 68% of girls aged 10-11. Girls Active offers a simple flexible action planning framework to help teachers and girls work together to address their particular issues. It is based on the Youth Sport Trust-developed principles of student engagement, such as student voice and leadership, alongside innovative approaches to marketing sport and exercise.

### CATheter Infections in Children (CATCH) trial

Central venous catheter (CVC) infections are a substantial and preventable cause of iatrogenic morbidity, mortality, excess length of stay and healthcare costs. Funded by the NIHR HTA programme, the CATCH trial considered the clinical and cost-effectiveness of heparin coated or antibiotic impregnated CVCs compared with standard CVCs for preventing blood stream infections (BSI) in the paediatric intensive care setting. This multicentre study of 1485 children showed no effect of impregnated compared with standard CVCs but secondary analyses revealed antibiotic CVCs to be superior to standard. While there were no significant differences in lengths of stay, 6-month costs for antibiotic CVC were higher than for the comparators, resulting in an ICER of £54,057 per BSI averted versus standard CVCs.



Dr Colin Ridyard giving a presentation on the CATCH trial at the recent North Wales Medicines Research Symposium

## UPCOMING EVENTS...

### Welsh Health Economists' Group (WHEG) meeting

The forthcoming 2015 meeting of the Welsh Health Economists Group (WHEG) will be hosted by CHEME on the 1-2 October at the University's Management Centre. WHEG meetings provide a forum for discussion and presentations - oral and posters for researchers across Wales. E-mail [cheme@bangor.ac.uk](mailto:cheme@bangor.ac.uk) for further information.

### CHEME lunchtime seminars

1st September – Dr Laura Ternent, Senior Lecturer, Newcastle University

6th October – Dr Ed Wilson, Senior Research Associate, CCHSR, Cambridge University

3rd November – Dr Apostolos Tsiachristas, Senior Researcher, HERC Oxford University

1st December – speaker to be announced

For further information please contact [I.tuersley@bangor.ac.uk](mailto:I.tuersley@bangor.ac.uk)

## STAFF NEWS...

In March, Professor Rhiannon Tudor Edwards was elected to the Learned Society of Wales. The Learned Society of Wales aims to celebrate and encourage excellence in all of the scholarly disciplines including the professions, industry and commerce, the arts and public service; to promote the advancement of learning and scholarship and the dissemination and application of the results of academic enquiry and research; and to act as an independent source of expert scholarly advice and commentary on matters affecting the wellbeing of Wales and its people.

Congratulations to Giovanna Culeddu of CHEME for gaining her MSc in Research Methods and Statistics from Manchester University.

Congratulations also to Nathan Bray on passing his PhD viva. Nathan undertook PhD research on the economics of wheelchair provision for children living with disabilities.



Dr Nathan Bray enjoying a glass of champagne following his PhD viva

## NEW FUNDING...

### **Health and Care Research Wales funding of the Welsh Health Economics Support Service (WHESS)**

The Welsh Government has awarded WHESS £1.2 million over 3 years to provide health economics support to health and social care researchers across Wales, mainly through the three clinical trials units, and all Wales Research Design and Conduct Service. For Welsh Government funding, WHESS has conservatively achieved a return on investment of over £4 for every £1 invested. WHESS is directed by Professor Rhiannon Tudor Edwards, and represents a collaboration between health economists from Swansea and Bangor Universities. Rhiannon said "Over the last five years, we have made great strides together at an All-Wales level in building a critical mass of health economics research and policy support expertise. Our aim now is to build and sustain this, supporting the next generation of health economists, and contributing to world class health and social care research in Wales. We are here to be mindful that resources are scarce and there is a need, to not only produce evidence on the effectiveness of services, but also their cost-effectiveness"

### **Seizure first Aid training For Epilepsy (SAFE)**

Funded by the NIHR Health Services and Delivery Research (HS&DR) Programme, Professor Dyfrig Hughes is collaborating with researchers at the University of Liverpool to optimise the content, delivery and behaviour change potential of a course aimed at people with epilepsy attending emergency departments, and their informal carers. A pilot RCT will then estimate likely recruitment, consent and follow-up rates for a future definitive trial.

### **Optimising quality of living throughout the course of a progressively disabling neurological condition (Opt- Life)**

Professor Dyfrig Hughes and Professor Carolyn Young (Walton Hospital) were awarded funds by the Motor Neurone Disease Association to conduct a national survey of the quality of life, economic and social impacts of Motor Neurone Disease (MND) on patients and their families. The health economics analysis will determine the trajectory of health outcomes and costs for future economic evaluation of new medicines and interventions in MND.

## RECENT EVENTS...

### **North Wales Medicines Research Symposium**

On the 1st July, delegates from the health service and academic institutions across Wales attended the third NWMRS, hosted by Professor Dyfrig Hughes (pictured below) and funded by Bangor University, Betsi Cadwaladr University Health Board, and the Local Practice Forum of the Royal Pharmaceutical Society. The keynote speaker, Professor Andrew Farmer of the Department of Primary Health Care Sciences at the University of Oxford, presented on 'Medicines non-adherence: managing a complex problem'. He covered the range of approaches been used to improve adherence, and the issues and pitfalls involved.



### **Health Economics for Public Health Practice & Research- Short course**

In March, CHEME offered, for the second year, an Expert Short Course in Public Health Economics, teaching health economics to Public Health practitioners and those undertaking research in Public Health. The course covers concepts, methods and the application of Health Economics to Public Health and attracts delegates both nationally and internationally. ([http://cheme.bangor.ac.uk/short\\_course](http://cheme.bangor.ac.uk/short_course))

### **The Impact of Housing on Health and Well-being Symposium**

A one-day symposium held in CHEME and led by Dr. Joanna Charles in March saw attendees and presenters from a range of backgrounds including research (London School of Economics; Gentoo Green), Health Impact Assessment, councils (Gwynedd Council; Lancaster Council) and organisations such as Public Health Wales, TPAS (Tenant Participation Advisory Service) Cymru plus Care and Repair Cymru. The programme provided a varied day presenting research findings and activities taking place in the community.

### **CHEME lunchtime seminar series**

We have been delighted to welcome speakers from other institutions to our regular seminar series. In March, Professor Darrin Baines from Coventry University gave a thought-provoking presentation on the assessment of cost in health economics in his talk 'Cost, spending and opportunity cost: Key issues in research for health economics?' Dr Louise Longworth from Brunel University came in April to discuss her recent work on cost-effectiveness of non-invasive methods for diagnosis of liver fibrosis in patients with chronic hepatitis C, as alternatives to liver biopsy. In May, Dr Emma Frew from Birmingham University

Continued overleaf...



## Recent Events (continued...)

shared insights into her current research on the cost-effectiveness of interventions being used to prevent childhood obesity. In June, Dr Martin Duerden, Clinical Adviser to the RCGP on Prescribing, presented on 'Polypharmacy and Medicines Optimisation', and our last speaker Professor Mark Bellis, Director of Policy, Research and Development, Public Health in Wales gave an entertaining presentation entitled, 'From Babylon to Bangor - 10,000 years of Drink, Dance and Danger in Nightlife'.

## Presentations

Dr Carys Jones presented 'Social Return on Investment Analysis of an art group for people with dementia' at the NEURODEM conference held at Bangor University in February 2015 and at the Living Well with Dementia through the Arts conference held at Bangor University in April 2015.

Dr Joanna Charles was invited to present a guest seminar by Dr Jane Callaghan, Associate Professor of Psychology, University of Northampton. Dr Charles presentation entitled "I Predict a Riot! The Public Health Economics of Improving Parenting" gave an overview of a health economist's role in early years preventative research.

Dr Catrin Plumptre presented on the 'Cost effectiveness of screening for HLA-A\*31:01 prior to initiation of carbamazepine in epilepsy' at the Personalised Medicine and Resource Allocation Conference in Oxford.

In June, Dr Nathan Bray presented his PhD research on the economics of wheelchair provision for children living with disabilities at the Rehabilitation Engineering and Assistive Technology Society of North America in Denver, Colorado USA.

## Recent Publications

Williams NH, Hawkes C, Din NU, Roberts J, Charles J, Morrison V, Hoare Z, Edwards RT, Andrew G, Alexander S, Lemmey A, Woods B, Sackley C, Logan P, Hunnisett D, Mawdesley K and Wilkinson. Fracture in the Elderly Multidisciplinary Rehabilitation (FEMuR): study protocol for a Phase II randomised feasibility study of a multidisciplinary rehabilitation package following hip fracture. BMC

Pilot and Feasibility Studies. 2015; 1:13 doi:10.1186/s40814-015-0008-0.

Blair J, Gregory JW, Hughes D, Ridyard CH, Gamble C, McKay A, Didi M, Thornborough K, Bedson E, Awoyale L, Cwiklinski E, Peak M. Study protocol for a randomised controlled trial of insulin delivery by continuous subcutaneous infusion compared to multiple daily injections. Trials. 2015 Apr 16; 16(1):163.

Edwardson CL, Harrington DM, Yates T, Bodicoat DH, Khunti K, Gorely T, Sherar LB, Edwards RT, Wright C, Harrington K, Davies MJ. A cluster randomised controlled trial to investigate the effectiveness and cost effectiveness of the Girls Active intervention: a study protocol. BMC Public Health. 2015 Jun 4;15:526.

Lötsch F, Hackenberg LA, Groger M, Rehman K, Morrison V, Holmes E, Parveen S, Plumptre C, Clyne W, de Geest S, Dobbels F, Vrijens B, Kardas P, Hughes D, Ramharter M. Adherence of patients to long-term medication: A cross sectional study of antihypertensive regimens in Austria. Wien Klin Wochenschr. 2015 May;127 (9-10):379-84.

Hughes DA, Wood EM, Tuersley L. NICE recommendations: why no disinvestment recommendations to offset investment decisions? BMJ. 2015 May 19;350:h2656.

Plumptre CO, Brown I, Reuber M, Marson T, Hughes DA. Economic evaluation of a behavior-modifying intervention to enhance antiepileptic drug adherence. Epilepsy Behav. 2015 Apr;45:180-6.

Whitaker R, Hendry M, Booth A, Carter B, Charles J, Craine N, Edwards RT, Lyons M, Noyes J, Pasterfield D, Rycroft-Malone J, Williams N. Intervention Now To Eliminate Repeat Unintended Pregnancy in Teenagers (INTERUPT): a systematic review of intervention effectiveness and cost-effectiveness, qualitative and realist synthesis of implementation factors and user engagement. BMJ Open. 2014 Apr 10;4(4):e004733.

Mountain GA, Hind D, Gossage-Worrall R, Walters SJ, Duncan R, Newbould L, Rex S, Jones C, Bowling A, Cattam M, Cairns A, Cooper C, Edwards RT, Goyder EC. 'Putting Life in Years' (PLINY) telephone friendship groups research study: pilot randomised controlled trial. Trials. 2014 Apr 24;15:141.

Watt H, Harris M, Noyes J, Whitaker R, Hoare Z, Edwards RT, Haines A. Development of a composite outcome score for a complex intervention - measuring the impact of Community Health Workers. Trials. 2015 Mar 21;16:107.

Clare L, Nelis SM, Jones IR, Hindle JV, Thom JM, Nixon JA, Cooney J, Jones CL, Edwards RT, Whitaker CJ. The Agewell trial: a pilot randomised controlled trial of a behaviour change intervention to promote healthy ageing and reduce risk of dementia in later life. BMC Psychiatry. 2015 Feb 19;15:25.

## Vacancies

### Postdoctoral Research Officer

We are seeking a post-doctoral researcher (£31,342 to £37,394 per annum) with quantitative skills to join our team in an important role to contribute to projects involving modelling of the clinical and cost consequences of healthcare interventions with opportunities for methodological research. The post is available immediately and for 18 months; enquiries should be addressed to d.a.hughes@bangor.ac.uk.

### PhD Studentships

Applications are invited for two PhD studentships - both are full-time, 3-year including full support for tuition fees (for UK/EU nationals), plus a stipend.

One is supported by the Motor Neurone Disease Association, through donations including the 'Ice Bucket Challenge', and aims to estimate the costs associated with MND, measure patients' health-related quality of life and develop an economic model for assessing the cost-effectiveness of medical interventions. Enquiries should be addressed to d.a.hughes@bangor.ac.uk.

The second, in collaboration with Public Health Wales and Blackburn with Darwin Local Authority, aims to research the impacts of stressful events during childhood on the health of individuals across the life course. The PhD will use the Adverse Childhood Experiences approach to examining the causes of ill health and anti-social behaviour across the life course in England and Wales. Enquiries should be addressed to m.a.bellis@bangor.ac.uk or r.t.edwards@bangor.ac.uk