



Canolfan Economeg Iechyd a Gwerthuso Meddyginiaethau

CHEME

Centre for Health Economics and Medicines Evaluation



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WINTER 2016/17

INSIDE THIS ISSUE...

Welcome to the Winter 2016-17 newsletter of the Centre for Health Economics and Medicines Evaluation

In this issue, we focus on recent achievements and research activities at CHEME. Highlights include:

- An analysis of pharmaceutical companies, which showed that, compared to control companies matched by size, country, and R&D investment, companies which market nearly 200 orphan drugs are on average five times more profitable and have a 10%-15% higher market value.
- The Early Years report, which highlights evidence that the foundations for thriving are laid down long before birth, with a critical time for investment occurring pre-conception and in early pregnancy. It concludes that by investing in the health and well-being of babies and young children, Wales has an opportunity to benefit from both short and long-term dividends right across society in the future.

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 Rhianon Tudor Edwards & Professor Dyfrig Hughes

CHEME Co-Directors

Spotlight on research
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**Transforming Young
Lives across Wales:
The Economic Argument
for Investing in Early Years
Summary Report**



Professor Rhianon Tudor Edwards
Lucy Brynning
Huw Lloyd-Williams

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Spotlight on research...

Early Years Report: Transforming Young Lives – The Economic Argument for Investing in Early Years

Launched on the 13th October 2016 at the Health and Care Research Wales conference in Cardiff, this report highlights evidence that the foundations for thriving are laid down long before birth, with a critical time for investment occurring pre-conception and in early pregnancy. Wales already has a significant policy direction and investment in programmes and practice relating to Early Years. To build on this, the report considers the economic evidence to support investment in services and programmes targeted at children under 7 years and concludes that by investing in the health and well-being of babies and young children, Wales has an opportunity to achieve returns to the economy which are similar to returns from large transport projects.

<http://cheme.bangor.ac.uk/reportspublications.php.en>

(Lucy Bryning, Rhiannon T Edwards and Huw Lloyd Williams—Early Years Report authors)



Profitability of Orphan drug companies

Almost a third of drugs for rare diseases now exceed \$1bn in annual sales. The global orphan drugs market is expected to reach \$176bn by 2020, and account for 19% of total branded prescription drug sales. This has led to concerns that the high cost of orphan drugs and the generosity of the incentives for orphan drug development, has led to increased company profits. Analysis carried out by Dyfrig Hughes, of companies which market nearly 200 orphan drugs show that, compared to control companies matched by size, country, and R&D investment, those which market orphan drugs are five times more profitable and have a 10%-15% higher market value. Moreover, their profits have been increasing by 11% for each additional orphan drug produced. This suggests that policies directed towards incentivising orphan drug development have worked to the extent that companies are profiting excessively.

PLoS ONE 11(10): e0164681. <http://tinyurl.com/OrphanProfit>

PhD Studentships

Alan Moore is undertaking a PhD studying the economics of Motor Neurone Disease. Funded by the Motor Neurone Disease Association, this research involves analysis of the TONIC (Trajectories of Outcome in Neurological Conditions) longitudinal cohort study to determine the relationship between preference-based and disease-specific measures of outcome, as well as the assessment of the cost-effectiveness of new interventions. His first publication, a critique of the existing economic literature in MND was recently published in *PharmacoEconomics* (DOI: [10.1007/s40273-016-0478-9](https://doi.org/10.1007/s40273-016-0478-9)).

Huw Lloyd-Williams, funded by Public Health Wales, is undertaking a PhD on the economics of Adverse Childhood Experiences (ACEs). This is a relatively new approach to defining and dealing with child maltreatment and much is known on the effects ACEs have on life course health but there are significant gaps in the knowledge on the costs of ACEs to society. This PhD will seek to take a novel approach to measuring the costs associated with ACEs by interrogating large datasets and calculating the attribution of particular ACEs to the burden of disease and applying relevant costs.

Upcoming events...

CHEME lunchtime seminars

In summer and autumn of 2016, we have been delighted to welcome speakers from near and far. Professor Sarah Byford from Kings College London held a seminar examining the effectiveness and cost-effectiveness of mindfulness based cognitive therapy (MBCT). Professor Alex Anstey, a Consultant Dermatologist from Betsi Cadwaladr University Health Board, presented on new treatments for psoriasis and whole system change. Professor Colin Green from the University of Exeter presented his work on predicting the progression of Alzheimer's disease dementia using a multi domain health policy model. And Dr Colin Ridyard from CHEME held a workshop on use of Hospital Episode Statistics (HES) data.

Confirmed upcoming speakers include:

7 Feb 2017—Dr Nicky Welton, University of Bristol

7 Mar 2017—Professor Katherine Payne, Manchester

2 May 2017—Professor Alan Finnegan, Chester

1 Aug 2017—Dr Chris Gibbons, University of Cambridge

Recent Events

ESPACOMP, 17-19th November 2016.

Dyfrig Hughes chaired the organising committee of this year's 20th annual meeting of the European Society of Patient Adherence, Compliance and Persistence, and presented research completed with Emily Holmes on "Understanding medication adherence: application of health psychology and behavioural economic theories".



(Dyfrig Hughes at ESPACOMP)

Staff News...

Welsh Health Economists Group Meeting (WHEG)

Health economists from Bangor and Swansea met for their annual WHEG meeting in Cardiff in October. The keynote speaker was Jonathan Price, Chief Economist for the Welsh Government.



Health and Care Research Wales

Members of CHEME are taking part in the pilot mentoring scheme, which pairs Senior Research Leaders with PhD students and staff across Wales. The programme is committed to building capacity and developing future leaders in health and social care research in Wales. Acknowledging that the pathway for researchers in health and social care is not always straight forward, the aim of the scheme is to help early career researchers to navigate it. In the first year of the scheme Rhiannon Tudor Edwards is a mentor and Nathan Bray, Carys Jones and Eira Winrow are mentees.

Advising Welsh Government

Rhiannon Tudor Edwards was invited to the Senedd by the Welsh Government to review the 2017/18 Health, Social Care and Sport budget.



(Rhiannon at the Senedd)

Building international links

Rhiannon visited NUI Galway to discuss a joint meeting, extending an invitation to health economists working in Ireland to attend and contribute to the Welsh Health Economists meeting, Autumn 2017

Dyfrig Hughes is part of an international collaboration of researchers developing the EMERGE guidelines (ESPACOMP Medication Adherence Reporting Guidelines). These guidelines, which are intended to be part of the EQUATOR network, aim to improve the reporting of studies concerned with medication adherence. The final version was agreed at the 2016 ESPACOMP conference.



(The EMERGE group, which met in Husafell, Iceland)

Fellowship

In September 2016 Nathan Bray started his Health and Care Research Wales Fellowship. Nathan aims to develop a novel, preference-based approach to measuring the health-related quality of life of people with mobility impairments (Study acronym: MobQoL).

Congratulations

Congratulations to Emily Holmes who successfully defended her PhD thesis "Understanding medication adherence: application of health psychology and behavioural economic theories" on 16th June 2016. Emily Holmes has been short-listed for the Bangor University Doctoral Project Research Excellence Award.

Health and Care Research Wales Conference

Rhiannon Tudor Edwards, Carys Jones and Eira Winrow all attended the Health and Care Research Wales conference in Cardiff, representing WHESS and CHEME. It was a fantastic day bringing together research from across Wales with a focus on impact and engagement.



(Rhiannon at the event)

New funding

Dyfrig Hughes is co-investigator on the NIHR PGfAR on supporting people with type 2 diabetes in effective use of their medicine through a system comprising mobile health technology integrated with clinical care (SuMMIT-D). Led by Professor Andrew Farmer of Oxford, this £2.6m programme aims to improve medication adherence using personalised text messaging.



In partnership with Salford University, Otovio AS and Innokas Medical, Rhiannon Tudor Edwards and Nathan Bray have been awarded funding by the Horizon 2020 Fast Track to Innovation pilot scheme for a project examining the clinical and cost-effectiveness of a novel treatment for severe peripheral arterial disease (Study acronym: FlowOx).

Carys Jones is principal investigator on the recently funded Health & Care Research Wales Social Care Research Award to evaluate the Health Precinct in Conwy, North Wales. This is a joint health and social care initiative which supports people to self-manage chronic conditions in a community setting. The 2-year study will use an implementation framework to identify what works about the Health Precinct, for whom, why and in what circumstances. A social return on investment analysis is planned.

New funding—continued

Emily Holmes and Dyfrig Hughes, together with colleagues at Betsi Cadwaladr University Health Board, have been awarded funding by the P2P scheme, to evaluate the cost effectiveness of the use of C reactive protein point of care tests in primary care. An initial pilot study has confirmed the potential for this NICE-approved test to reduce unnecessary antibiotic prescribing. The current project will provide more definitive evidence of effectiveness and implementation in routine practice.

Presentations

In October, Carys Jones presented on the Dementia and Imagination study at the Alzheimer Europe conference, held in Copenhagen, Denmark. Carys also presented an overview of the new Health Precinct evaluation at the CADR conference, held in Cardiff.



(Carys giving a presentation)

CHEME provides health economics support to the All Wales Therapeutics and Toxicology Centre, the secretariat of the All Wales Medicines Strategy Group (AWMSG). Dyfrig Hughes & Emily Holmes presented at and facilitated a training day for Health Economists involved in assessing pharmaceutical industry submissions to the AWMSG for appraisal, and contributed to the AWMSG Masterclass for the pharmaceutical industry.

Emily Holmes and Catrin Plumpton participated in a workshop on adherence organised by the Arthritis Research UK Adult Inflammatory Arthritis Clinical Study Group in Manchester. Emily presented an overview of Medication Adherence Research at CHEME.

Dyfrig Hughes presented on the health economics of stratified medicine at an MRC workshop at the University of Manchester in September and at the Academy of Medical Sciences in London.

Emily Holmes presented work on "Patients' preferences for anti-epileptic drugs (AEDs)" in the plenary session of The International League Against Epilepsy conference in Dublin.

Recent Publications

Nollett CL, Bray N, Bunce C, Casten RJ, Edwards RT, Hegel MT, Janikoun S, Jumbe SE, Ryan B, Shearn J, Smith DJ, Stanford M, Xing W, Margrain TH. Depression in Visual Impairment Trial (DEPVIT): A Randomized Clinical Trial of Depression Treatments in People With Low Vision. *Investigative Ophthalmology & Visual Science* 2016; 57: 4247-4254.

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Jones C, Busse M, Quinn L, Dawes H, Drew C, Kelson M, Hood K, Rosser A, Edwards RT. The societal cost of Huntington's disease: are we underestimating the burden? *European Journal of Neurology*. 2016;23(10):1588-90.

Newman A, Baber M, O'Brien D, Goulding A, Jones CH, Howson T, Jones C, Parkinson C, Taylor K, Tischler V, Windle G. Carrying out research across the arts and humanities and social sciences: Developing the methodology for Dementia and Imagination, *Cultural Trends*. 2016; 25(4), pp. 1-15

Watermeyer, T.J., Hindle, J.V., Roberts, J, Lawrence CL, Martyr A, Lloyd-Williams H, Brand A, Gutting P, Hoare Z, Edwards RT, Clare L. Goal Setting for Cognitive Rehabilitation in Mild to Moderate Parkinson's Disease Dementia and Dementia with Lewy Bodies. *Parkinsons Dis*. 2016;2016:8285041.