



# HEB Newsletter

Health Economics Bristol (HEB)



Will Hollingworth

## Welcome from Will

Welcome to the summer edition of the HEB newsletter. Inside this 8<sup>th</sup> issue you'll find details of two new short courses that we are developing to extend the training we offer in health economics research methods. We were one of the first Universities to provide professional development courses in health economics and it is exciting now to be able to offer novel courses on qualitative methods in health economics and economic evaluation and modelling using R.

On the research front, we're using qualitative methods to develop a standardised modular resource use measure (MODRUM) and to develop capability measures for use in children and young people. We evaluate the performance of preference-based outcome measures in patients

following cataract surgery and we are working more closely with commissioners to make sure our research informs policy and vice versa.

I write this from a hot and cramped coach *en route* to IHEA, looking forward to catching up with friends and colleagues and to the summer holidays thereafter. I hope you enjoy reading this newsletter and have a relaxing and enjoyable summer.

*Will Hollingworth*, Director of HEB



# HEB News



## South West Health Economists Day

In June, Health Economics Bristol hosted visitors from the health economics departments Bath, Exeter, and Cardiff

Universities for the South West Health Economists meeting. Assistance with organization and funding was provided by the GW4 Alliance of these universities, which aims to boost regional collaboration. Thanks to a lot of hard work and preparation, we had as close to an “action packed” day as a conference on health economics could achieve!

We began with an hilarious and educational “snowballs and aeroplanes” ice-breaker that helped the different groups to get acquainted. This was followed by a whirlwind tour by the department heads on research interests at Bath, Exeter, Bristol, and Cardiff. Attendees then gave a huge variety of high quality talks, ranging from fast Fourier transforms for decision modelling, through taxes on sugary drinks, to valuing quality of life when health is fluctuating. A dedicated collaboration brainstorming session threw up dozens of ideas for future projects. Overall, a very successful meeting that will hopefully lead to fruitful collaboration across the south west health economics departments in the future.



Feedback from the South West Health Economists meeting.

## Summer Conferences 2019

**Katie Breheny** presented her work at the Patient Reported Outcomes Measures (PROMs) conference in Leeds in June. **Sabina Sanghera** presented research from her NIHR fellowship at the UK Health Economists’ Study Group (HESG) working paper meeting being held in Norwich in July. Also in July was the International Health Economics Association (iHEA) congress, held in Basel, Switzerland where **Sabina Sanghera, Pdraig Dixon, Paul Mitchell** and **Joanna Coast** presented. An iHEA pre-congress session hosted the ICECAP measures workshop, for the first time outside of the UK, where **Samantha Husbands** and **Joanna Coast** presented recent research findings.



Kirsty Garfield

## Developing a Modular Resource-use Questionnaire For Use In RCTs

**Kirsty Garfield** is undertaking a PhD to develop a modular resource-use questionnaire (RUQ). A new standardised questionnaire would avoid duplication and improve comparability between trials. From items identified in an expert Delphi study, a core module and several bolt-on modules have been developed based on existing RUQs, research team meetings and expert advice. Kirsty is currently interviewing health economists to gain feedback on whether questions adequately capture what they purport to measure and whether information captured can be costed. A revised RUQ, incorporating feedback, will be shown to patients in “think-aloud” interviews with retrospective probing to explore patient understanding of questions, gain opinions on layout and assess whether questions measure what they intend. In a future quantitative study, patients will complete the RUQ and the feasibility, acceptability, validity and reliability of the RUQ will be tested.

Kirsty is funded by the MRC HTMR and supervised by **Jo Thorn, Samantha Husbands, Sian Noble** and **Will Hollingworth**.

## Priority Setting in Healthcare




Amanda Owen - Smith

**Amanda Owen-Smith** is a Senior Lecturer in Medical Sociology and has worked within the HEB team for the last twelve months. Her core interests are in priority-setting in healthcare and she works closely with colleagues across

both PHS and the NIHR CLAHRC to develop new and innovative solutions to priority-setting dilemmas.

Amanda's own fieldwork is particularly concerned with the implementation of rationing decisions at the level of the doctor-patient interaction and how models of shared decision-making can be extended to encompass financial concerns.

In recent months, Amanda has taken on a 0.4 secondment to BNSSG CCG and Bristol Health Partners, where she is working alongside colleagues to implement a more rigorous programme of priority-setting when it comes to the commissioning of mental health services.

 @AmandaOwenSmith

## The Predict-CAT Cohort Study





Will Hollingworth & Katie Breheny

**Katie Breheny, Rebecca Kandiyali and Will Hollingworth** are working on an NIHR funded project examining the performance of preference-based measures (PBMs) in cataract surgery patients.

In the Predict-CAT cohort study, 1,315 patients were randomised to complete either the EQ-5D-5L, EQ-5D-3L or EQ-5D vision bolt-on before cataract surgery and 4-8 weeks after. All patients also completed a measure of cataract quality of life (Cat-PROM5) and the ICECAP-O. A post-operative questionnaire included questions about the perceived benefit of surgery and impact on quality of life, from the patients' perspectives. Properties of the PBMs being examined include floor and ceiling effects, construct validity and responsiveness.

This is the first use of the ICECAP-O in a vision impaired population; therefore, the study will provide important insights into the performance of measures of capability wellbeing in this population. The large Predict-CAT dataset will also enable a comparison of the responsiveness of three versions of the EQ-5D in cataract surgery patients.

 @K\_Breheny

 @Kandibex




Joanna Coast, Sam Husbands & Paul Mitchell

## The LifeCourseCap Project

**Sam Husbands, Paul Mitchell and Joanna Coast** are working on a Wellcome Trust funded project which began in February 2018 and aims to develop a life-course approach to measuring capability for economic evaluation of health and social care interventions. Current research on the project is focused on the development of ICECAP capability measures for use with children and young people, and Sam has

recently started undertaking in-depth qualitative interviews with children and young people and their parents/guardians to identify important capabilities to inform the descriptive systems for the measures. This work will continue until June 2020, when work to test the feasibility of the generated measures with children and young people will begin research.

 @joclarkecoast

 @Paul\_M\_Mitchell

## Key publications

### Efficiency and Equity in Decision Making

Jones, T, Carr, A, Beard, D, Linton, M-J, Rooshenas, L, Donovan, J & Hollingworth, W 2019, 'A longitudinal study of use and cost of subacromial decompression surgery: the need for effective evaluation of surgical procedures to prevent overtreatment and wasted resources' *BMJ Open*.

Linton, M-J, Coast, J, Williams, I, Copping, J & Owen-Smith, A 2019, 'Developing a framework of quality indicators for healthcare business cases: a qualitative document analysis consolidating insight from expert guidance and current practice' *BMC Health Services Research*, vol. 19, no. 1, 433. [doi.org/10.1186/s12913-019-4269-9](https://doi.org/10.1186/s12913-019-4269-9)

Thom, H, Sofat, R, Wang, Z, Fang, W, Bodalia, PN, Bryden, P, Davies, P, Caldwell, D, Dias, S, Eaton, D, Higgins, J, Hingorani, AD, Lopez-Lopez, J, Okoli, G, Richards, A, Salisbury, C, Savović, J, Stephens-Boal, A, Sterne, J & Welton, N 2019, 'Directly Acting Oral Anticoagulants for the Prevention of Stroke in Atrial Fibrillation in England and Wales: Cost-Effectiveness Model' *MDM Policy & Practice*.

Morton, K, MacNeill, S, Sanderson, E, Dixon, P, King, A, Jenkins, S, Metcalfe, C, Shaw, ARG, Chalder, M, Benger, J, Hollingworth, W, Calvert, J & Purdy, S 2019, 'An evaluation of 'care bundles' for patients with Chronic Obstructive Pulmonary Disease (COPD): a multi-site study in the United Kingdom' *BMJ Open Respiratory Research*, vol. 6, no. 1, e000425.

Thom, H, Visan, ACC, Keeney, E, Dorobantu, DM, Fudulu, D, Sharabiani, MTA, Round, J & Stoica, SC 2019, 'Clinical and cost-effectiveness of the Ross procedure versus conventional aortic valve replacement in young adults' *Open Heart*, vol. 6, no. 1, e001047. [doi.org/10.1136/openhrt-2019-001047](https://doi.org/10.1136/openhrt-2019-001047)

McMeekin, N, Chrysos, A, Vale, L & Fisher, AJ 2019, 'Incorporating ex-vivo lung perfusion into the UK adult lung transplant service: an economic evaluation and decision analytic model' *BMC Health Services Research*, vol. 19, no. 326. [10.1186/s12913-019-4154-6](https://doi.org/10.1186/s12913-019-4154-6)

Fawsitt, C, Vickerman, P, Cooke, GS, Welton, N & STOP-HCV Consortium 2019, 'A Cost-Effectiveness Analysis of Shortened Direct-Acting Antiviral Treatment in Genotype 1 Noncirrhotic Treatment-Naive Patients With Chronic Hepatitis C Virus' *Value in Health*. [10.1016/j.ival.2018.12.011](https://doi.org/10.1016/j.ival.2018.12.011)

Audrey, S, Fisher, H, Cooper, A, Gaunt, D, Garfield, K, Metcalfe, C, Hollingworth, W, Gibson, F, Gabe-Walters, M, Rodgers, S, Davis, AL, Insall, P & Procter, S 2019, 'Evaluation of an intervention to promote walking during the commute to work: A cluster randomised controlled trial' *BMC Public Health*, vol. 19, no. 1, 427, pp. 427. [10.1186/s12889-019-6791-4](https://doi.org/10.1186/s12889-019-6791-4)

Lenguerrand, E, Artz, N, Marques, E, Sanderson, E, Lewis, K, Murray, JRD, Parwez, T, Bertram, W, Beswick, A, Burston, A, Goberman-Hill, R, Blom, A & Wylde, V 2019, 'Effect of group-based outpatient physiotherapy on function after total knee replacement: The ARENA randomised controlled trial' *Arthritis Care and Research*. [10.1002/acr.23909](https://doi.org/10.1002/acr.23909)

Hewlett, S, Almeida, C, Ambler, N, Blair, PS, Choy, E, Dures, E, Hammond, A, Hollingworth, W, Kadir, B, Kirwan, J, Plummer, ZE, Rooke, C, Thorn, J, Turner, N, Pollock, J & on behalf of the RAFT Study Group 2019, 'Reducing arthritis fatigue impact: Two-year randomised controlled trial of cognitive behavioural approaches by rheumatology teams (RAFT)' *Annals of the Rheumatic Diseases*, vol. 78, no. 4, pp. 465-472. [10.1136/annrheumdis-2018-214469](https://doi.org/10.1136/annrheumdis-2018-214469)

Fawsitt, C, Thom, H, Hunt, L, Nemes, S, Blom, A, Welton, N, Hollingworth, W, Lopez-Lopez, JA, Beswick, A, Burston, A, Rolfson, O, Garellick, G & Marques, E 2019, 'Choice of Prosthetic Implant Combinations in Total Hip Replacement: Cost-Effectiveness Analysis Using UK and Swedish Hip Joint Registries Data' *Value in Health*, vol. 22, no. 3, pp. 303-312. [10.1016/j.ival.2018.08.013](https://doi.org/10.1016/j.ival.2018.08.013)

### Economics of Health Care across the Life Course

Tinner, L, Kipping, R, White, J, Jago, R, Metcalfe, C & Hollingworth, W 2019, 'Cross-sectional analysis of physical activity in 2-4-year-olds in England with paediatric quality of life and family expenditure on physical activity' *BMC Public Health*, vol. 19, 846. [doi.org/10.1186/s12889-019-7129-y](https://doi.org/10.1186/s12889-019-7129-y)

Canaway, A, Al-Janabi, H, Kinghorn, P, Bailey, C & Coast, J 2019, 'Close person spill-overs in end of life care: using hierarchical mapping to identify whose outcomes to include in economic evaluation' *Pharmacoeconomics*, vol. 37, no. 4, pp. 573-583. [10.1007/s40273-019-00786-5](https://doi.org/10.1007/s40273-019-00786-5)

Kinghorn, P & Coast, J 2019, 'Appropriate frameworks for economic evaluation of end of life care: A qualitative investigation with stakeholders' *Palliative Medicine*. [10.1177/0269216319839635](https://doi.org/10.1177/0269216319839635)

### Methods for Applied Health Economics

Thom, H, Lopez-Lopez, J & Welton, N 2019, 'Shared parameter model for competing risks and different data summaries in meta-analysis: implications for common and rare outcomes.' *Research Synthesis Methods*.

Kanya, L, Sanghera, S, Lewin, A & Fox-Rushby, J 2019, 'The criterion validity of willingness to pay methods: A systematic review and meta-analysis of the evidence' *Social Science and Medicine*, vol. 232, pp. 238-261. [10.1016/j.socscimed.2019.04.015](https://doi.org/10.1016/j.socscimed.2019.04.015)

Dixon, P, Davey Smith, G & Hollingworth, W 2019, 'The Association Between Adiposity and Inpatient Hospital Costs in the UK Biobank Cohort' *Applied Health Economics and Health Policy*, vol. 17, no. 3, pp. 359-370. [doi.org/10.1007/s40258-018-0450-2](https://doi.org/10.1007/s40258-018-0450-2)

Incerti, D, Thom, H, Baio, G & Jansen, JP 2019, 'R You Still Using Excel? The Advantages of Modern Software Tools for Health Technology Assessment' *Value in Health*, vol. 22, no. 5, pp. 575-579. [10.1016/j.ival.2019.01.003](https://doi.org/10.1016/j.ival.2019.01.003)

Thom, H, White, IR, Welton, N & Lu, G 2019, 'Automated methods to test connectedness and quantify indirectness of evidence in network meta-analysis' *Research Synthesis Methods*, vol. 10, no. 1, pp. 113-124. [10.1002/irsm.1329](https://doi.org/10.1002/irsm.1329)



Howard Thom, Padraig Dixon & Nicky Welton

## 'R' short course summary

In March of this year, **Howard Thom, Padraig Dixon, Claire Williams, and Nicky Welton**, ran a pilot 2-day course on economic evaluation (EE) and modelling in R.

This was driven by a HEB objective to move economic evaluation away from Microsoft Excel and towards transparent, efficient, and flexible modelling software such as R.

Our course had a very ambitious syllabus covering missing data, decision trees, Markov and semi-Markov models, and value of information analysis. Thanks to the enthusiasm of our University of Bristol participants and hard work of our tutors, the course was a huge success.

We will re-run externally on 9/10<sup>th</sup> July 2020 (provisional) with booking opening from October 2019 from the Population Health Sciences website (<https://www.bristol.ac.uk/medical-school/study/short-courses/>).

## An Introduction to Qualitative Methods for Health Economics short course

The pilot of the Introduction to Qualitative Methods for Health Economics short course, run by **Joyanna Coast, Sam Husbands and Amanda Owen-Smith**, ran successfully in May with 15 participants. The course received positive feedback from delegates in terms of its presentation and content. The course will run again on 2nd - 4th March 2020 and will be open to external participants.



Yuri Hamashima

## HEB is growing!

**Yuri Hamashima** started her PhD in May 2019.

Yuri's mixed-methods research is going to look into the influence of local healthcare priority-setting policies on a physician's decision-making in primary care. Her supervisors are **Joanna Coast, Amanda Owen-Smith** and **Tim Jones**.

## Population Health Sciences

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