



Canolfan Economeg Iechyd a Gwerthuso Meddyginiaethau

CHEME

Centre for Health Economics and Medicines Evaluation



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SUMMER 2016

Welcome to the Summer 2016 newsletter of the Centre for Health Economics and Medicines Evaluation (CHEME)

In this issue, we focus on recent achievements and research activities at CHEME over the last six months. Highlights include: Final report of the NIHR HTA-funded trial of PET/CT in the diagnosis and management of suspected pancreatic cancer (PET-PANC), Lancet paper reporting the results of the CATCH trial of impregnated central venous catheters for prevention of bloodstream infection in children, the short course on Health Economics for Public Health Practice & Research, and activities relating to the appraisal of new medicines in Wales.

More information on research, teaching and NHS support activities is available from our website: cheme.bangor.ac.uk or contact our administrator Ann Lawton: cheme@bangor.ac.uk
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Professor Dyfrig Hughes & Professor Rhiannon Tudor Edwards

CHEME co-directors

INSIDE THIS ISSUE...

- Spotlight on research
- Upcoming events
- Staff news
- Recent Events
- Recent publications



Rhiannon Tudor Edwards presenting at the 2 day short course—Health Economics for Public Health Practice and Research in March 2016

Spotlight on research...

Diagnosing Pancreatic Cancer (The HTA PET-PANC Study)

Catrin Plumptre, Huw Lloyd-Williams, Seow Tien Yeo and Rhiannon Tudor Edwards have completed the economic modelling of the NIHR-HTA funded PET-PANC study.

Pancreatic cancer diagnosis and staging can be difficult in 10-20% of patients. PET/CT adds precise anatomical localization to functional data. PET-PANC followed up 589 patients across 18 UK centres. In PET-PANC patients underwent FDG PET/CT following multi-detector CT. Diagnosis, staging and planned management were recorded before and after FDG PET/CT.

Using Mindfulness for Anger and Aggressive behaviour - with people with Learning Disabilities (UMAA-LD)

Lucy Bryning and Rhiannon Tudor Edwards are collaborating with colleagues at Bangor University, Betsi Cadwaladr University Health Board and University of Warwick, on a Health and Care Research Wales funded pilot study, the "Soles of the Feet Mindfulness" intervention, in a sample of 20 adults with learning disabilities and difficulty with anger control. Mindfulness is a meditation technique where individuals learn to bring their attention back to the present moment. The Soles of the Feet intervention is a one-to-one therapy, which involves teaching the individual to direct their attention to a neutral part of the body (the soles of the feet) in order to help them be able to self-manage anger and eliminate aggressive behaviours. The main objective of the project is to assess feasibility of the intervention, appropriateness of outcome measures and to inform the protocol for a future trial.

Assessment of new medicines for the AWMSG

For over 12 years, Dyfrig Hughes and colleagues at CHEME have provided health economics support to the All Wales Therapeutics and Toxicology Centre, the secretariat of the All Wales Medicines Strategy Group (AWMSG). This has involved providing strategic leadership and training sessions to decision makers, writing assessment reports (for over 200 medicines) and membership of the appraisal committees. Currently, Eifiona Wood and Emily Holmes are editors for the health economics section of the assessment reports, and Dyfrig Hughes is health economist member of the AWMSG. <http://www.awmsg.org>

Upcoming events...

North Wales Medicines Research Symposium

Dyfrig Hughes will host the 2016 North Wales Medicines Research Symposium on July 11th. This annual event is sponsored by the Royal Pharmaceutical Society, BCUHB, Health and Care Research Wales and Bangor University. This year's keynote speaker is clinical pharmacologist Professor Robin Ferner from the University of Birmingham. <http://cheme.bangor.ac.uk/nwmrs>

CHEME lunchtime seminars

In spring 2016, we have been delighted to welcome speakers from near and far. Podcasts of audio and slides for some seminars are available on our website.

In March, Professor Jo Coast from Bristol University shared her experiences of qualitative methods in health economic research, with a focus on her work in end of life care. Dr Chris Johnson, from Public Health Wales presented work investigating the potential impact of BCUHB's digital dictation initiative in April. Professor Michael Shields of Monash University, Melbourne, came back to his roots in North Wales to present on "Health in a recession: evidence from the UK". Rebecca Worboys described her role as a health economist in Public Health England and, from the London School of Hygiene and Tropical Medicine, Professor Richard Smith presented on "It's the economy, stupid!: 'whole economy' modelling of health (care)", and Dr Manuel Gomes presented on appropriate methods for the analysis of missing data in health economic evaluation of RCTs.

Upcoming speakers include:

- July 5th - Professor Sarah Byford, Kings College London
- September 6th – Professor Alex Anstey, Consultant Dermatologist, BCUHB
- October 4th – Professor Colin Green, University of Exeter
- November 1st – Professor Katherine Payne, University of Manchester
- December 6th – Professor Richard Bentall, University of Liverpool

Staff News...

Rhiannon Tudor Edwards and Nathan Bray were invited to meet with Baroness Jane Campbell of Surbiton at the House of Lords to discuss measurement of health related quality of life in people who use assistive mobility technology.



Rhiannon Tudor Edwards, Guy L'Etang, (Baroness Campbell's researcher) Nathan Bray and Baroness Jane Campbell outside the Houses of Lords

Dyfrig Hughes has been appointed health economist member to the All Wales Medicines Strategy Group, and also to the Welsh Government-led taskforce on Genomics. The taskforce is chaired by Dr Andrew Goodall, Chief Executive NHS Wales, and will support the development of a strategy focussing on the platforms and advances needed in genomics to underpin precision medicine. Specifically, these will relate to clinical and laboratory genetics services, research and innovation, strategic partnerships and the NHS workforce.

Both Rhiannon and Dyfrig were appointed as Health and Care Research Wales Senior Research Leaders. They will act as ambassadors for HCRW and play a leading role in raising the profile of health and social care research in Wales on a national and international level.

Recent Events

Clinical Pharmacology Colloquium

Dyfrig Hughes hosted the Clinical Pharmacology Colloquium in May. This biannual meeting is sponsored by the British Pharmacological Society and brings together academics and clinicians to present research related to clinical pharmacology and therapeutics.

This year's meeting saw presentations by Dyfrig Hughes on economically favourable drug-interactions, Mark Pucci (Birmingham) on adverse reactions to the 'legal high' synthetic cannabinoid NM-2201, Robin Ferner (Birmingham) on post-mortem sampling from bile, Jeff Aronson (Oxford) on how spelling errors in drug names impacts on systematic review searches, Phil Routledge (Cardiff) on medication safety, Rachel Bryan (Swansea) on problems caused by similar sounding drug names, and Emily Holmes on patient preferences for outcomes in anti-epileptic drug trials.

2 Day Short Course—Health Economics for Public Health Practice and Research

For the third year running, we ran the Health Economics for Public Health Practice and Research course at the Management Centre, Bangor University. Attended by international delegates, delegates from Public Health England, University of York and Public Health Wales. The short course covered: Challenges of applying methods of economic evaluation to public health settings; Economic modelling of public health interventions; Social Return on Investment (SROI) with a housing example; and Priority setting in Public Health Spending using Programme Budgeting and Marginal Analysis (PBMA).

For more information on next year's event: <http://cheme.bangor.ac.uk/health-economics-course-16>



Colin Ridyard, Dyfrig Hughes, and Lorna Tuersley contributed to a workshop on Health Economics Analysis Plans (HEAP) in Bristol. Attended by over 50 health economists, this MRC-funded workshop aimed to open a dialogue and initiate the development of a HEAP template for use in clinical trials. Dyfrig Hughes presented on the trials and tribulations of HEAPs in the context of two recently completed RCTs.

School of Healthcare Sciences Postgraduate Research Day

On the 18th May 2016 CHEME PhD students and supervisors attended the School of Healthcare Sciences Postgraduate Research day. Congratulations to PhD student Siobhan Bourke, who was awarded the poster prize for research on public preferences for funding of orphan drugs. Siobhan also co-presented a session with PhD student Eira Winrow, promoting postgraduate student networking and writing initiatives.



Siobhan and her winning poster

Festival of Behaviour Change

CHEME had a stand promoting the broad range of behaviour change research conducted within the Centre at the Festival of Behaviour Change, held in Bangor in May. Emily Holmes delivered a workshop on understanding adherence to medication on the Future of Healthcare day, attended by patients, clinicians and researchers.

CHEME has a broad behaviour research portfolio that ranges from systematic reviews of theoretical frameworks to explain behaviour, to cost-effectiveness analysis of behaviour change interventions; relating to prescribing and more generally in public health.



Emily Holmes at the Behaviour change festival

Presentations

Seow Tien Yeo gave a poster presentation on the 'The health economics of EUS staging in patients with gastro-oesophageal cancer (GOC) and current clinical practice in Wales' at this year's combined Welsh Association for Gastroenterology and Endoscopy (WAGE) and Association of Upper GI Surgeons of Great Britain and Ireland (AUGIS) Welsh Chapter Upper GI Symposium at Cardiff



Seow Tien Yeo presenting her poster

Dyfrig Hughes presented on the cost-effectiveness of preventing medication errors at the Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Sicily. This retreat provides a wonderful forum for learning and scientific debate. <http://tinyurl.com/Erice2016>

In May, Dyfrig presented on uncertainty and reimbursement issues with accelerated release of drugs at the World Health Organization Pharmacovigilance Monitoring Centre, Uppsala, Sweden.



Rhiannon Tudor Edwards presented a CHE Seminar at York University entitled "Assets and Actions – Exploring the Economic Case for Investment in Early Years in Wales" March 2016.

Rhiannon Tudor Edwards delivered a TED Talk entitled "Promoting Resilience through Sight Loss: the view from Inside my head". <https://www.youtube.com/watch?v=7sv3pj5vfkA>

Emily Holmes presented work on patient preferences for antiepileptic drugs at the British Pharmacological Society's Clinical Pharmacology Colloquium, held at Bangor in May.

Dyfrig Hughes presented on medication adherence at Cardiff University's School of Pharmacy and Pharmaceutical Sciences.

Recent Publications

Hughes D, Charles J, Dawoud D, Edwards RT, Holmes E, Jones C, Parham P, Plumpton C, Ridyard C, Lloyd-Williams H, Wood E, Yeo ST. Conducting Economic Evaluations Alongside Randomised Trials: Current Methodological Issues and Novel Approaches. *PharmacoEconomics*. 2016. DOI: 10.1007/s40273-015-0371-y

Plumpton CO, Morris T, Hughes D, White I. Multiple imputation of multiple multi-item scales when a full imputation model is infeasible. *BMC Research Notes*. 2016; 9:45

Gilbert RE, Mok Q, Dwan K, Harron K, Moitt T, Millar M, Ramnarayan P, Tibby SM, Hughes D, Gamble C; CATCH trial investigators. Impregnated central venous catheters for prevention of bloodstream infection in children (the CATCH trial): a randomised controlled trial. *Lancet*. 2016 Apr 23;387 (10029):1732-42

Hindle JV, Watermeyer TJ, Roberts J, Martyr A, Lloyd-Williams H, Brand A, Clare L. Cognitive rehabilitation for Parkinson's disease dementia: a study protocol for a pilot randomised controlled trial. *Trials*, 2016; 17(1), 1

Clarkson S, Axford N, Berry V, Edwards TE, Bjornstad G, Wrigley Z, Charles J, Hoare Z, Ukoumunne OC, Matthews J and Hutchings J. Effectiveness and micro-costing of the KiVa school-based bullying prevention programme in Wales: study protocol for a pragmatic definitive parallel group cluster randomised controlled trial. *BMC Public Health* 2016; 16:104. DOI 10.1186/s12889-016-2746-1

Charles J, Rycroft-Malone J, Aslam R, Hendry M, Pasterfield D. An embedded realist review of what works, for whom, how, and in what circumstances to reduce repeat pregnancies in adolescence: a systematic mixed-methods review. *The Lancet*, November 2015 Volume: 386: S28

Plumpton CO, Roberts D, Pirmohamed M, Hughes DA. A Systematic Review of Economic Evaluations of Pharmacogenetic Testing for Prevention of Adverse Drug Reactions 2016. doi: 10.1007/s40273-016-0397-9

Holmes EA, Morrison VL, Hughes DA. What influences persistence with medicines? A multinational discrete choice experiment of 2549 patients. *British Journal of Clinical Pharmacology*. 2016 doi: 10.1111/bcp.12971

Breckenridge A, Hughes D. Prof. John Urquhart. *Br J Clin Pharmacol*. 2016 May 2. doi: 10.1111/bcp.12974.

Members of the medication adherence research group within CHEME were sad to hear of John Urquhart's passing earlier this year. John was the leading figure in the area of medication adherence, and was hugely influential in how we now understand and recognise what patients do with their prescribed medicines.



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