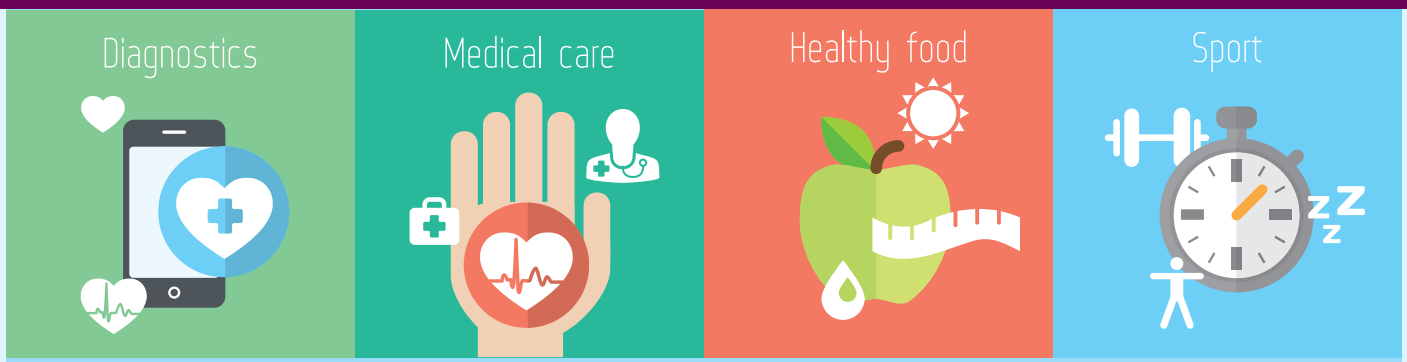
Health Economics Research Centre

HERC news

www.herc.ox.ac.uk

Issue 24 August 2018



Nudging people with diabetes towards a healthier lifestyle

Project team: Thomas Rouyard, José Leal, Alastair Gray

Type 2 diabetes (T2D) is a major problem for healthcare systems. It accounts for 12% of healthcare expenditures worldwide, with recent forecasts estimating that one in 10 people will suffer from the condition by 2040. What is most frustrating is that T2D has the potential to be well-controlled. By making appropriate lifestyle changes (e.g. a healthy diet), people with T2D can prevent the onset of T2D-related complications. However, in practice, many patients fail to change their lifestyle and remain poorly controlled.

Over the past 10 years, there has been increasing interest in using concepts and methods from behavioural economics to inform health promotion interventions. Richard Thaler, a pioneer in this field, received the Nobel Prize in economics in 2017. Located at the interface of psychology and economics, behavioural economics assumes that people are not completely rational when making decisions. For example, people tend to value present outcomes, such as having a cigarette or an extra dessert now, more than future outcomes, such as avoiding cancer or heart disease ("time inconsistency"). Behavioural economists are concerned with identifying and using such irrationalities in people's decision-making processes to "nudge" them towards a recommended behaviour.

HERC researchers have recently developed an innovative risk communication tool to help doctors better communicate T2D-related risks. The tool aims to nudge people with T2D towards a healthier lifestyle. It calculates personalised risk information and displays it using metrics and formats more easily grasped by patients. For example, it calculates the "effective heart age" of patients instead of their more abstract probability of experiencing a heart attack. A study conducted in 40 participants with poorly controlled T2D to assess the feasibility of using this tool in routine primary care consultations has shown promising results: after three months, patients' risk perceptions and intentions to change diet were significantly improved. Future work at HERC will explore the impact of the tool on long-term behavioural and health outcomes.

For more information: HERC

> "...people tend to value present outcomes, such as having a cigarette or an extra dessert now, more than future outcomes, such as avoiding cancer or heart disease."

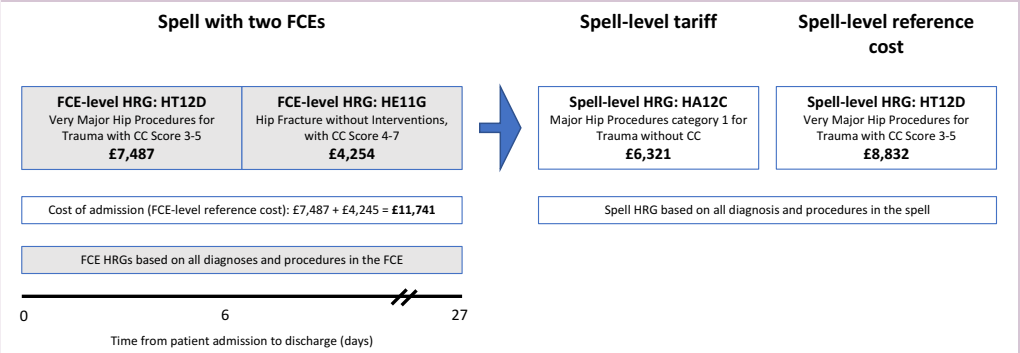
The impact of hospital costing methods on cost-effectiveness analysis

Project team: José Leal, Stefania Manetti, James Buchanan

Several methods can be used to cost hospital contacts when estimating the cost-effectiveness of a new intervention. These range from local micro-costing approaches to the use of diagnosis-related group (DRG)-based costs, which group patients according to their diagnosis and procedures. In the UK, there are three potential sources of unit costs that could be applied to cost hospital resource use: spell-level tariffs, spell-level reference costs and finished consultant episode (FCE)-level reference costs (see example in Figure). However, the implications of choosing a particular source of unit costs remain unclear.

We recently conducted a study that considered the consequences of using different sources of unit costs when undertaking an economic evaluation. Using hip fracture as a case study, we applied the three potential sources of unit costs within a cost-utility analysis of different models of care for patients with a hip fracture admitted to an NHS hospital in England. Three care models were considered: (1) introduction of an orthogeriatrician-led service; (2) introduction of a nurse-led fracture liaison service (FLS); and (3) standard post-hip fracture care.

The results of this study were published in *PharmacoEconomics* in May 2018. The key finding was that the hospital costs associated with hip fracture varied between £10,749 and £14,440 per fracture, depending on the set of unit costs used. Importantly, the recommended adoption decision changed when the source of unit cost data was varied. Using spell-level reference costs or tariffs resulted in FLS-led services being the most cost-effective option, whereas usual care was found to be the most cost-effective strategy using FCE-level reference costs.



Given this, we concluded that, conditional on the set of unit costs adopted, different policy decisions may be made regarding the introduction of new healthcare interventions. This may ultimately lead to suboptimal patient health outcomes, reducing population health.

For more information:

HERC

The Cancer Drugs Fund: addressing decision uncertainty in NICE appraisals

Project team: Liz Morrell, Sarah Wordsworth

In 2016 the English Cancer Drugs Fund (CDF) became a managed access fund for cancer drugs. Where there is too much uncertainty in the evidence base for a drug to be recommended for routine commissioning, it can be funded through the CDF – typically for two years – and data collected from use in the NHS to address this uncertainty. We recently collaborated with the Centre for the Advancement of Sustainable Medical Innovation (CASMI) on a review of NICE appraisals of cancer drugs in the two years before 2016, to identify the types of uncertainty we might expect to see in candidates for CDF funding.

We identified two main types of uncertainty: immature survival data and comparators that were not relevant to UK practice. Neither of these can readily be resolved by collecting additional observational data, because of bias due to confounding, and because the timeframe is short relative to the existing trial data.

Other uncertainties related to dosage regimens, differences in trial populations and costs. As these are more amenable to resolution through observational data, we predicted that these would be the focus of CDF data collection, with additional survival data coming from continuation of existing trials. This is exactly what we have observed since 2016. For example, data collection for the first drug to enter the CDF - osimertinib in non-small-cell lung cancer - focused on baseline patient characteristics and duration of treatment, and specified future analyses of ongoing trials to resolve survival uncertainty.

What we have not yet seen is how NICE will evaluate CDF data alongside 'gold standard' RCT data, particularly if they differ. In June 2018, NICE re-appraised drugs for multiple sclerosis that had been subject to a 10-year managed access scheme, and stated that in this case the committee preferred the observational data. The first CDF re-evaluations requiring integration of observational and trial data are due in summer 2019 – we await the outcome with great interest.

For more information: HERC

> "We identified two main types of uncertainty: immature survival data, and comparators that were not relevant to UK practice."

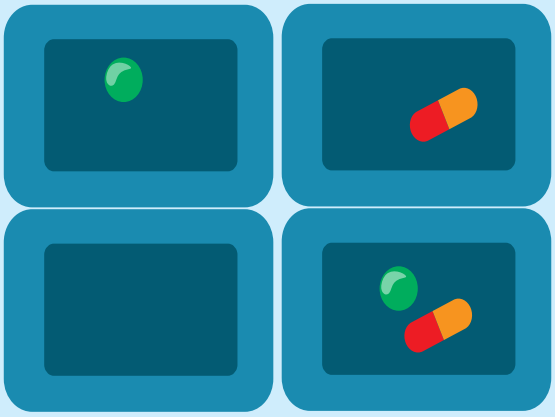
HERC

Joint versus separate decisions on interacting treatments

Project team: Helen Dakin, Alastair Gray

At present, decision-makers like NICE typically make separate decisions on individual treatments, assuming that treatments have independent effects and that the costs and effects of one intervention are not affected by the simultaneous use of a second intervention. However, we have recently demonstrated that when treatments interact, using the decision rules for independent treatments may not maximise the amount of health generated by the healthcare budget. To get best value for money, we instead need to compare different combinations of interacting treatments using the decision rules for mutually-exclusive interventions.

Many economic evaluations and HTAs therefore compare the wrong sets of treatments, make inappropriately simple assumptions about the effect of giving treatments together or incorrectly apply evidence from trials allowing combination therapy. For example, rather than evaluating the cost-effectiveness of statins versus no statins and, separately, assessing a drug to reduce high blood pressure against no treatment, it may be more appropriate to make a joint decision between four mutually-exclusive combinations (statin, blood-pressure drug, neither and both).



Our paper, published in *Medical Decision Making*, presents a framework that researchers and decision-makers can use to identify whether or not interactions are likely to change the conclusions, or whether it is safe to make separate decisions on each treatment individually. A taxonomy outlining the situations in which interactions are likely to occur is also presented. These include interventions targeting the same goal or clinical event, life-saving interventions given to overlapping populations, and some interventions given for different conditions or to different patients within the same healthcare facility. HTA organisations such as NICE could improve decision-making by using this framework to consider the likelihood, type and magnitude of interactions among interventions at all stages in the appraisal process, allowing for potentially influential interactions in decision-making.

For more information: HERC

> “When treatments interact, using the decision rules for independent treatments may not maximise the amount of health generated by the healthcare budget.”

Are steroids for sore throats cost-effective?

Project team: Jane Wolstenholme, Richéal Burns, with the TOAST Trial Investigators

Every year, nearly one in 10 patients registered with a GP will have a consultation for sore throat. Almost all patients diagnosed with tonsillitis will receive antibiotics, as will half of those simply recorded as having a sore throat. Research shows that antibiotics offer limited benefit for symptoms of sore throat and guidance recommends they should not be prescribed.

In practice, reducing unnecessary antibiotic prescribing will be easier if the clinician can offer an alternative option for symptom relief. We conducted an economic analysis alongside a UK-based, multicentre, two arm, randomised, double blind trial to assess the cost-effectiveness of a single 10mg dose of oral dexamethasone compared to placebo for the relief of sore throat. Adults with acute sore throat and painful swallowing were recruited and randomised at GP practices, and data were collected on healthcare resource use and health-related quality of life (HRQoL), evaluated using the EQ-5D-5L. This work was undertaken with colleagues in Oxford (Nuffield Department of Primary Care Health Science) and a number of other centres around the UK, and the results were recently published in *BMJ Open*.

We observed differences in HRQoL at 24 hours and over seven days from baseline in the dexamethasone group compared with the placebo group (2.5% and 2.9% higher, respectively). After controlling for baseline HRQoL, the impact of the intervention was not statistically significant: the QALY difference was equivalent to a loss in HRQoL of a half hour in the dexamethasone group. The average cost per patient in the dexamethasone and placebo groups in the base-case analysis was £73 and £69, respectively. In the base-case analysis, the mean ICER was -£6,440 with a wide confidence interval suggesting considerable uncertainty.

We estimate the annual economic burden associated with sore throat in the UK to be £2.35 billion. There is considerable uncertainty regarding the cost-effectiveness of a single dose of oral dexamethasone, hence we concluded that there was insufficient evidence to support its use in clinical practice.

For more information: HERC

Money matters for child behaviour: longitudinal findings from the UK

Project team: Katharine Noonan, Richéal Burns, Mara Violato

It is well recognised that children from socio-economically deprived backgrounds experience a range of poor health outcomes compared to their wealthier peers. In the UK, inequalities in child physical and mental health have been linked to poverty and social disadvantage. Among these outcomes is a higher prevalence of behavioural problems, including hyperactivity and inattention, conduct disorders, emotional problems and difficulties with peers. These difficulties not only reflect poor mental health, but are also linked to adult outcomes, including academic attainment and employment.

Despite this knowledge, measures to financially assist families have been reduced in recent years, and the government's dedicated unit to eliminate child poverty was abolished in 2016. The number of children living in poverty in the UK in 2017 was over 4 million, representing 30% of children.

Using the UK Millennium Cohort Study (MCS), we investigated the relationship between family income and child socio-emotional behaviour at 11 years of age. We also examined how psychological distress experienced by mothers impacts this relationship over time.

Our results showed a significant protective effect of higher family income on the likelihood of behavioural problems at age 11. The behavioural problems reported by teachers were more strongly related to family income than problems reported by parents. Mother's psychological distress, particularly longstanding or recurrent mental health issues, was important in explaining the income-child behaviour relationship for parent-reported behavioural issues. Contrary to previous findings, the importance of family income remained statistically significant even when we considered other determinants of child behaviour (e.g. parenting practices, time spent with friends, time playing sport). These results may be significant for policy makers, in that children may experience worse outcomes just because they are poorer, not only through the effect of economic hardship on parenting and household characteristics. Our findings validate calls for psychosocial and financial support for mothers and families, particularly those affected by parental mental health issues.

For more information: HERC

HERC

Hospital and nursing home care costs after peripheral vascular events

Project team: Ramón Luengo-Fernández, Kathleen Nichol, Emily Dobell, with the OXVASC team

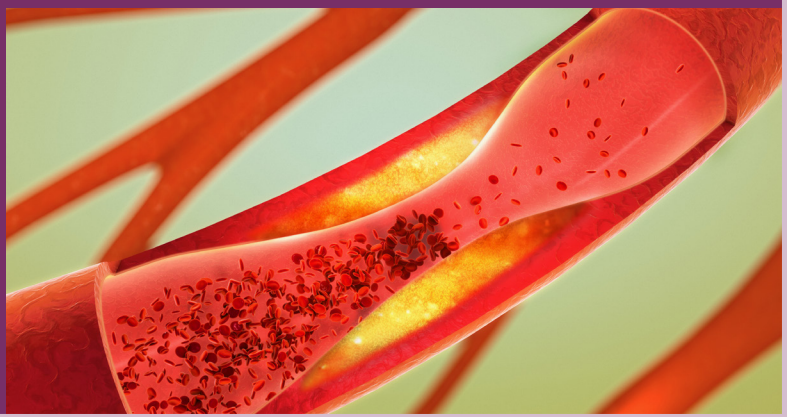
Although peripheral arterial disease (PAD) has a poor prognosis, it has been neglected in terms of research, and there is little data on the economic impact of PAD on healthcare systems. This lack of data limits comparisons between this and other conditions, which makes it more difficult to make decisions about funding, service provision and research support.

We recently estimated the five-year hospital and nursing home care costs following a first peripheral vascular event, and compared these costs to those of stroke. This work used data from the Oxford Vascular study (OXVASC), a UK-population-based cohort study evaluating the incidence and outcomes after acute vascular events led by Professor Peter Rothwell, (Centre for Prevention of Stroke and Dementia, University of Oxford).

The results of this work were published in the *European Journal of Vascular and Endovascular Surgery* in April 2018. Among 351 patients with an acute peripheral disease event, mean five-year total care costs were €35,211, of which €6,443 (18%) were due to long-term institutionalisation. Costs differed significantly by type of event (acute visceral ischaemia €16,476; acute limb ischaemia €24,437; critical limb ischaemia €46,281).

Five-year hospital care costs after an acute peripheral disease event were significantly higher than after stroke (€28,768 vs €22,623), but similar after including long-term costs of institutionalisation (€35,211 vs €35,391). This data will be useful to researchers who are attempting to better understand the likely economic consequences of PAD in their own setting.

For more information: HERC



Staff News

Welcome to:

Murong Yang who is an MSc student from the University of York on a 3-month summer placement in HERC. She is working with Laurence Roope, James Buchanan and Sarah Wordsworth on a project evaluating whether different approaches to measuring attributes towards risk can impact on predictions of risky health behaviours such as smoking.

Richard O'Halloran (L) and **Patrick Edwards** (R) who joined HERC in May whilst completing their MSc's in Global Health Science and Epidemiology at NDPH. Richard is evaluating the association between BMI and hospital costs using data from the UK Biobank and Patrick is using RCT results to assess the cost-effectiveness of a cognitive behaviour therapy designed to reduce psychosis patients' persecutory delusions through alleviating worry

Rishi Patel who is a public health registrar on a placement in HERC working on the validation of the UKPDS-Outcomes model and the benefit of postponing diabetes onset, with José Leal and Alastair Gray.

Lizzie Smith who is a public health registrar on a placement in HERC working with José Leal, Ramón Luengo-Fernández, Filipa Landeiro and Alastair Gray. Lizzie is working on a project evaluating the economic burden of cardiovascular disease and inter-observer variance when assessing the quality of economic models.

Dalia Youssef is a public health registrar on a placement in HERC working with José Leal and Alastair Gray on the development of life expectancy tables for diabetes patients, and also with Jane Wolstenholme and Ines Rombach on preparing a trial-based cost-effectiveness analysis.

Jasmine Morton who is a foundation doctor on a 4-month rotation in HERC working with Alastair Gray and Filipa Landeiro on a systematic review of the literature on economic models for Alzheimer's disease as part of the ROADMAP project.

Marvi Iftikhar who is a foundation doctor on a 4-month rotation in HERC working with Ines Rombach, Alastair Gray and Filipa Landeiro on mapping a dementia specific quality of life instrument to the EQ-5D-5L, as part of the ROADMAP project.

Farewell to:

Jacqueline Murphy who joined HERC in 2012. Jacqui initially worked mainly on economic evaluations alongside clinical trials, notably the UKUFF trial comparing arthroscopic with open rotator cuff repair of the shoulder. She also worked on an evaluation of the pilot study of FIT testing in the Bowel Cancer Screening Programme in England, and successfully applied for "pump priming" funding which allowed her to work with a large linked observational data set to compare the hospital costs of treating interval and screen-detected colorectal cancers. More recently, Jacqui has been working with large observational datasets on hip and knee replacements from the ATLAS study. Jacqui has been keen to further develop her statistical skills for some time and is half-way through a part-time course at LSHTM, so in moving to a Statistician post in the Centre for Cancer Prevention at the Wolfson Institute, she is taking another step to realise that ambition. While we are sorry to see her leave HERC, we wish her every success in the future.

Brett Doble who joined HERC in late 2016 from the University of Cambridge, after completing his PhD in Australia. Brett has taken on an active role in HERC, organising our external seminar series while also working on three large programmes of work in the areas of bariatric surgery, bleeding after cardiac surgery and genomic medicine. In all his work Brett has been able to demonstrate his strong economic evaluation and publication writing skills. Brett has now accepted an Assistant Professor post at DUKE-NUS Medical School in Singapore. We are very sorry to see him leave HERC, but pleased that the research he will be undertaking in Singapore is similar to his work in HERC, offering some fantastic opportunities for collaboration in the future.

HERC hosts conference on personalised medicine

On 19th June, HERC co-hosted a conference with the Centre for Personalised Medicine and the Ethox Centre, University of Oxford, titled: **"Resource Allocation in Personalised Medicine: Evaluation, Translation & Ethics"**. Ellen Graham (Deputy Director, Genomics, NHS England) opened the day by discussing the changing landscape of commissioning genomics healthcare services in the UK, followed by Clare Craig (Clinical Lead for Cancer Recruitment for Genomics England), who talked about building a genomics service within the NHS.

Before and after lunch there were a series of presentations by health economists, including Dean Regier (University of British Columbia), James Buchanan (HERC), Sarah Wordsworth (HERC), Katherine Payne (University of Manchester) and Catherine Lejeune (Faculty of Health Sciences, Dijon). The day ended with a series of lectures about policy and ethical issues, as well as the patient perspective, presented by Nick Fahy (University of Oxford), Inês Amado (project manager for the 2025 Genomic Medicine France Plan), Christian Munthe (University of Gothenburg) and Jayne Spink (Genetic Alliance UK).

The conference organisers are currently putting together a journal special issue which will summarise the work presented during this event, with publication planned for early 2019.

Spotlight on Liam Mc Morrow

I joined HERC as a Researcher in April 2017 to work on a number of diabetes projects in collaboration with the Diabetes Trials Unit. I have a keen interest in diabetes and I am currently undertaking an economic evaluation of the Acarbose Cardiovascular Evaluation (ACE) trial. This trial assessed the effects of acarbose, which slows down the absorption of carbohydrates, in 6,522 patients with coronary heart disease and impaired glucose tolerance (pre-diabetes) from 176 hospital outpatient clinics in China. I am also involved in RHAPSODY, an EU funded project to study the progression of pre-diabetes to type 2 diabetes. RHAPSODY is a unique collaboration of over 100 researchers from academia, clinical and pharmaceutical research institutions. We are currently undertaking a systematic review of existing models for populations of individuals with pre-diabetes.

Prior to joining HERC, I undertook my PhD at the Health Economics Research Unit, University of Aberdeen examining the non-price determinants of food choices to understand how to encourage healthier diets. I explored whether signposting a tax rate would influence snack food choices independently from the financial impact of the tax. A Discrete Choice Experiment suggested that signposting the tax rate influenced behaviour, however a follow-up field experiment found that the signpost did not influence food choices as respondents failed to notice the signpost.

Working at HERC has given me the opportunity to be part of world-leading diabetes projects and build networks with people within HERC, across the Nuffield Department of Population Health and the Diabetes Trials Unit. I look forward to continuing work on diabetes projects in HERC and collaborating with colleagues across the University of Oxford.

HERC courses

HERC offers two courses in health economics:

Introduction to Health Economic Evaluation is a one-day course on the basics of health economics and its relevance to the health service. The next course is scheduled for 19 October 2018 and will be held at St. Catherine's College in Oxford.

Applied Methods of Cost-Effectiveness Analysis is a three-day course for those who wish to learn in detail about the analytic methods of cost-effectiveness analysis for healthcare interventions, and to give participants 'hands on' experience through the use of computer-based exercises with real data. This course will run again from 5th to 7th December 2018 at St. Catherine's College, Oxford.

If you would like more information on course content or how to reserve a place, please visit: **https://www.herc.ox.ac.uk/herc-short-courses**

HERC Seminars

Convenor: Brett Doble

HERC runs a series of seminars with invited speakers from the health economics community who talk on a wide range of applied and methodological topics.

In May, **Assistant Professor Baptiste Leurent**, London School of Hygiene and Tropical Medicine visited to present his work on: *Sensitivity analysis for not-at-random missing data in trial-based cost-effectiveness analysis.*

In June, **Dr Edwine Barasa**, Nairobi Programme, KEMRI-Wellcome Trust Research Programme in Kenya came to HERC to present his work on: *Tracking Progress towards Universal Health Coverage in Kenya.*

In July, **Dr Fern Terris-Prestholt**, Associate Professor at the London School of Hygiene and Tropical Medicine, gave a seminar on: *Discrete Choice Experiments to Inform Programming and C-E Modelling of HIV Prevention.*

Details of forthcoming talks can be found on the HERC website: **http://www.herc.ox.ac.uk**. To be added to our mailing list for future seminars, email us at **herc@dph.ox.ac.uk**

HERC

Presentations by members of HERC

ISPOR 23rd Annual International Meeting
Baltimore, USA, May 2018
James Buchanan and Sarah Wordsworth
Are whole exome and whole genome sequencing approaches cost-effective? A systematic review of the literature.

Resource Allocation in Personalised Medicine: Evaluation, Translation & Ethics
Oxford, June 2018
James Buchanan and Sarah Wordsworth
Translating genomic tests into clinical practice in the UK NHS: is the health economics evidence base there yet?

Department of Psychiatry
Oxford, June 2018
Apostolos Tsiachristas
Incorporating health economics in mental health research

Spanish Health Economics Conference
Las Palmas de Gran Canaria, Spain, June 2018
Filipa Landeiro
Health-related quality of life in people with dementia measured with preference based instruments: a systematic literature review and meta-analysis

Weekly Seminar Series, MRC Clinical Trials Unit, University College London
London, July 2018
Liz Morrell
Complex trials as a working environment

One-day workshop on R for trial and model-based cost-effectiveness analysis
London, July 2018
Borislava Mihaylova and Iryna Schlackow
A policy model of cardiovascular disease in moderate-to-advanced chronic kidney disease

European Health Economics Association Conference
Maastricht, the Netherlands, July 2018
Ines Rombach
A cost-effectiveness analysis of a placebo surgery randomised controlled trial
Sophie Diarra
The effect of income on childhood patterns of wheezing in the UK
Apostolos Tsiachristas
Cost-effectiveness of healthcare interventions for rare cancers: evidence from a systematic literature review and meta-analysis.

Recent Publications

1. Addison M, McGovern R, et al. [includes **Becker F**]. *Alcohol Screening and Brief Intervention in Police Custody Suites: Pilot Cluster Randomised Controlled Trial (AcCePT).* Alcohol and Alcoholism. 2018. doi:10.1093/alcalc/agy039

2. **Becker F**, Anokye N, et al. *Women's preferences for alternative financial incentive schemes for breastfeeding: A discrete choice experiment.* PLoS One. 2018. doi:10.1371/journal.pone.0194231

3. Briggs ADM, Scarborough P, **Wolstenholme J**. *Estimating comparable English healthcare costs for multiple diseases and unrelated future costs for use in health and public health economic modelling.* PLoS One. 2018. doi:10.1371/journal.pone.0197257

4. **Eibich P**, **Dakin HA**, et al. [includes **Gray AM**]. *Associations between preoperative Oxford hip and knee scores and costs and quality of life of patients undergoing primary total joint replacement in the NHS England: an observational study.* BMJ Open. 2018. 8:e019477. doi:10.1136/bmjopen-2017-019477

5. Ellis G, Gardner M, et al. [includes **Tsiachristas A**]. *Comprehensive geriatric assessment for older adults admitted to hospital.* Age Ageing. 2018. doi:10.1093/ageing/afy035.04

6. Karagiannidou M, Wittenberg R, et al. [includes **Landeiro F**, **Gray AM**, **Ghinai I**, **Wolstenholme J**]. *Systematic literature review of methodologies and data sources of existing economic models across the full spectrum of Alzheimer's disease and dementia from apparently healthy through disease progression to end of life care: a systematic review protocol.* BMJ Open. 2018. 8(6):e020638. doi:10.1136/bmjopen-2017-020638

7. Kitchener H, Gittins M, et al. [includes **Gray AM**]. *A cluster randomized trial of strategies to increase uptake amongst young women invited for their first cervical screen: The STRATEGIC trial.* J Med Screen. 2018. 25(2):88-98. doi:10.1177/0969141317696518

8. **Leal J**, **Manetti S**, **Buchanan J**. *The impact of hospital costing methods on cost-effectiveness analysis: a case study.* PharmacoEconomics. 2018. 1-10. doi:10.1007/s40273-018-0673-y

9. Maier CB, Köppen J, et al. [includes **Tsiachristas A**]. *Task shifting between physicians and nurses in acute care hospitals: Cross-sectional study in nine countries*. Hum Resour Health. 2018. 16(24). doi:10.1186/s12960-018-0285-9

10. **Marthi A**, Donovan K, et al. [includes **Rooney CM**, **Mihaylova B**]. *Fibroblast Growth Factor-23 and Risks of Cardiovascular and Noncardiovascular Diseases: A Meta-Analysis.* J Am Soc Nephrol. 2018. 29(5). doi:10.1681/ASN.2017121334

11. **Morrell L**, **Wordsworth S**, et al. *Will the reformed Cancer Drugs Fund address the most common types of uncertainty? An analysis of NICE cancer drug appraisals.* BMC Health Serv Res. 2018. 18:393. doi:10.1186/s12913-018-3162-2

12. Reed SD, Li Y, et al. [includes **Leal J**, **Gray AM**]. *Longitudinal medical resources and costs among type 2 diabetes patients participating in the Trial Evaluating Cardiovascular Outcomes with Sitagliptin (TECOS).* Diabetes Obes Metab. 2018. 20:1732-1739. doi:10.1111/dom.13292

13. **Rombach I**, Jenkinson C, **Gray AM**, et al. *Comparison of statistical approaches for analyzing incomplete longitudinal patient-reported outcome data in randomized controlled trials.* Patient Relat Outcome Meas. 2018. 9:197-209. doi:10.2147/PROM.S147790

14. **Roope L**, Tonkin-Crine S, et al. [includes **Wordsworth S**]. *Reducing demand for antibiotic prescriptions: evidence from an online survey of the general public on the interaction between preferences, beliefs and information United Kingdom, 2015*. Euro Surveill. 2018. 23(25):pii=1700424. doi:10.2807/1560-7917.ES.2018.23.25.1700424

15. **Roope L**. *Characterizing inequality benchmark incomes.* Econ Theory Bull. 2018. 1-15. doi:10.1007/s40505-018-0148-5

16. **Rouyard T**, **Leal J**, et al. [includes **Gray A**]. *Nudging people with Type 2 diabetes towards better self-management through personalized risk communication: A pilot randomized controlled trial in primary care.* Endocrinol Diab Metab. 2018. 1(3):e00022. doi:10.1002/edm2.22

17. Rutten-van Molken M, Leijten F, et al. [includes **Tsiachristas A**]. *Strengthening the evidence-base of integrated care for people with multi-morbidity in Europe using Multi-Criteria Decision Analysis (MCDA).* BMC Health Serv Res. 2018. 18:576. doi:10.1186/s12913-018-3367-4

18. Smit AK, Newson AJ, et al. [includes **Wordsworth S**]. *The melanoma genomics managing your risk study: A protocol for a randomized controlled trial evaluating the impact of personal genomic risk information on skin cancer prevention behaviors.* Contemp Clin Trials. 2018. 70:106-16. doi:10.1016/j.cct.2018.05.014

19. Stokes J, Struckmann V, et al. [includes **Tsiachristas A**]. *Towards incentivising integration: A typology of payments for integrated care*. Health Policy. 2018. doi:10.1016/j.healthpol.2018.07.003

20. Thorn JC, Brookes ST, et al. [includes **Wordsworth S**]. *Core Items for a Standardized Resource Use Measure: Expert Delphi Consensus Survey.* Value Health. 2018. 21(6):640-649. doi:10.1016/j.jval.2017.06.011

21. **Tsiachristas A**, Waite F, Freeman D, **Luengo-Fernandez R**. *Cost-effectiveness of cognitive behavioural therapy for sleep disorder added to usual care in patients with schizophrenia: the BEST study.* BJPsych Open. 2018. 13(4):e0194231. doi:10.1192/bjo.2018.2

22. Wang K, Carver T, et al. [includes **Wolstenholme J**]. *Early use of Antibiotics for at Risk CHildren with InfluEnza (ARCHIE): protocol for a double-blind, randomised, placebo-controlled trial.* BMJ Open. 2018. 8:e021144. doi:10.1136/bmjopen-2017-021144

HERC
www.herc.ox.ac.uk

Health Economics Research Centre
Nuffield Department of Population Health, University of Oxford,
Richard Doll Building, Old Road Campus, Headington, Oxford OX3 7LF UK
tel: +44 (0) 1865 289272/3 • email: herc@dph.ox.ac.uk

To receive this newsletter quarterly email **herc@dph.ox.ac.uk**

Academic editorial team: James Buchanan, Liz Stokes, Filipa Landeiro
Production co-ordinator: Darren Barber

UNIVERSITY OF OXFORD

http://www.facebook.com/healtheconomicsresearchcentre

http://twitter.com/HERC_Oxford