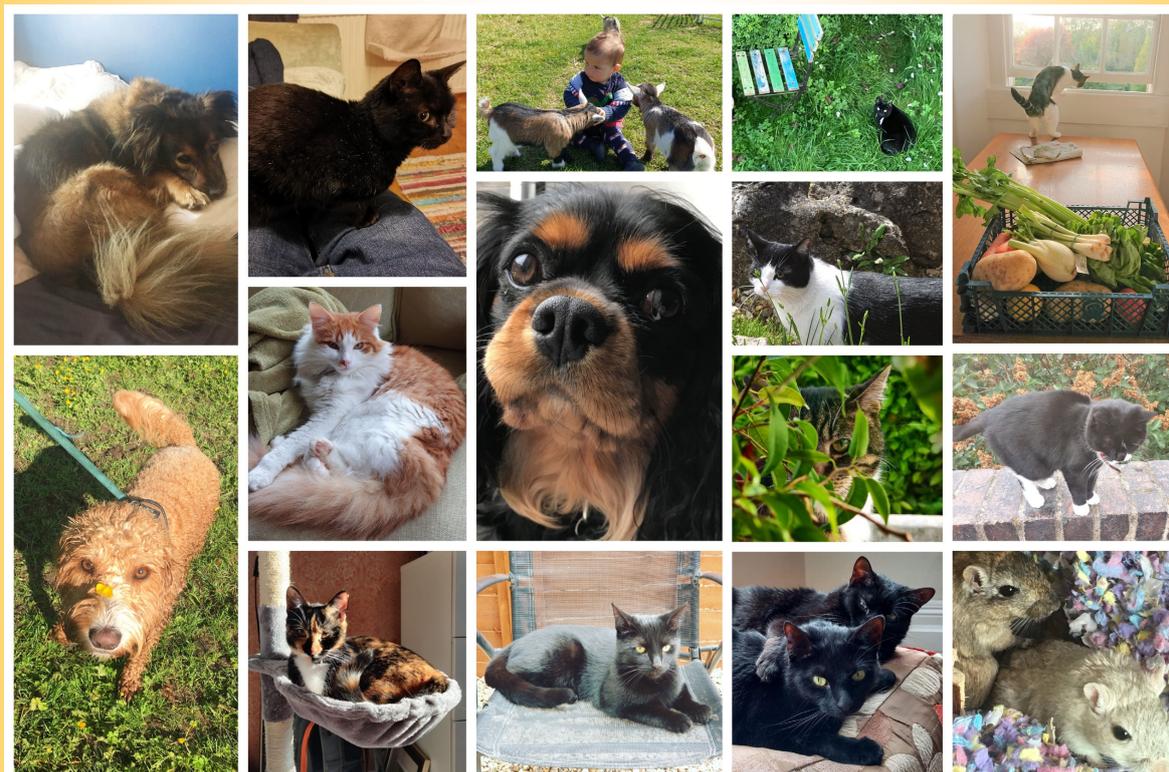




# HEB Newsletter

## Health Economics Bristol (HEB)



### Welcome from Will & Jo



Hello and welcome to this summer edition of the HEB newsletter. In this edition, we feature our unsung colleagues, large and small, who have helped us through the lockdowns. Also known as the HEB pets, they have provided a patient listening ear through IT frustrations, a constant source of support for our wellbeing and the occasional helpful Zoom call contribution. Most of them and us are looking forward to getting out a bit more over the coming months!

Also in this edition, Jo reflects on her experience as chair of the iHEA Congress scientific panel helping to deliver an engaging conference online across numerous time zones. In research news, we welcome Joanna McLaughlin who is setting out on her PhD evaluating interventions to reduce obesity and smoking prior to joint replacement surgery and Katie Breheny describes her NIHR School for Public Health Research Launching Fellowship.

We feature recent research publications describing qualitative research using think aloud methods to validate the ModRUM resource use questionnaire and, separately, consider how to measure capability wellbeing in chronic health conditions across the life course. In other work, we have evaluated the cost-effectiveness of mesh to prevent hernias after colorectal surgery and synthesized the evidence on the cost-effectiveness of therapy for chronic fatigue syndrome.

Will Hollingworth & Jo Coast, Co-Directors of HEB

## HEB News — Research

### Update on Katie Breheny's fellowship



I am one year into my NIHR SPHR Post-doctoral Launching Fellowship, jointly based in the Centre for Public Health and HEB. Aims of my fellowship include gaining experience in public health research by contributing to SPHR projects and grant applications, and further developing my expertise in public health economics. Through the SPHR Efficiency and Equity theme I contributed to workshops with academics and public health practitioners that intend to improve the measurement and reporting of efficiency in public health research.

I have become involved in a number of applied projects, working with local authorities to evaluate their own secondary school-based initiatives such as health and wellbeing screening and universal free school meals in Leicester and London, respectively. This has proved both interesting and challenging as the initiatives were implemented without any formal evaluation planned. A large benefit of my fellowship is having the funding and dedicated time to attend iHEA, HESG, public health conferences such as EUPHA as well external courses. In my second year, I intend to generate outputs from my projects and apply for further fellowships.

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### iHEA Congress: chair of the scientific panel



Joanna Coast has just finished her term as, first, Co-chair (Basel Congress 2019) and then Chair (Online Congress 2021) of the International Health Economics Association – iHEA – Scientific Committee and tells us a bit about it here: “The role has been a challenging but enjoyable one, with periods of frantic activity around the selection of Abstract Reviewers and Programme Chairs, making decisions around the review process, checking (lots of checking!) and monitoring the various processes, allocating abstracts to sessions alongside the Programme Chairs and pulling the conference schedule together.

The 2021 Congress also involved decisions about how to format the sessions in a way that would, hopefully, work with the online format. We were ready to go ahead in good time, and the Congress took place between 12th and 15th July; there were no major disasters, and I enjoyed it personally, but await the results of the evaluation!”

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### Joanna McLaughlin's new PhD research



Joanna McLaughlin has started a NIHR Doctoral Fellowship to investigate the effectiveness and cost-effectiveness of pre-surgical 'Health Optimisation' public health policies for obesity and smoking in elective hip and knee replacement surgery. The PhD study is being undertaken in collaboration with BNSSG CCG and builds on a pilot study undertaken with ARC West while an Academic Clinical Fellow (Public Health). Joanna's supervisors are Andy Judge, Ruth Kipping, Amanda Owen-Smith and Hugh McLeod.

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### Webinar

Documenting trial methods - the Health Economics Analysis Plan (HEAP)

Thursday 14 October 2021 – 12-1pm

Joanna Thorn (University of Bristol)

For more information and to register:

[www.eventbrite.co.uk/e/151938938455](http://www.eventbrite.co.uk/e/151938938455)

## HEB Publications

### Development of a brief, generic, modular resource-use measure (ModRUM): cognitive interviews with patients



ModRUM is a new questionnaire designed to measure patient-reported resource use in trials. To test the content validity and acceptability of the healthcare module of ModRUM, 20 patients participated in interviews, which included a 'think-aloud' exercise and retrospective probing questions. 80% of questions were completed without issue and responses were consistent with what questions were intended to measure. The most common issue was ambiguity around whose healthcare use the questions related to. The length, content and layout were acceptable to most participants. Revisions to ModRUM, based on the findings, included highlighting important details and providing additional definitions or examples.

[www.ncbi.nlm.nih.gov/pmc/articles/PMC8058988](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8058988) [kirsty.garfield@bristol.ac.uk](mailto:kirsty.garfield@bristol.ac.uk)

### Cost-effectiveness of Interventions for Chronic Fatigue Syndrome or Myalgic Encephalomyelitis: A Systematic Review of Economic Evaluations



Chronic fatigue syndrome (CFS), or myalgic encephalomyelitis (ME), is medically unexplained, severe and persistent fatigue. The syndrome causes a profound loss in quality of life and often results in financial implications. A systematic review was carried out to identify and critically appraise the evidence on the cost-effectiveness of CFS/ME interventions. Cognitive behavioural therapy (CBT) was evaluated across five studies, making it the most commonly evaluated intervention. Three trials supported CBT as a cost-effective treatment option for adults; however, cost-effectiveness may depend on the duration and frequency of sessions. Further larger studies are needed as well as research on interventions for children.

[www.link.springer.com/article/10.1007%2Fs40258-021-00635-7](http://www.link.springer.com/article/10.1007%2Fs40258-021-00635-7) [madeleine.cochrane@bristol.ac.uk](mailto:madeleine.cochrane@bristol.ac.uk)

### Is mesh a cost-effective way to prevent parastomal hernia in patients undergoing colostomy surgery for rectal cancer in patients undergoing end colostomy creation for rectal cancer?



Parastomal hernia (PSH) is a common problem after colostomy surgery. We developed a decision-tree and semi-Markov model to assess the 'lifetime' cost-effectiveness of synthetic, biologic and no mesh to prevent PSH after colostomy surgery for rectal cancer stages I–IV. Mesh relative risks of PSH were pooled from 13 trials and superimposed on the baseline (no mesh) risk from a population-based cohort. The risk of PSH, its repair and mortality were adjusted to account for competing risks. EQ-5D-5L utility data were incorporated from the NIHR HTA-funded CIPHER study (Cohort study to Investigate the prevention of Parastomal HERnia). Synthetic mesh was found to be the most cost-effective strategy for all rectal cancer stages.

[www.onlinelibrary.wiley.com/doi/10.1111/codi.15848](http://www.onlinelibrary.wiley.com/doi/10.1111/codi.15848) [syed.mohiuddin@bristol.ac.uk](mailto:syed.mohiuddin@bristol.ac.uk)

### Measuring capability wellbeing in adults at different stages of life



HEB team members Paul Mitchell, [Samantha Husbands](#), [Sabina Sanghera](#), [Joanna Coast](#) (as well as clinical colleagues) have recently published an article titled "Measuring capability wellbeing in adults at different stages of life for use in economic evaluation of health and care interventions: a qualitative investigation in people requiring kidney care" in Quality of Life Research. Participants completed the ICECAP-A (designed for all adults aged 18 and older) and ICECAP-O (designed for older adults aged 65 and over) in a think aloud study. The study highlights the importance of considering stage of life when choosing appropriate measures of quality of life for use in economic evaluation. The study also suggests using the ICECAP-A in patients with certain chronic health conditions that include a mix of adults across the life course.

[www.link.springer.com/article/10.1007/s11136-021-02851-z](http://www.link.springer.com/article/10.1007/s11136-021-02851-z) [paul.mitchell@bristol.ac.uk](mailto:paul.mitchell@bristol.ac.uk)

### Further key publications

**Keeney, E, Thom, HHZ, Turner, EL, Martin, RM & Sanghera, S** 2021, 'Using a Modified Delphi Approach to Gain Consensus on Relevant Comparators in a Cost-Effectiveness Model: Application to prostate cancer screening', *PharmacoEconomics*, vol. 39, no. 5, pp. 589-600. <https://doi.org/10.1007/s40273-021-01009-6>

**McLaughlin, J, Palmer, C, Redwood, S, Kipping, R, Scott, L, Hill, EM, Donovan, JL, Jago, R & Owen-Smith, A** 2021, 'Commissioner, clinician, and patient experiences of a pre-surgical health optimisation programme: a qualitative study', *BMC Health Services Research*, vol. 21, no. 1, 409, pp. 409. <https://doi.org/10.1186/s12913-021-06434-z>

Hubens, K, Krol, M, **Coast, J**, et al. 2021, 'Measurement Instruments of Productivity Loss of Paid and Unpaid Work: A Systematic Review and Assessment of Suitability for Health Economic Evaluations from a Societal Perspective: Measurement Instruments of Productivity Loss', *Value in Health*.

Jago, R, Tibbitts, B, Willis, K, Sanderson, E, **Kandiyali, R**, Reid, T, Kipping, RR, Campbell, R, MacNeill, SJ, **Hollingworth, W** & Sebire, SJ 2021, 'Effectiveness and cost-effectiveness of the PLAN-A intervention, a peer led physical activity program for adolescent girls: Results of a cluster randomised controlled trial', *International Journal of Behavioral Nutrition and Physical Activity*, vol. 18, no. 1, 63. <https://doi.org/10.1186/s12966-021-01133-8>

Heath, A, Strong, M, Glynn, D, Kunst, N, **Welton, NJ**, et al. 2021, 'Simulating Study Data to Support Expected Value of Sample Information Calculations: A Tutorial', *Medical Decision Making*.

**Chamberlain, CA**, Kandesamy, R, Robbins, et al. 2021, 'Modelling palliative and end-of-life resource requirements during COVID-19: implications for quality care', *BMJ Open*, vol. 11, no. 5, e043795. <https://doi.org/10.1136/bmjopen-2020-043795>

**Mitchell, PM, Husbands, SK**, Byford, S, Kinghorn, P, Bailey, C, Peters, TJ & **Coast, J** 2021, 'Challenges in developing capability measures for children and young people for use in the economic evaluation of health and care interventions', *Health Economics*, vol. 2021. <https://doi.org/10.1002/hec.4363>

Macgregor, L, **Ward, Z**, Martin, NK, et al. 2021, 'The cost-effectiveness of case-finding strategies for achieving hepatitis C elimination among men who have sex with men in the UK', *Journal of Viral Hepatitis*, vol. 28, no. 6, pp. 897-908. <https://doi.org/10.1111/jvh.13503>

**Keeney, E, Welton, NJ**, Stevenson, et al. 2021, 'Cost-Effectiveness Analysis of Smoking Cessation Interventions in the United Kingdom Accounting for Major Neuropsychiatric Adverse Events', *Value in Health*, vol. 24, no. 6, pp. 780-788. <https://doi.org/10.1016/j.jval.2020.12.012>

Janssen, LMM, Drost, RMWA, Paulus, ATG, **Garfield, K, Hollingworth, W, Noble, S, Thorn, JC**, Pokhilenko, I & Evers, SMAA 2021, 'Aspects and Challenges of Resource Use Measurement in Health Economics: Towards a Comprehensive Measurement Framework', *PharmacoEconomics*. <https://doi.org/10.1007/s40273-021-01048-z>

Mafirakureva, N, Stone, J, Fraser, H, **Walker, J**, Vickerman, P & al., E 2021, 'An intensive model of care for hepatitis C virus screening and treatment with direct-acting antivirals in people who inject drugs in Nairobi, Kenya: A model-based cost-effectiveness analysis', *Addiction*. <https://doi.org/10.1111/add.15630>

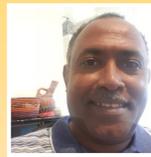
Fang, W, Wang, Z, Giles, MB, Jackson, CH, **Welton, NJ**, Andrieu, C & **Thom, H** 2021, 'Multilevel and Quasi Monte Carlo Methods for the Calculation of the Expected Value of Partial Perfect Information', *Medical Decision Making*.

**Keeney, E, Thom, HHZ, Turner, EL, Martin, RM, Morley, JE & Sanghera, S** 2021, 'Systematic review of cost-effectiveness models in prostate cancer: exploring new developments in testing and diagnosis', *Value in Health*.

**Thom, H, Walker, J**, Vickerman, P & **Hollingworth, W** 2021, 'Exploratory Comparison of Healthcare costs and benefits of the UK's Covid-19 response with four European countries', *European Journal of Public Health*, vol. 31, no. 3, ckab019. <https://doi.org/10.1093/eurpub/ckab019>

**Ward, ZD**, Mafirakureva, N, Stone, J, et al 2021, 'Cost-effectiveness of mass screening for Hepatitis C virus among all inmates in an Irish prison', *International Journal of Drug Policy*.

### Welcome Ammar!



HEB is pleased to welcome Ammar Annaw who joined us in May to work with the Research Design Service and the Bristol Randomised Trials Collaboration. Ammar joins us fresh off the MSc in Health Economics and Decision Modelling at the University of Sheffield after previously working in pharmacoeconomics in Sudan. Ammar will be putting his MSc training into action on trials of therapies for kidney failure and Parkinson's disease, amongst others.

### Congratulations!

We want to congratulate recent promotions for HEB members. Kirsty Garfield has been promoted from Research Associate to Senior Research Associate, she will continue working for the Bristol Trials Centre and The NIHR Research for Patient Benefit Programme (RfPB). Tim Jones has been promoted from Senior Research Associate to Research Fellow, he will continue being part of the health economic group in Applied Research Collaboration (ARC) West. Well-done!

### Farewell to Rebecca & Estela!



We wish Rebecca Kandiyali a fond farewell as she leaves us in September 2021 to join the University of Warwick. Rebecca joined HEB in 2015 to work with the Research Design Service and the Bristol Randomised Trials Collaboration. She has provided thoughtful guidance and support to colleagues over the years and has had great success in securing research funding in the areas of child health, type 1 diabetes and digital technologies.

We also wish Estela Capelas Barbosa all the best in her new role. She left us in April 2021 to co-Lead the Violence and Society Centre at City, University of London. Estela joined HEB in 2020 to perform two economic evaluations alongside musculoskeletal trials. Estela was also involved in the REDUCE study looking at patient and hospital factors predictive of costs and outcomes among patients admitted with a hip fracture.

### HEB seminars

We would like to thank Ben Kearns from the University of Sheffield for his wonderful contribution to the HEB seminar series/Statistics Discussion Group titled 'Dynamic survival models for predicting the future in health technology assessment and incorporating external evidence'.

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