

CHEME

Centre for Health
Economics and
Medicines Evaluation



PRIFYSGOL
BANGOR
UNIVERSITY

SUMMER 2013

Welcome to the third newsletter of the Centre for Health Economics and Medicines Evaluation (CHEME)

In this issue, we focus on key achievements and research activities thus far in 2013. Highlights include, completing the All Wales Programme Budgeting and Marginal Analysis of the Ministerial health improvement budget of £17 million, with a clear message to move attention from individual to environmental initiatives.

We contributed to the Mindfulness in Society International Scientific Conference, recognising growing interest in the cost-effectiveness of Mindfulness in health care, work and school settings; and held a successful MRC-funded workshop on the methods of quantitative benefit-risk analysis in HTA. This had international attendance mainly from academia, but with representations from the NHS, the MHRA and the pharmaceutical industry. CHEME also presented evidence to NICE on the methods of value-based pricing and on the methods for appraising highly specialised technologies.

Rhiannon Tudor Edwards & Dyfrig Hughes

CHEME CO-DIRECTORS

INSIDE THIS ISSUE

Upcoming events

Spotlight on research

Staff news

CHEME's newest PhD student

New funding

Recent presentations

Recent publications

Vacancies



UPCOMING EVENTS...

- ⚙️ Dyfrig Hughes will be hosting the North Wales Medicines Research Symposium on the 16th July at the Kinnel Manor Hotel Abergele. This event is in collaboration with the Royal Pharmaceutical Society and the Betsi Cadwaladr University Health Board, where Dyfrig is academic lead for pharmacy & medicines management.
<http://cheme.bangor.ac.uk/documents/2013%20North%20Wales%20Medicines%20Research%20Symposium%20Flyer-4.pdf>
- ⚙️ Rhianon Tudor Edwards and William Hollingworth, University of Bristol are leading a workshop on Public Health Economics at the 4th Annual UKCRC Public Health Research Centres of Excellence (PHRCoE) Conference on the 9th of July 2013 in Cardiff.
<http://www.phrcoeconference2013.com/>
- ⚙️ Welsh Health Economists Group Summer Meeting 11th and 12th of July, St Mellons Hotel, Cardiff.
- ⚙️ Dyfrig Hughes and Colin Ridyard are collaborating with Professor Alastair Gray, Dr Sarah Wordsworth and Helen Dakin (Oxford), and Dr Sian Noble and Dr Joanna Thorn (Bristol) on a MRC Hubs for Trials Methodology Research (HTMR) workshop on creating guidance for costing methodology within clinical trials 10th October in Oxford.
- ⚙️ Huw Lloyd-Williams and Chris Whitaker from the Bangor Trials Unit will be running an internal CHEME workshop in July on sample size and power calculations in trials of public health interventions.

CHEME'S NEWEST PHD STUDENT

CHEME would like to welcome Laura Budd, *(right)* our newest Tenovus funded PhD student. Laura will undertake a PhD exploring the health economics of gynaecological cancer follow up in Wales.



RECOGNITION FOR ACHIEVEMENTS

Four leading health academics at Bangor University including CHEME's co-director Professor Rhiannon Tudor Edwards are among 23 academics across Wales to be appointed as founding Senior Faculty members of Wales' new National Institute for Social Care and Health Research (NISCHR).

CHEME's co-director Professor Dyfrig Hughes has been elected Fellow of The Learned Society of Wales, as a result of the Society's 2013 Election of new Fellows. Three other Bangor University academics were also elected.

NEW FUNDING

- ⚙ Dyfrig Hughes is working in collaboration with Jon Sussex, Professor Nancy Devlin and Sarah Karlsberg Schaffer at the Office of Health Economics, on a new project to ascertain "The opportunity costs of implementing NICE decisions in the NHS in Wales".
- ⚙ Paul Parham submitted a grant application to the NIH on 'Multimodel ensemble approaches to projecting climate change impacts on malaria' in Feb 2013 for \$2,158,503, to include a PhD studentship in CHEME.
- ⚙ CHEME is collaborating with Moorfields Eye Hospital in their recent successful application to the MRC of £1,224,099.20 to research the Clinical Efficacy and Mechanistic Evaluation of Aflibercept for Proliferative Diabetic Retinopathy.
- ⚙ Rhiannon Tudor Edwards was recently successful, as principal investigator of a £59,991 Tenovus funded Studentship application to explore the health economics of gynaecological cancer follow up in Wales.

STAFF NEWS

CHEME would like to wish Warren Linley every success in his new post as Senior Medicines Commissioning Pharmacist for NHS North Lancashire. He was also recently appointed to the NICE technology appraisal committee.

We would like to welcome Dr Martin Duerden, Acting Medical Director for Betsi Cadwaladr University Health Board, who is joining us for 1 day a week, to research on pharmaceutical policy. Martin is also member of the NICE technology appraisal committee, and was formerly chair of the New Medicines Group in Wales. CHEME also wishes to welcome Ann Lawton, who joined our team in April as CHEME's administrator, while Sioned Smith is away on maternity leave.

Congratulations to Joshua Pink who was awarded his PhD in May, to Carys Jones for successfully defending her PhD thesis in her viva examination and to Warren Linley for submitting his PhD thesis.

VACANCIES

We are currently recruiting for a post-doctoral research officer (from £30,424 p.a.), to conduct economic evaluations alongside clinical trials, and act as frontline advisor for the North West Research Design Service. This post offers an excellent opportunity for career development in health economics. The closing date for applications is 26th July. If interested, please contact Dyfrig Hughes in the first instance. Further details available from <http://jobs.bangor.ac.uk/>

(Right) Dyfrig Hughes and Professor Lou Garrison (University of Washington, Seattle) at the MRC-funded workshop on the methods for benefit-risk analysis in drug regulation and health technology assessment.

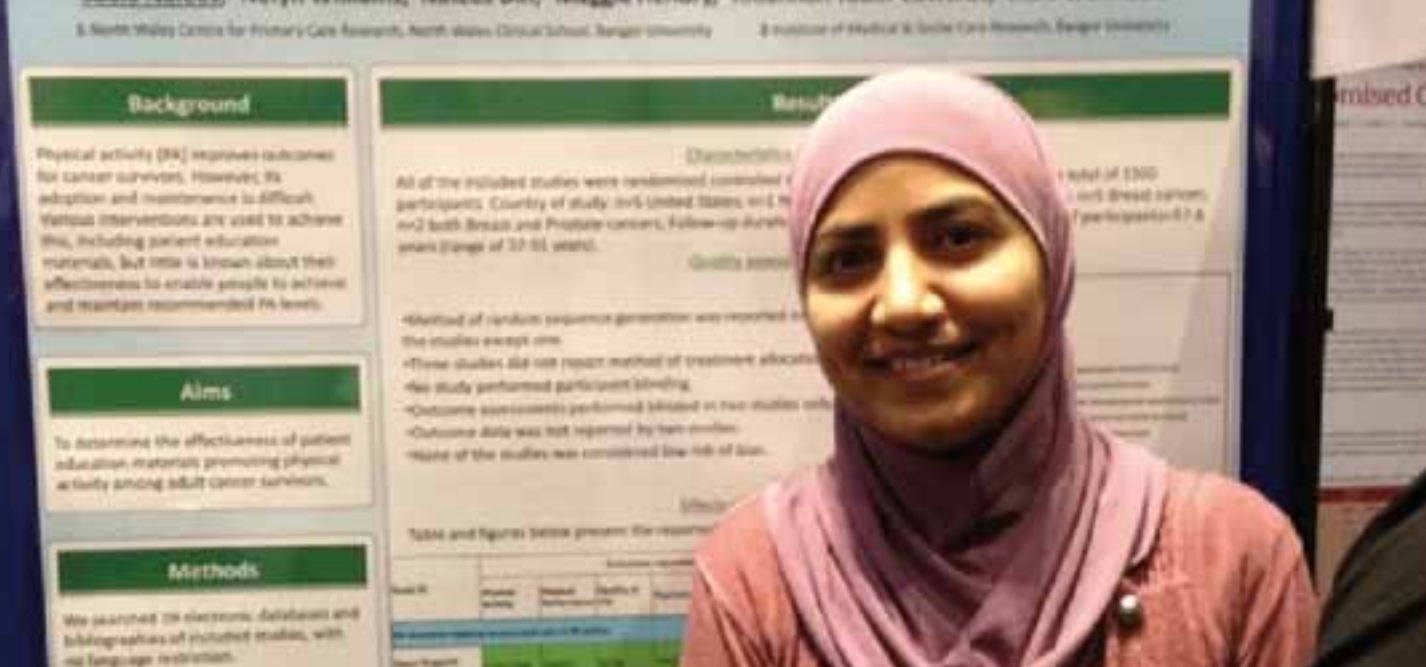




- ✧ Colin Ridyard and Dyfrig Hughes have started analysing the economic data from the CATCH trial (www.catchtrial.org.uk). Currently they are looking at the case report form data and some locally-generated hospital statistics. These will be compared against data to be supplied by the NHS Information Centre and the Paediatric Intensive Care Audit Network (PICANet).
- ✧ Seow Tien Yeo and Rhiannon Tudor Edwards are working on the economic evaluation of two cancer trials; Trismus (<http://www.controlled-trials.com/ISRCTN79084153>) and ELCID (<http://www.cancerresearchuk.org/science/research/who-and-what-we-fund/browse-by-location/bangor/university-of-wales-bangor/grants/richard-neal-12199-el-cid-improved-lung-cancer-identification>). Both these trials are now open to recruitment.
- ✧ Paul Parham and Dyfrig Hughes are currently working on the BASICS clinical trial, which is examining the impact of different types of catheters that may be used as ventriculoperitoneal shunts to treat hydrocephalus. The trial is currently in the very early stages and patient recruitment will shortly be underway.
- ✧ Rhiannon Tudor Edwards and Nathan Bray are collaborating with Gentoo (a housing group who aim to improve the lives of their residents by improving the energy efficiency of their homes) based in Sunderland. Rhiannon, Nathan and Gentoo are working in conjunction with Nottingham City Council to assess the health benefits of improved heating efficiency measures in housing.
- ✧ CHEME is supporting the Centre for Mindfulness Based Research and Practice, Bangor University in evaluating the cost-effectiveness of mindfulness to promote resilience in schools (<http://www.bangor.ac.uk/mindfulness/education.php.en>).
- ✧ Ned Hartfiel has undertaken a pilot trial of yoga based back care for NHS staff, funded by NISCHR as part of his PhD.
- ✧ Jo Charles is assisting in the literature screening and data extraction of a realist review in order to inform the development of a new a multidisciplinary rehabilitation package following hip fracture as part of the FEMuR (<http://www.hta.ac.uk/2933>) Trial, funded by the HTA.
- ✧ Dalia Dawoud is health economist for the HTA/AR-UK funded SYCAMORE (www.sycamoretrial.org.uk) trial, which is a randomised controlled trial of the clinical and cost effectiveness of adalimumab for the treatment of juvenile idiopathic arthritis associated uveitis.

SPOTLIGHT ON RESEARCH...

- ⚙ Nathan Bray and Rhiannon Tudor Edwards are conducting a mixed methods systematic review of the health and fitness of children with mobility impairments, as part of the Well MI (<http://wellmi.bangor.ac.uk/>) trial, funded by NISCHR.
- ⚙ Colin Ridyard manages the Database of Instruments for Research Use Measurement (www.DIRUM.org), which now catalogues 63 resource use measures, and has a listing of related methodological papers.
- ⚙ Carys Jones is working on a number of projects involving older people and dementia care; Challenge ResCare (<http://www.challengedemcare.com/documents/ChallengeResCareAbstract.pdf>), an NIHR funded trial of a web-based tool to help care home staff manage challenging behaviour in residents with dementia, will be presented at the forthcoming NHESG meeting in Oslo, August 2013. AGEWELL (<http://www.controlled-trials.com/ISRCTN30080637>), a study to promote wellbeing in older people, funded by the MRC is on-going. SMART, a study to promote self-management in people with dementia, funded by NISCHR and Move to Exercise (<https://healthcarestudies.cf.ac.uk/ActiveHD/current-research/move-to-exercise/>), an exercise study for people with Huntington's disease, funded by the NIHR are both in the trial development stage.
- ⚙ Emily Fargher, Catrin Plumpton and Dyfrig Hughes lead CHEME's interests in epilepsy. Current projects, in collaboration with the University of Liverpool, include a DCE of patient preferences for antiepileptic drugs, the HTA-funded SANAD II trial, which is comparing newer treatments for epilepsy (www.sanad2.org.uk), and economic analyses of a pharmacogenetic test to prevent adverse reactions to carbamazepine, and of interventions to enhance adherence to antiepileptic drugs.
- ⚙ Dyfrig Hughes provides strategic advice and operational input to the assessment and appraisal functions of the All Wales Medicines Strategy Group.
- ⚙ Nathan Bray is working on an economic evaluation of portable Electronic Vision Enhancement System (p-EVEs) devices and conventional optical low vision aids (LVAs) for near tasks (<http://clinicaltrials.gov/show/NCT01701700>), funded by the NIHR. This study is now open to recruitment.
- ⚙ Part-time PhD student Mike Palmer, supervised by Dyfrig Hughes and Dr Anu Jacob at the Walton Centre, is undertaking an economic evaluation and cost of illness study for neuromyelitis optica as part of his work on the economics of rare diseases.
- ⚙ Huw Lloyd-Williams is working on an economic analysis of a trial assessing the use of FDG-PET or PET/CT in the diagnosis of pancreatic malignancy (<http://www.hta.ac.uk/2065>), funded by the HTA. Huw is also involved, in his capacity as methodologist, with the LEAP alcohol Relapse project led by Professor Miles Cox, Bangor University and funded by the NIHR PHR.
- ⚙ Jo Charles is assisting in the literature screening and data extraction of a mixed methods systematic review as part of the Intervention Now To Eliminate Repeat Unintended Pregnancy in Teenagers (INTERUPT) project team (<http://www.hta.ac.uk/2976>), funded by the HTA.
- ⚙ Dyfrig Hughes is co-chair of a newly-formed working group on Rare Diseases for the International Society for Pharmacoeconomics and Outcomes Research.
- ⚙ Paul Parham is currently working on developing methods for economic evaluation using multi-model comparisons and ensemble predictions to support decision-making. Most of the research at the moment is focusing on comparing the predictions of ensembles of Markov models with different structural assumptions (but with time-independent health state transition probabilities) and a package in R is also being developed to support this.
- ⚙ Rhiannon Tudor Edwards and Jo Charles continue to provide health economics support to Public Health Wales. Following a successful programme budgeting and marginal analysis (PBMA) exercise conducted November 2012. Rhiannon and Jo are now working with Public Health Wales to develop a report of current population health in Wales and how investing in prevention could create sustainability in conjunction with improving health.
- ⚙ Paul Parham's Royal Society proposal was accepted in June 2013, he will be Guest Editor of a forthcoming Theme Issue of Philosophical Transactions of the Royal Society B on 'Climate change and vector-borne diseases of humans' (will consist of 12 papers from leading groups around the world working on effects of climate change on different VBDs; writing underway and volume should be published around summer 2014) (<http://rstb.royalsocietypublishing.org/site/misc/guest-editors.xhtml>).
- ⚙ Lucy Bryning has undertaken a pilot trial of Mindfulness Based Cognitive Therapy for Cancer (MBCT-Ca), funded by Tenovus as part of her PhD. Recruitment for the trial is on-going until early 2014.
- ⚙ Carys Jones is currently writing up the results of two completed trials involving older people; FIRE (<http://www.firestudy.org/>), an EU FP7 funded study into facilitation in a care home setting and PLINY (<http://www.controlled-trials.com/ISRCTN28645428>), a trial of a telephone befriending scheme.



RECENT PRESENTATIONS...

(Above) PhD student Sadia Nafees at the British Psychosocial Oncology Society conference, held in Southampton.

- ☀ Rhiannon Tudor Edwards, Huw Lloyd-Williams and Jo Charles collaborated with Emma McIntosh, Neil Craig, William Hollingworth, Kenny Lawson and Cam Donaldson to present "Health Economics and Population Health: Emerging Methodological and Policy Issues for the Health Economics Community" at the Summer HESG meeting, Warwick, June 2013.
- ☀ Rhiannon Tudor Edwards gave a Keynote presentation to the Welsh Intensive Care Society, Portmerion, June 2013.
- ☀ A DIRUM poster was showcased at the annual 1-day meeting of the Vancouver Health Economics Methodology (Van-HEM) group at the Vancouver Creekside Community Centre Olympic Village, Canada, June 2013.
- ☀ Emily Fargher presented "Patient preferences and priorities for treatment options and outcomes in epilepsy" at the United Kingdom Epilepsy Research Network, Birmingham, June 2013.
- ☀ Catrin Plumton presented "Cost effectiveness model of adherence enhancing interventions for epilepsy", at the United Kingdom Epilepsy Research Network, Birmingham, June 2013.
- ☀ Paul Parham organised meeting on "Mosquito Population Modelling" and presented on 'Mathematical modelling of mosquito population dynamics' at Imperial College London, June 2013.
- ☀ Dyfrig Hughes was keynote speaker, giving the opening presentation to over 500 participants of the Population Approach Group in Europe (PAGE) conference, on "Quantitative benefit-risk analysis based on linked PKPD and health outcome modelling", Glasgow, June 2013.
- ☀ Ned Hartfiel presented "Yoga research for reducing back pain", at the Holistic Health Exhibition at the NEC Birmingham, May 2013.
- ☀ Paul Parham presented "Multimodel insights into the optimal temperature regime for malaria transmission", at the British Society for Parasitology Spring Meeting, Bristol, April 2013.
- ☀ Dyfrig Hughes was invited speaker at British Society for Haematology Annual Scientific Meeting, "Newly licensed cancer therapies into clinical practice" Liverpool, April 2013.
- ☀ Rhiannon Tudor Edwards and Lucy Bryning lead a workshop on "Economic Evaluations of Mindfulness Based Interventions" at the Mindfulness in Society International Scientific Conference, Chester, March 2013.
- ☀ Ned Hartfiel presented "Yoga research for reducing back pain", at the Back Pain Exhibition at the London Olympia, February 2013.
- ☀ Dyfrig Hughes chaired a session on Health Economics at the MRC Network of Hubs for Trials Methodology Research Annual Meeting, Oxford, February 2013.
- ☀ Nathan Bray presented "Antipsychotic and Benzodiazepine Prescribing Prevalence and Costs in People with Dementia and Challenging Behaviours, Living in Care Homes" at the Eleventh Workshop on Costs and Assessment in Psychiatry, Venice, March 2013.
- ☀ PhD Student Sadia Nafees presented "Effectiveness and cost-effectiveness of potential education materials about physical activity among adult cancer survivors: systematic review" at the British Psychosocial Oncology Society conference, Southampton, January 2013.



(Left) Ned Hartfiel presenting at the Holistic Health Exhibition at the NEC Birmingham.

(Right) Paul Parham outside Bristol Cathedral at the British Society for Parasitology Spring Meeting.



(Left) Left to right; Chris Ruane, MP (www.chrisruane.org), Rebecca Crane, Director of the Centre for Mindfulness Research and Practice, Bangor University, Darren Millar, AM (www.darrenmillaram.com), Jon Kabat-Zinn, Director of the Stress Reduction Clinic and the Centre for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School, Prof Mark Williams, Director of the Oxford Mindfulness Centre, University of Oxford, Rhiannon Tudor Edwards at the Mindfulness in Society International Scientific Conference held in Chester.



(Below) Nathan Bray at the Eleventh Workshop on Costs and Assessment in Psychiatry Conference in Venice

RECENT PUBLICATIONS...

- ☀ Sabry, N., Farid, S., Dawoud, D. Antibiotic Dispensing in Egyptian Community Pharmacies: An Observational Study. *Research in Social and Administrative Pharmacy*. 2013, doi:10.1016/j.sapharm.2013.03.004
- ☀ Slater HC, Gambhir M, Parham PE, Michael E. Modelling Co-Infection with Malaria and Lymphatic Filariasis. *PLoS Comput Biol*. 2013, 9(6): e1003096. doi:10.1371/journal.pcbi.1003096
- ☀ Noyes J, Edwards RT, Hastings RP, Hain R, Totsika V, Bennett V, Hobson L, Davies GR, Humphreys C, Devins M, Spencer LH, Lewis M. Evidence-based planning and costing palliative care services for children: novel multi-method epidemiological and economic exemplar. *BMC Palliative Care*. 2013, 12:18.
- ☀ Dawoud D. Lack of Transparency needs to change. *Pharmaceutical Journal*. 2013, 290:200.
- ☀ Thorn JC, Coast J, Cohen D, Hollingworth W, Knapp M, Noble SM, Ridyard C, Wordsworth S, Hughes D. Resource-use measurement based on patient recall: issues and challenges for economic evaluation. *Appl Health Econ Health Policy*. 2013, 11(3):155-61.
- ☀ Demonceau J, Ruppert T, Kristanto P, Hughes DA, Fargher E, Kardas P, De Geest S, Dobbels F, Lewek P, Urquhart J, Vrijens B; ABC project team. Identification and assessment of adherence-enhancing interventions in studies assessing medication adherence through electronically compiled drug dosing histories: a systematic literature review and meta-analysis. *Drugs*. 2013, 73(6):545-62.
- ☀ Thomson CE, Beggs I, Martin DJ, McCaldin D, Edwards RT, Russell D, Yeo ST, Russell IT, Gibson JNA. Methylprednisolone injections for the treatment of Morton Neuroma: A patient-blinded randomized trial. *The Journal of Bone & Joint Surgery*. 2013, 95(9):790-79.
- ☀ Linley WG, Hughes DA. Decision-makers' preferences for approving new medicines in wales: a discrete-choice experiment with assessment of external validity. *Pharmacoeconomics*. 2013, 31(4):345-55.
- ☀ Pink J, Pirmohamed M, Hughes DA. Comparative Effectiveness of Dabigatran, Rivaroxaban, Apixaban, and Warfarin in the Management of Patients With Nonvalvular Atrial Fibrillation. *Clin Pharmacol Ther*. 2013, doi: 10.1038/clpt.2013.83.

More information on research, teaching and NHS support activities is available from our website:

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