



UNIVERSITY  
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**RESEARCH**



Centre For Health Economics

# 2021 ANNUAL REPORT

**Informing Policy and Practice  
Economic Analysis of Worldwide Repute**

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**This is my first opportunity to welcome you to our CHE Annual Report, having taken over as Director in October 2021. Mainly under the excellent leadership of our previous director, Maria Goddard, CHE again performed strongly in 2021 as shown in the research presented here, together with the grants, publications and presentations.**

**A** proportion of 2021 was, of course, affected by lockdown as a policy response to the COVID-19 pandemic. This resulted in impacts on many people personally, including my colleagues in CHE, in terms of their own or family illness, the challenges of home-schooling and multiple effects on wellbeing. I am very grateful for the flexibility and adaptability of CHE staff and students to achieve so much in these difficult circumstances, and for everyone's willingness to support their colleagues.

As we (hopefully) move beyond the worst effects of the pandemic, we have learned a lot about new ways of working through improved digital technologies, and the opportunities these provide to work effectively from home for a proportion of our working week, whilst also retaining the vibrancy of regular group activities in the office. I am proud of how CHE has moved so smoothly and productively to hybrid working.

The value of new technology facilitated the large number of presentations reported here at conferences, seminars and professional meetings over the year. It also enabled our long-standing short courses in decision modelling for economic evaluation to be run online in collaboration with the London School of Hygiene and Tropical Medicine, which attracted over 140 participants from 35 countries.

The legacy and continued effect of COVID-19 continues to impose profound disruption on health systems and the wider economy. As shown in this report, CHE's activities in 2021 included research projects to inform policy responses to these challenges, including a review of modelling methods to evaluate COVID-19 policies from a broad perspective and the impact of the pandemic on the labour market experiences of disabled people. A range of timely and accessible commentaries by CHE researchers in The Conversation provided insights on important economic and policy aspects of the pandemic.

2021 was another good year for journal publications, with 142 peer-reviewed papers published by CHE

researchers and students. Although this form of dissemination is important to demonstrate the quality of our research, I am also very happy that we retain a thriving series of internal publications, with 8 new contributions in 2021. Since the Centre's inception in 1983, 465 CHE Research and Discussion Papers have been published.

This report shows the significant number and variety of research projects being undertaken by CHE researchers over the year. Many of these fed directly into policy, for example through the two National Institute for Health Research (NIHR)-funded Policy Research Units in economics and contributions to a third in public health. We were also successful in renewing our funding from the NIHR for a 5-year programme of technology assessment for the National Institute for Health and Care Excellence (NICE). This research, in collaboration with the Centre for Reviews and Dissemination, is now in its 20th year of offering evidence and analysis to inform the decisions of NICE committees. Several CHE researchers have also contributed to the decision making through membership of those committees, and this input continued in 2021.

It was wonderful to welcome 7 new PhD students to CHE despite the challenges of travel and working arrangements. The diversity of their research topics is notable, ranging from estimation of the effects on mental health of acute health shocks to the effectiveness of development aid. We were also delighted to have 6 new researchers join us working in health policy, global health and economic evaluation. We also said goodbye to several colleagues in 2021, the longest serving of which was Trish Smith. Over 18 years, Trish led our excellent professional and support team whose hard work and dedication to CHE can never be overstated.

I hope you enjoy this year's annual review of our activities.

**Mark Sculpher**  
Director of CHE

# News and events 2021



CHE was saddened to hear about the death of *Dr Sandra G. Sosa-Rubí* in March 2021. Sandra did her PhD at the University of York, graduating in 2006 and is remembered very fondly indeed by many current and former CHE staff.



**Claire de Oliveira** was invited to join the international editorial board of the *British Journal of Psychiatry*. Her main role on the board includes serving as handling editor for papers that fall within the field of mental health economics.



**Maria Goddard** was invited to become a member of the *International Scientific Advisory Board of the Alliance for Cancer Early Detection* from March 2021.



**Ana Duarte** was appointed as a member of one of the *NICE Technical Appraisal Committees* in September 2021.

## COLOMBIA RESEARCH NEWS

**Rodrigo Moreno-Serra** from CHE was co-author of *research* into the positive effect of Colombia's ceasefire on the country's young mothers and their babies.



War and Peace in Colombia: *three years on*, researchers from the University of York and Universidad de los Andes share results from 'War and Peace – the Health and Health System Consequences of Conflict in Colombia'.

On 25 October 2021, **Rodrigo Moreno-Serra** attended the inaugural meeting of the External Advisory Committee of the 10-Year Public Health Plan of Colombia 2022-2031. Rodrigo is one of the six external advisors who were appointed to provide methodological guidance for the development of the Plan, which is being led by the Colombian Ministry of Health and Universidad de los Andes.

## COVID-19 RELATED



*How will vaccines affect the length of England's lockdown?* written for The Conversation by **Peter Sivey** and **James Gaughan** in January 2021.

*Lockdown roadmap: is the UK's exit plan the right one?* written for The Conversation by **Peter Sivey** in February 2021, as an expert's view.

*What India's government needs to do to avoid another healthcare meltdown* written for The Conversation by **Sumit Mazumdar** in May 2021.



*COVID restrictions: the data that explains why England is facing four more weeks of lockdown* written for The Conversation by **Peter Sivey** and **James Gaughan** in June 2021.

*COVID-19: further lockdowns unlikely but some winter restrictions are possible* written for The Conversation by **James Gaughan** and **Peter Sivey** in September 2021.

*COVID increased restrictions in the UK look inevitable as winter arrives* written for The conversation by **Peter Sivey**, in October 2021.

*Christmas socialising: three health experts explain how to interpret new advice* written for The Conversation by **Peter Sivey** in December 2021, a health experts view.

# THE CONVERSATION

A House of Commons Work and Pensions Select Committee report: *Disability employment gap*, published 30 July 2021, contained evidence provided to the Committee, both in writing and orally by **Nigel Rice** and colleagues at Sheffield. The work cited focused on the impact of the COVID-19 pandemic on the labour market experiences of disabled people, particularly those with a mental health disability working in shutdown sectors. The underlying research was funded through a Health Foundation grant.



## Public Health England

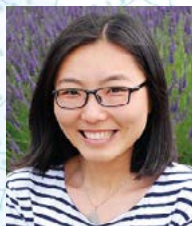


As part of *EEPRU*, **Ana Duarte**, **Simon Walker**, **Mark Sculpher** and colleagues supported Public Health England in considering ways in which decision models could guide policy responses to COVID-19. In particular, they *undertook a review* and workshop focussing on models that have incorporated COVID-19 and other health effects, NHS and other public sector costs and wider economic implications.

### MSc HEALTH ECONOMICS STUDENTS

12 MSc Health Economics students from the Department of Economics and Related Studies (DERS) joined CHE from 14 June to 13 September 2021 to carry out research and write their dissertations.

### PROMOTION SUCCESS IN 2021



Fan Yang



James Love Koh



James Gaughan



Noemi Kreif



Rita Faria



Pedro Saramago  
Goncalves

### PHD SUCCESS FOR



Laurie Rachet  
Jacquet



Yingying  
Zhang

### RETIREMENTS



**Trish Smith** retired in June 2021, after working in CHE for over 18 years.



Former CHE Head of Department, **Pete Smith** retired in September 2021 and is now Emeritus Professor in CHE.

# Spotlight on child and youth health

Anne Mason, Helen Weatherly

The depth and breadth of CHE's research on the health and wellbeing of children and young people are evident from its publications. Here, we highlight key themes from our research in 2021.

12  
Journal articles

9  
Funded projects

12  
CHE researchers

## Investing in young children

Detecting mental health problems in very young children is challenging, but parenting skills can influence children's risk of problems in later life. A pilot study showed that an early years parenting programme in England had promise, though uptake was lower than expected.

Designed to tackle child poverty, Canada's child benefit program offers tax-free cash to lower income households with children under 18. Its aim is to help prevent poor mental and physical health in later life, but some of the neediest families miss out. A review concluded that healthcare professionals could encourage awareness and uptake amongst these groups.

## Benefits and harms of gamification, screen time and entertainment

Childhood obesity is a major concern, described by some as an epidemic. Schools in Chile were randomly assigned to a 'gamification' strategy - which used stories, points and rewards to motivate pupils to eat healthily and be more active - or to a control group. Gamification reduced obesity but had no discernible impact on waist size.

Television is a possible reason for poor mental health, but demonstrating cause and effect is challenging. Using a phased introduction of digital television in the UK as a natural experiment,

researchers found that exposure to TV damaged mental health in school-aged children. By reducing social and physical activity, more screen-time may also have increased obesity.

A Canadian study of the Netflix series '13 Reasons Why' examined subsequent changes in Emergency Department visits for self-harm. Among adolescents and young people, visits increased significantly in the 3 months following the release of the Netflix series.

## Understanding and addressing violence

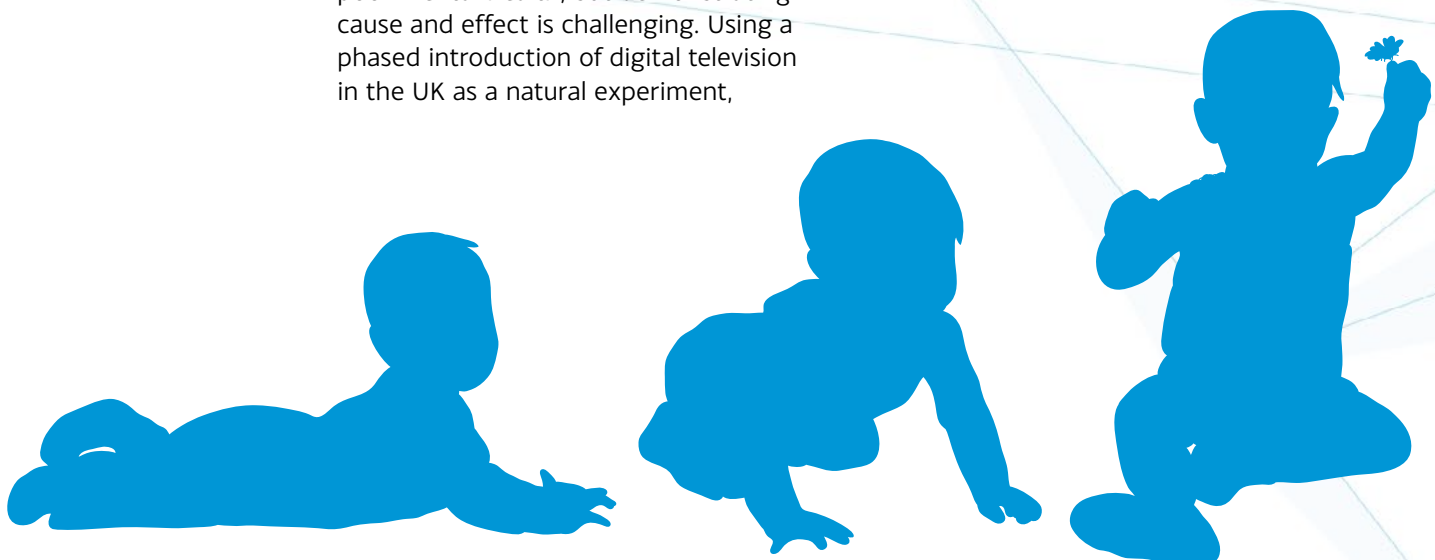
Firearm injuries are a major public health concern, with children and young people being particularly vulnerable. An analysis of Canadian data found that policies to reduce death rates from injury should consider both weapon type and intent.

The health impacts of civil conflict were scrutinised using data from Colombia. For children affected by the conflict before and shortly after birth, harmful effects on their physical development were still evident at the age of five.

## Understanding life events

The move from child to adult services is notoriously challenging for young people. CHE's input into research on these transitions includes a mental health navigator model, a method for calculating the age of transition in children with long-term conditions, and a review of the health or social care impacts of transition for those with life-limiting disease.

A review of the evaluation challenges for end-of-life care in children advocated





the need for a broader approach to the assessments of costs and benefits in such an emotive area.

Last, but not least, a *microsimulation model* was constructed to examine the life-long physical and mental health effects of childhood circumstances and development. Using data from the Millennium Cohort Study, 'LifeSim' can also enable policy analysis over the life course.

#### **Commentary**

These 12 studies illustrate how health and care economics methods can be successfully applied to address policy and evaluation questions in children and young people.

It is widely known that children's health and care needs differ to those of adults, with greater potential for the public sector to support them to flourish. These studies cover interventions across health, care, education and criminal justice targeting children and, sometimes, their parents and close networks too. Children are among the most socially vulnerable group of society with the least voice and agency:

research plays an essential role to evidence their needs.

These studies provide economic evidence spanning babies and the early years to young people in transition to adulthood, with one study following the life course of the individual. Data requirements to reflect the breadth of cross-sector contributions to care for children, as well as to evidence health inequality impact, create practical challenges for the analyst. A range of datasets were used in these studies to assess child health and care. Data challenges are particularly formidable when undertaking longer-term analyses, partly because children's services are rarely integrated within the health and care systems for adults. However, establishing causality is, in principle, no more of a challenge compared to generating economic evidence in adult health and care.

The studies illustrate the diversity of CHE's research in children, as well as identifying important evidence gaps that could be addressed through future research.



# Evaluation of GPs in emergency departments

James Gaughan, Dan Liu, Nils Gutacker (CHE), Karen Bloor, Tim Doran (Department of Health Sciences, York), Jonathan Benger (University of the West of England, Bristol)

Emergency departments (EDs) in English hospitals treat a high volume of patients with a wide range of conditions. Over recent years, the number of ED attendances has been rising, due to demographic pressures and difficulties in accessing other medical services. There are concerns that such growth in demand is not sustainable and will lead to overly crowded EDs, with negative consequences for patient care.

EDs are open every day of the week, 24/7, and will often act as a carer of last resort when other forms of care are not immediately available. Previous research has estimated that around a quarter of ED attendances might have been appropriately cared for in primary care by a general practitioner (GP). But diverting patients to GP practices has proven difficult and most hospitals have recently developed general practitioner services in emergency departments (GPEDs) to treat non-emergency patients attending EDs. The aim of these services is to reduce pressure on other ED staff, allowing them to focus on patients with more acute health problems, thereby improving patient care overall. But there is little evidence on the effectiveness of GPED models of care to date. Our NIHR-funded study sought to measure the impact of GPED services on patient experiences and outcomes.

We studied attendances to 40 EDs in English hospitals from April 2018 to March 2019. GPED is not available 24/7, but at specific times of the day. Each hospital sets the hours of operation of its GPED service. Most patients attend the ED closest to them and at a time of need, hence availability of a GPED service is

largely driven by chance. This allows us to compare what happens to patients who have potential access to a GP in the ED they attend with those who do not.

Our study showed that GPED services lead to approximately 300 fewer unplanned reattendances within 7 days, per year for the average hospital. This is a very modest impact when compared to the more than 100,000 attendances EDs deal with on average each year. There was no detectable impact of GPED on other outcome measures such as total volume of attendances, ED waiting times, or mortality.

Overall, we found no evidence for the hoped for benefits of faster and higher quality care for patients in EDs. Based on the outcomes we were able to investigate, GPED services do not currently appear to justify their costs.

This work is funded by National Institute of Health Research (NIHR) Health Services and Delivery Research Programme (15/145/04 and 15/145/06)

## Further details of the work can be found in the following publication:

Gaughan J, Liu D, Gutacker N et al. *Does the presence of general practitioners in emergency departments affect quality and safety in English NHS hospitals? A retrospective observational study.* *BMJ Open* 2022;12:e055976.





# Research projects 2021

Research projects are arranged in themes to reflect the cross-cutting nature of CHE research. CHE has a broad funding base and a list of funders follows:

## CHE FUNDERS

- **Better Start Bradford**
- **Bill and Melinda Gates Foundation**
- **Biotechnology and Biological Sciences Research Council (BBSRC)**
- **British Council –UK/China Partnership Innovation Challenge Fund**
- **British Heart Foundation (BHF)**
- **British Skin Foundation (BSF)**
- **Cancer Research UK (CRUK)**
- **Centre for Future Health (CFH)**
- **Department for International Development (DFID)**
- **Economic and Social Research Council (ESRC)**  
Impact Acceleration Account (IAA)
- **Engineering and Physical Sciences Research Council (EPSRC)**
- **European & Developing Countries Clinical Trials Partnership (EDCTP)**
- **European Commission**  
Innovative Medicines Initiative (IMI) H2020 programme
- **EuroQol Research Foundation**
- **Geneva University Hospitals Foundation**
- **Global Challenges Research Fund (GCRF)**
- **Health Foundation**
- **Medical Research Council (MRC)**  
Clinical Trials Unit (CTU)  
GCRF Foundation  
Newton Fund  
Research Councils UK (RCUK)  
South African Medical Research Council (SAMRC)  
UK Prevention Research Partnership
- **National Institute for Health Research (NIHR)**  
Applied Research Collaboration (ARC)  
Global Health Research  
Health Services & Delivery Research (HS&DR)  
Health Technology Assessment (HTA)  
NIHR Evaluation Trials and Studies Coordinating Centre (NETSCC)  
Policy Research Programme (PRP)  
Programme Grants for Applied Research (PGfAR)  
Public Health Research (PHR)  
Research and Development (R&D) Programme  
Research Capability Funding (RCF)  
Research for Patient Benefit (RfPB)  
Research and Innovation for Global Health Transformation (RIGHT)  
School for Social Care Research (SSCR)  
Technology Assessment Reviews (TARs)
- **NordForsk**
- **Research Council of Norway**
- **The World Bank**
- **Trond Mohn Foundation and Norwegian Agency for Development Cooperation**
- **UK Health Security Agency and Office for Health Improvement and Disparities**
- **UK Research and Innovation (UKRI)**
- **Wellcome**
- **Worldwide Universities Network (WUN)**
- **Yorkshire Cancer Research (YCR)**

# Research projects 2021 (in progress 2021 or completed in 2021)

## ECONOMIC EVALUATION

- A pragmatic, multicentre, randomised controlled trial to assess the clinical and cost effectiveness of negative pressure wound therapy versus usual care for surgical wounds healing by secondary intention (SWHSI 2)**  
Pedro Saramago Goncalves  
Funder: NIHR HTA
- A randomised controlled trial of compression therapies for the treatment of venous leg ulcers (VenUS 6)**  
Marta Soares, Pedro Saramago Goncalves  
Funder: NIHR HTA
- Appraising the social distributions to guide levelling up health and wellbeing during COVID-19 recovery**  
Susan Griffin, Simon Walker, Helen Weatherly  
Funder: NIHR PRP
- Assessing the value of novel antimicrobials under new payment models**  
Mark Sculpher, Beth Woods, Laetitia Schmitt, Claire Rothery, Dina Jankovic, Laura Bojke  
Funder: DHSC PRP EEPUR
- Atopic Eczema (AE) in adults & children**  
Andrea Manca (CHE), Tom Patton (University of California)  
Funder: BSF
- Breathlessness RELief AT Home (BREATHE)**  
Susan Griffin (CHE), Victoria Allgar (Department of Health Sciences, York)  
Funder: NIHR RfPB
- Cerebral embolic protection in TAVI – A Clinical Outcome Trial**  
Stephen Palmer  
Funder: BHF and NIHR
- Estimating health opportunity costs for the NHS**  
Karl Claxton, James Lomas, Marta Soares, Mark Sculpher (CHE), Steve Martin (Department of Economics and Related Studies, York)  
Funder: DHSC PRP EEPUR
- FAST-Forward – a randomised clinical trial testing a 1-week course of curative whole breast radiotherapy against a standard 3-week schedule in terms of local cancer control and late adverse effects in women with early breast cancer**  
Susan Griffin, Rita Faria, David Glynn, Francesco Longo  
Funder: NIHR HTA
- Going beyond health opportunity costs: exploring the potential effects of publicly funded Adult Social Care on individual net production**  
Francesco Longo, Karl Claxton, Anne Mason, Susan Griffin, Simon Walker, Helen Weatherly  
Funder: DHSC PRP EEPUR II and ESHCRU II
- Healthcare Alliance for Resourceful Medicines Offensive against Neoplasms in Haematology (HARMONY)**  
Andrea Manca  
Funder: European Commission IMI H2020 programme
- HTx: Next Generation HTA**  
Andrea Manca, Noemi Kreif, Claire Rothery (CHE), Cynthia Iglesias, Alexandra Smith, Ge Yu (Department of Health Sciences, York)  
Funder: European Commission H2020 programme
- IMPORT LOW: Randomised trial testing intensity modulated and partial organ radiotherapy following breast conservation surgery for early breast cancer**  
Susan Griffin, Rita Faria, David Glynn, Francesco Longo  
Funder: CRUK (CRUK/06/003) and DHSC
- Improving the Wellbeing of people with Opioid Treated CHronic pain (I-WOTCH)**  
Andrea Manca (CHE), Cynthia Iglesias (Department of Health Sciences, York)  
Funder: NIHR HTA R&D Programme
- NETSCC: TARs – Production of Technology Assessment Reviews for the NIHR**  
Laura Bojke, Susan Griffin, Stephen Palmer, Claire Rothery, Mark Sculpher, Marta Soares, Simon Walker, Beth Woods, Ana Duarte, Rita Faria, Pedro Saramago Goncalves  
Funder: NIHR TARs
- NICE Economic and Methodological Unit (EMU)**  
Helen Weatherly, Susan Griffin, Simon Walker, with colleagues from York Health Economics Consortium  
Funder: NICE
- NIHR Applied Research Collaboration – Yorkshire and Humber ARC (Health Economics, Evaluation, Equality theme)**  
Laura Bojke, Gerry Richardson, Sebastian Hinde, Rowena Jacobs (CHE), with colleagues from across the University of York  
Funder: NIHR ARC
- NIHR Research Design Service (RDS)**  
Gerry Richardson, Susan Griffin, Sebastian Hinde  
Funder: NIHR
- PRECISE: A health economic approach to evaluate uncertain evidence in personalised medicine**  
Karl Claxton  
Funder: NordForsk
- Prevalence and economic burden of medication errors in the NHS in England**  
Rita Faria, Mark Sculpher, Dina Jankovic (CHE), Rachel Elliott, Elizabeth Camacho (University of Manchester), Fiona Campbell, Marissa Martyn St James, Ruth Wong, Eva Kaltenthaler (University of Sheffield)  
Funder: DHSC PRP EEPUR
- PROFID: Implementation of personalised risk prediction and prevention of sudden cardiac death after myocardial infarction**  
Andrea Manca, Beth Woods, Vijay Gc, Alastair Bennett (CHE), Cynthia Iglesias (Department of Health Sciences, York)  
Funder: European Commission (IMI) H2020 programme
- Promoting the use of structured methods for expert elicitation into health care decision making: development of an online repository and dissemination tools**  
Laura Bojke, Dina Jankovic, Marta Soares  
Funder: ESRC IAA
- REVascularisation of Ischaemic VEntricular Dysfunction (REVIVED): a randomised comparison of percutaneous coronary intervention (with optimal medical therapy) versus optimal medical therapy alone for heart failure secondary to coronary**  
Mark Sculpher  
Funder: NIHR HTA

# Examining equity in the utilisation of psychiatric hospital care for people with severe mental illness (SMI) in Ontario, Canada

**Claire de Oliveira, Rowena Jacobs** (CHE), **Joyce Mason** (Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, Canada)

Severe mental illness (SMI), such as schizophrenia, bipolar disorder and other psychoses, affects a small number of people, but is associated with poor health, social, and economic outcomes, such as elevated risk of death, lower life expectancy (by about 13–30 years compared to the general population), high health care costs, and lost productivity, with psychiatric hospital care accounting for a large part of patients' health care use.



**P**ast research done at the Centre for Health Economics (by White and colleagues) examined the socio-economic equity in the use of hospital care for people with SMI using the Hospital Episode Statistics database from England. The researchers found pro-poor socio-economic inequality in the use of psychiatric hospital care for people with SMI – in other words, they found that people with SMI living in poorer areas were more likely to have psychiatric hospital care than people living in wealthier areas. They also found that this difference between poorer and wealthier people with SMI had decreased over time.

To understand whether these findings were unique to England or not, they suggested doing the same analysis using data from other countries with a

similar health care system. Because of the similarities between the English and Ontario health care systems, we decided to re-do this analysis using data from Ontario, Canada.

We used health care records for all people with SMI living in Ontario, and re-did the same analysis as White and colleagues to model equity in the use of psychiatric hospital care. Socio-economic equity in psychiatric hospital care was defined as equality in the use of psychiatric hospital care between different deprivation groups in different geographic areas with the same need for health care.

Like White and colleagues, we also found that people with SMI living in poorer areas of Ontario had more psychiatric hospitalisations than people living in wealthier areas. This difference was especially present for people living in poorer areas in large cities, where many people with SMI live, and for people living in very rural parts of the province, where access to health care can be difficult. We found that this inequality did not change over time.

Although there has been some discussion about whether to make more or less use of hospital care versus other care in treating people with SMI, policy makers should try to make sure that people living with SMI have access to the primary, community, and/or social care they need. This could be done by getting rid of barriers to get psychiatrist care and making sure all patients can access psychotherapy.

This work was partly funded through the Alan Williams Fellowship awarded to Claire de Oliveira by the Centre for Health Economics at the University of York, England.

## Further details of the work can be found in the following publication:

de Oliveira C, Mason J, Jacobs R. *Examining equity in the utilisation of psychiatric inpatient care among patients with severe mental illness (SMI) in Ontario, Canada*. *BMC Psychiatry* 2021;21:420.

# Research projects 2021

## Setting payment-levels and managing uncertainty within the commercial arrangements for new antibiotics

Beth Woods, James Lomas, Mark Sculpher, Karl Claxton  
Funder: NIHR PRP EEP RU

## SHIFT – A cluster randomised controlled trial to investigate the effectiveness and cost-effectiveness of a Structured Health Intervention For Truckers

Gerry Richardson, Edward Cox, Simon Walker  
Funder: NIHR PHR

## SMART- Strategies for reducing sitting time in office workers: a three arm cluster randomised controlled trial

Gerry Richardson, Edward Cox, Simon Walker  
Funder: NIHR PHR

## SWIFFT – Scaphoid Waist Internal Fixation for Fractures Trial: cast treatment versus surgical fixation of fractures of the scaphoid waist in adults: a multi-centre randomised controlled trial

Gerry Richardson, Sebastian Hinde (CHE), Stephen Brealey (Department of Health Sciences, York)  
Funder: NIHR HTA

## The cost-effectiveness of cascade testing for familial hypercholesterolaemia

Beth Woods, Pedro Saramago Goncalves, Rita Faria, Susan Griffin, Edward Cox, Mark Sculpher  
Funder: NIHR HTA

## The wearable clinic for digital care services

Andrea Manca, Vijay Gc (CHE), Cynthia Iglesias (Department of Health Sciences, York), Ibrahim Habli (Department of Computer Sciences, York)  
Funder: EPSRC

## Transforming the treatment and prevention of leprosy and buruli ulcers in low- and middle-income countries (LMICs)

Mark Sculpher, Rita Faria, Jessica Ochalek  
Funder: NIHR RIGHT

## Trial of imaging and schedule in seminoma testis (TRISST)

Pedro Saramago Goncalves, Rita Faria, Mark Sculpher  
Funder: MRC UCL & Cancer Research UK

## UK China Health and Economy Partnership

Cynthia Iglesias (Department of Health Sciences, York), Andrea Manca (CHE)  
Funder: British Council -UK/China Partnership Innovation Challenge Fund

## HEALTH POLICY

### Analysis of purchaser-provider contracts: modelling risk sharing and incentive implications

Martin Chalkley, Hugh Gravelle, Maria Goddard, Nils Gutacker, Nikita Jacob, Rowena Jacobs, Leonardo Koeser, Dan Liu, Rita Santos (CHE), Luigi Siciliani (Department of Economics and Related Studies, York)  
Funder: NIHR PRP ESHCRU II

### Case-mix adjustment of PROM data at the level of health domains

Nils Gutacker (CHE), David Parkin (Office of Health Economics & City University of London), Yuanyuan Gu (Macquarie University, Australia)  
Funder: EuroQol Research Foundation

### Drivers of demand for health care and associated activity and spending

Nigel Rice, Martin Chalkley, Nils Gutacker, Panos Kasteridis, Anne Mason, Maria Ana Matias, Rita Santos (CHE), Raphael Wittenberg (LSE)  
Funder: NIHR PRP ESHCRU II

### How did previous patients like me do?

Nils Gutacker  
Funder: Geneva University Hospitals Foundation

### Measuring NHS productivity

Adriana Castelli, Martin Chalkley, James Gaughan, Maria Ana Matias, Anastasia Arabadzhyan  
Funder: NIHR PRP

### Paying for health benefits using PROMs data

Martin Chalkley, James Gaughan, Nils Gutacker, Hugh Gravelle (CHE), Luigi Siciliani (Department of Economics and Related Studies, York)  
Funder: NIHR PRP ESHCRU II

### PREPARE 2020 – 2025 Fast response research and analytical facility

Nils Gutacker, Anne Mason (CHE), Karen Bloor, Tim Doran, Stephen Holland, Trevor Sheldon (Department of Health Sciences, York), Yvonne Birks (Social Policy Research Unit, York), in collaboration with the King's Fund  
Funder: NIHR PRP

### The Health of Places and the Health and Outcomes of Individuals in those Places

Rita Santos (CHE), Luke Munford (University of Manchester)  
Funder: Health Foundation

# Evaluating decision uncertainty in distributional cost-effectiveness analysis

Fan Yang, Ana Duarte, Simon Walker, Susan Griffin

Public health interventions aim to produce health benefits on a population level. When making the decision about whether to implement a public health intervention, it is important to know not only the impact on overall population health but also on how the benefits are spread between different groups (i.e., the impacts on health inequality).

**D**istributional cost effectiveness analysis (DCEA) allows for the consideration of the impacts of interventions on population health and health inequalities. It incorporates information on differences between specified socioeconomic groups, for example, in their behaviours, health condition and health interventions, to capture how an intervention would affect both overall population health and differences in health between these socioeconomic groups. The use of DCEA also provides valuable information on the extent of any potential trade-offs between improvements in overall health versus reduction in health inequality, and whether there is value in modifying an intervention to improve its distributional impacts.

In DCEA, uncertainty analysis can consider the decision uncertainty around impacts on both overall health and health inequality (i.e., the probability that an intervention will increase overall health and the probability that it will reduce inequality). The cost of uncertainty can be estimated in terms of the probability of an incorrect decision and the potential loss associated with it, and used to inform research decisions about whether it would be worthwhile obtaining more information to reduce the uncertainty.

In our recent study, we adapted an existing smoking cessation cost-effectiveness model comparing two active interventions and a 'do nothing' alternative, so that it captured socioeconomic variation in model parameters, namely baseline

health and behaviour and intervention impacts. Socioeconomic groups were defined in the model in terms of the Index of Multiple Deprivation, a weighted composite index measure of deprivation by geographical areas combining level of deprivation information from their inhabitants and the areas in England. Model parameters were characterised as probability distributions and input uncertainty then propagated through the model using Monte Carlo simulation. Value of information (VoI) analysis and analysis of covariance (ANCOVA) identified what additional evidence would add most value to the level of confidence in the results. We also explored the robustness of results when using local authority-level versus national inputs to ascertain whether the conclusions about decision uncertainty based on the national-level estimates could inform local policy.

When comparing active interventions to "do nothing", we found that providing the smoking cessation interventions would increase overall health while increasing inequality, with no uncertainty associated with the decision. However, there was uncertainty in the direction of both impacts when comparing the two active interventions. Uncertainty in socioeconomic differences in intervention effectiveness and uptake were shown to contribute the most to this decision uncertainty based on VOI and ANCOVA, suggesting potential value of collecting additional evidence on intervention-related inequalities. We also found different levels of decision uncertainty between local and national settings. This implies that different types and levels of additional evidence are required for decisions at local-authority and national levels.

This work is funded by a grant from Public Health Research Consortium (PHRC).

**Further details of the work can be found in the following publication:**

Yang F, Duarte A, Walker S, Griffin S. *Uncertainty analysis in intervention impact on health inequality for resource allocation decisions*. *Medical Decision Making* 2021;41(6):653-666.



# Research projects 2021

## MENTAL HEALTH

### Assessing the quality and uptake of incentivised physical health checks for people with serious mental illness

Panos Kasteridis, Rowena Jacobs, María José Aragón, Luis Fernandes, Nils Gutacker (CHE), Najma Siddiqi (Department of Health Sciences).

Funder: NIHR PRP

### Closing the GAP (CTG) Mental Health Network

Rowena Jacobs, María José Aragón, with colleagues from across the University of York

Funder: UKRI

### Contracting for secure mental health services

Martin Chalkley, María José Aragón, Rowena Jacobs

Funder: DHSC PRP EEPUR

### DIADEM – Design and evaluation of interventions to improve outcomes for diabetes and depression multi-morbidity in Bangladesh and Pakistan

Rowena Jacobs, Marc Suhrcke, Simon Walker, David Glynn, Pedro Saramago Goncalves (CHE), Najma Siddiqi, Simon Gilbody, Catherine Hewitt (Department of Health Sciences, York)

Funder: NIHR RIGHT

### DIAMONDS: Improving diabetes self-management for people with severe mental illness

Rowena Jacobs, Stephen Palmer, Simon Walker, Panos Kasteridis, Rita Santos, Francesco Fusco, Dina Jankovic (CHE), with colleagues from Department of Health Sciences, York

Funder: NIHR PGfAR

### Efficiency, cost and quality of mental healthcare provision

Rowena Jacobs, Adriana Castelli, Maria Goddard, Hugh Gravelle, Nils Gutacker, María José Aragón, Anne Mason (CHE), with colleagues from University of Sheffield and University of Birmingham

Funder: Health Foundation

### IMPACT: Improving outcomes in mental and physical multimorbidity in South Asia

Rowena Jacobs (CHE), with colleagues from across the University of York and partner institutions

Funder: NIHR Global Health Research

### Improving diabetes care for people with serious mental illness (SMI)

Rowena Jacobs (CHE), with colleagues from Department of Health Sciences, York

Funder: Closing the Gap (CTG) Mental Health Network, UKRI

### Mental Health Navigators Evaluation

Laura Boke, Gerry Richardson, with colleagues from across the University of York

Funder: NIHR

### MIND-ECON: The longer-term, average & distributional effects of mental health interventions & the causal impact of mental illness on economic outcomes

Rowena Jacobs, Nikita Jacob, Marc Suhrcke, Samuel Lordemus, Noemi Kreif (CHE), Andrew Mirelman (WHO), with colleagues from University of Cape Town, South Africa, and the South African Medical Research Council

Funder: MRC Newton Fund

### Multimorbidity Among People with Serious mental illness (MAPS): Mapping disease clusters, risk factors, trajectories, service barriers and outcomes

Rowena Jacobs, Claire de Oliveira, Panos Kasteridis, Leo Koeser (CHE), with colleagues from across the University of York

Funder: MRC

### Personalising mental health treatments for young people using machine intelligence (ProMetheUs)

Noemi Kreif, with colleagues from across the University of York

Funder: CFH

### The HOME study: A randomised controlled trial comparing the addition of Proactive Psychological Medicine to usual care on the time spent in hospital by older acute hospital inpatients

Simon Walker, Fan Yang, Mark Sculpher (CHE), with colleagues from University of Oxford and London School of Hygiene and Tropical Medicine

Funder: NIHR HS&DR

### The PSY-SIM model: Using real world data to inform health care policy for individuals with psychosis in England

Claire de Oliveira, Rowena Jacobs (CHE)

Funder: Closing the Gap (CTG) Mental Health Network, UKRI

### Yorkshire and Humber ARC (Mental and Physical Multimorbidity theme)

Rowena Jacobs, Laura Bojke, Gerry Richardson, Sebastian Hinde (CHE), with colleagues from across the University of York

Funder: NIHR ARC

## EQUITY IN HEALTH AND HEALTH CARE

### Accounting for Unmet Need in Equitable Healthcare Resource Allocation

CHE team: Richard Cookson, James Lomas, Katia Grascic; wider multi-institution team including Ben Barr (PI from Liverpool), Christodoulos Kyridemos, Laura Anselmi, Miqdad Asaria, Tarryn Lake, Chris Bentley, Martin O'Flaherty, Matthew Sutton

Funder: NIHR PRP

### ActEarly – a city collaboratory approach to early promotion of good health and well-being

CHE team: Richard Cookson, Ieva Skarda (with numerous colleagues from other departments at York and other UK institutions)

Funder: UK Prevention Research Partnership (MRC)

### Bergen Centre for Ethics and Priority-Setting, University of Bergen (subcontract via grants from Trond Mohn Foundation and Norwegian Agency for Development Cooperation)

Richard Cookson

Funder: Trond Mohn Foundation and Norwegian Agency for Development Cooperation

### Decomposing the socioeconomic gradient in health-related quality of life over the life course (DeQoL-LIFE)

Nils Gutacker, James Love-Koh (CHE), Tim Doran (Department of Health Sciences, York), Simon McNamara, Paul Schneider (University of Sheffield).

Funder: EuroQoL Research Foundation

### Equity impact toolkit – Small-scale prototype development study

Richard Cookson, Fan Yang, James Love-Koh, Rita Faria, Susan Griffin

Funder: NICE

# Does aid for malaria increase with exposure to malaria risk? Evidence from mining sites in the D.R.Congo

Samuel Lordemus

Identifying and reaching the populations with the most pressing health needs is essential in countries with high disease burdens and limited health care resources. Yet, in those vulnerable countries, information about local health needs might be hard to obtain for the government and international donors, due to numerous potential barriers (poor capacity to identify cases, information not routinely collected, weak institutions to collect the data, etc.). Under such circumstances, donors might have limited information about the distribution and intensity of the needs in the recipient country. This could in turn reduce their capacity to identify and target local population needs, reduce the burden of the diseases, and maximise the effects of aid. Identifying and targeting these locations is crucial to containing the risk of transmission and eliminating the disease.

This paper addresses this issue by exploring to which extent donors are able to target communities with the highest exposure to malaria risk in the eastern provinces of the Democratic Republic of Congo (DRC). Artisanal and small-scale mining (ASM) is a major economic activity in this region of the DRC, and mines provide favourable environments for mosquitoes' breeding habitats. The paper relies on an innovative strategy that exploits the dramatic increase in the risk of malaria transmission around mines, defined as malaria "hotspots", to identify the spatial variations in the burden of malaria. The intuition behind this strategy is to compare how aid for malaria received by health facilities varies between areas with low and high malaria risk. To do it, fine-grained data on mines as well as financial and health indicators at the health facility level were collected.

The results show no evidence that aid for malaria increases with exposure to malaria risk. The finding suggests that local populations with the highest burden of malaria do not receive the highest share of aid for malaria, compared to those living in neighbouring areas with reduced exposure to malaria infection.

Overall, these findings provide some suggestive evidence that donors may have limited ability to target aid to beneficiaries with the greatest health needs and challenge the assumption that donors possess adequate information about local needs to make optimal aid allocation decisions. Better allocation of aid could generate health efficiency gains and reduce inequities in treatment access for patients across areas with different burdens of diseases. In cases where health information is fragmented and difficult to collect, donors could seek the engagement of local community leaders in aid targeting decisions.

This work is funded by the Economic and Social Research Council.

**Further details of the work can be found in the following publication:**

Lordemus S. *Does aid for Malaria increase with exposure to Malaria risk? Evidence from mining sites in the D.R.Congo.* *Oxford Bulletin of Economics and Statistics* 2021;doi:10.1111/obes.12483.



# Research projects 2021

## **Evidence to support efficient and effective reduction of health inequality**

Susan Griffin, Nils Gutacker, Simon Walker, Jessica Ochalek, Shainur Premiji, Fan Yang  
Funder: NIHR PRP

## **MatCHNet: Harnessing cross-country administrative data to evaluate national policy impacts on maternal, infant and child health and health inequalities**

Richard Cookson (CHE), Ruth Dundas, Alastair Leyland, Anna Pearce (University of Glasgow), Ruth Gilbert, Pia Hardelid, Katie Harron (UCL), Sinead Brophy (Swansea University), Joanne Given, (Ulster University), Rachael Wood (NHS National Services Scotland)  
Funder: UK Prevention Research Partnership (MRC)

## **Methods for reducing health inequalities through pricing of health services policy research programme central commissioning facility**

Nils Gutacker, Luis Fernandes, David Glynn, Anne Mason, Simon Walker (CHE), Tim Doran (Department of Health Sciences, York), Luigi Siciliani (Department of Economics and Related Studies, York).  
Funder: NIHR PRP

## **Re-engineering health policy for fairer decisions and better health**

Richard Cookson (CHE), Tim Doran (Department of Health Sciences, York),  
Funder: Wellcome Senior Investigator Award

## **Tracing causes of inequalities in health and well-being: analysis of rich longitudinal data**

Nils Gutacker  
Funder: Research Council of Norway via University of Tromsø

## GLOBAL HEALTH

### **ARISE: Accountability for informal urban equity hub**

Sumit Mazumdar (CHE), Helen Eley (Department of Health Sciences, York)  
Funder: ESRC GCRF

### **Breather Plus Trial**

Simon Walker, Paul Revill  
Funder: EDCTP

### **Children with HIV in Africa – pharmacokinetics and acceptability of simple antiretroviral regimens (CHAPAS 4)**

Paul Revill, Jessica Ochalek, Beth Woods, Alex Rollinger  
Funder: EDCTP

### **COVID-19, social distancing and violence against women in Brazil (BRAVE)**

Rodrigo Moreno-Serra, Noemi Kreif, Samuel Lordemus  
Funder: UKRI GCRF/Newton Fund

### **HIV modelling consortium: 4 year programme grant**

Mark Sculpher, Paul Revill, Claire Rothery, Karl Claxton, Beth Woods  
Funder: Bill and Melinda Gates Foundation

### **Informing health resource allocation decisions: models of interdisciplinary research emphasising local engagement and policy impact**

Paul Revill, James Love Koh, Alex Rollinger  
Funder: Worldwide Universities Network (WUN)

## **Maximising the impact of York research on conflict and health in Colombia through timely evidence for policy, knowledge exchange and local partnerships**

Rodrigo Moreno-Serra  
Funder: ESRC IAA

## **National and regional policies to improve food environments, obesity and cardiovascular health in Peru: A community-based systems and modelling approach**

Marc Suhrcke (CHE), Andrew Mirelman (WHO)  
Funder: BBSRC

## **NIHR global health research group on Global Health Econometrics and Economics (GHE2)**

Marc Suhrcke, Rodrigo Moreno-Serra, Noemi Kreif, Sumit Mazumdar, Mark Sculpher, Paul Revill, Stephen Palmer, Martin Chalkley, Nigel Rice, Richard Cookson (CHE), Andrew Mirelman (WHO). With PRICELESS SA, Wits University School of Public Health (South Africa). Foundation Economic Research Institute (FIPE), University of São Paulo (Brazil). Center for Health Economics and Policy Studies (CHEPS), Universitas Indonesia (Indonesia)  
Funder: NIHR Global Health Research

## **Redressing gendered health inequalities of displaced women and girls in contexts of protracted crisis in Central and South America**

Rodrigo Moreno-Serra, Cristobal Cuadrado (CHE), Jean Grugel (Department of Politics, York)  
Funder: ESRC

## **Refugees in Africa ClusTer (REACT): humanitarian health policy, gender and health economics**

Paul Revill, Mark Sculpher, Wiktorja Tafesse  
Funder: EPSRC

## **SHINE: Shorter treatment for minimal TB in children**

James Love-Koh, Paul Revill, Simon Walker  
Funder: MRC CTU

## **Short intensive anti-tuberculosis and anti-thrombosis treatment for children with tuberculous meningitis**

Simon Walker, Paul Revill  
Funder: MRC

## **Tailoring health policies to improve outcomes using machine learning, causal inference and operations research methods**

Noemi Kreif, Julia Hatamyar  
Funder: MRC

## **Thanzi la Onse (Health of All): Frameworks and analysis to ensure value for money health care – developing theory, changing practice**

Mark Sculpher, Paul Revill, Martin Chalkley, Alex Rollinger, Steph Richards, Sakshi Mohan, Beth Woods, Simon Walker, Peter C Smith, Susan Griffin, Wiktorja Tafesse, Marc Suhrcke, (CHE). With Department of Politics, University of York. Department of Health Sciences, University of York. Overseas Development Institute (ODI). Center for Global Development (CGD). Imperial College London. University College London. College of Medicine, University of Malawi. MRC/UVRI & LSHTM Uganda Research Unit on AIDS  
Funder: MRC GCRF, RCUK

## **Uganda EQ-5D-5L valuation study**

Fan Yang, Susan Griffin, Mark Sculpher (CHE), Kenneth Katumba (MRC/UVRI & LSHTM Uganda Research Unit, Uganda)  
Funder: Euroqol Group



# Sharing the value of new pharmaceuticals: how much goes to patients and to manufacturers?

Beth Woods, Aimee Fox, Mark Sculpher, Karl Claxton

The economic evaluation of new branded pharmaceuticals by health technology assessment (HTA) organisations like the National Institute for Health and Care Excellence (NICE) seeks value for money from those products for health systems. The manufacturers of these products have generally secured patents which protect them from competition from cheaper generic products for a period of about 10 years. In part, patents aim to ensure manufacturers have sufficient revenue to incentivize further research and development to benefit future patients. HTA organisations also see part of their role as being to encourage manufacturers to innovate. This is reflected, for example, in decisions about the additional costs they are willing to accept for extra patient benefit from a new drug. This approval norm is often called a 'cost-effectiveness threshold'.

**T**his interaction of HTA, patent protection, and subsequent competition from generic products will result in the value of a new pharmaceutical being shared between its manufacturer (in terms of profit) and the patients served by the health care system in terms of health improvement. Previous research suggested that patients accrue 59-98% of the total value of new drugs, with manufacturers taking the remaining value. However, these studies fail to consider key evidence which impacts how value is shared – opportunity cost. Any commitment of additional expenditure on new pharmaceuticals inevitably takes funding from elsewhere, resulting in other interventions being curtailed or opportunities or their further development forgone, with negative impacts on the benefits for other patients. Empirical evidence shows that the health opportunity costs of health care funds are considerably higher than existing approval norms.

The proportion of value accruing to manufacturers is, therefore, likely to have been under-estimated in previous studies.

This research developed a framework to quantify the total value of branded drugs accounting for their benefits and health opportunity costs in the patent and post-patent periods. The framework was applied to a sample of branded pharmaceuticals that have been appraised by NICE. The research showed that the share of value accruing to patients ranged from losses of 160% to gains of 94% of the potential net health benefits available. Even in the long run, the benefits of some new medicines are not sufficient to offset the opportunity costs of payments to manufacturers, and approval will reduce overall population health. The work raises some important policy implications. Shares of value to patients may be less if HTA bodies do not ensure the prices paid for



branded pharmaceuticals are reset if a generic or biosimilar version of a comparator becomes available – something not routinely done in the UK. Furthermore, although using payment levels on current products to generate long-term gains net health effects by incentivising R&D is a legitimate policy consideration, this cannot justify prices being agreed at levels which lead to overall losses in population health.

This work is funded by the National Institute for Health Research (NIHR) Policy Research Programme, conducted through the Policy Research Unit in Economic Methods of Evaluation in Health and Social Care Interventions, PR-PRU-1217-20401.

**Further details of the work can be found in the following publication:**

Woods B, Fox A, Sculpher M, Claxton K. *Estimating the shares of the value of branded pharmaceuticals accruing to manufacturers and to patients served by health systems*. *Health Economics* 2021, 1-18.

# Research projects 2021

## **War and Peace: the health and health system consequences of conflict in Colombia**

Rodrigo Moreno-Serra, Noemi Kreif, Marc Suhrcke, Samuel Lordemus (CHE), Andrew Mirelman (WHO), Nina Caspersen (Department of Politics, York), Bayard Roberts (London School of Hygiene and Tropical Medicine). With Universidad de los Andes, Colombia.  
Funder: MRC/ESRC/DFID/Wellcome

## **HEALTH AND SOCIAL CARE**

### **Adult social care partnership: Using co-production methods to build and evaluate a regional capacity-building network to facilitate greater understanding use and production of research in adult social care**

Helen Weatherly (CHE), Yvonne Birks, Kate Baxter, Mark Wilberforce (Social Policy Research Unit, York)  
Funder: NIHR HS&DR

### **Better Start Bradford Innovation Hub Phase 2**

Gerry Richardson, Laura Boke, Sebastian Hinde (CHE), Kate Pickett, Karen Bloor, Tracey Bywater (Department of Health Sciences, York)  
Funder: Better Start Bradford

### **ENHANCE – End of Life Care for Infants, Children and Young People: a mixed methods evaluation of current practice in the United Kingdom**

Helen Weatherly, Sebastian Hinde (CHE), and colleagues in Department of Health Sciences, York  
Funder: NIHR HSDR

### **ESSENCE – Examining the economic case for a range of adult social care interventions**

Helen Weatherly  
Funder: NIHR SSCR

### **Evaluating the life-course health impact of a city-wide system approach to improve air quality in Bradford, UK: A quasi-experimental study with implementation and process evaluation.**

Laura Bojke, Simon Walker (CHE), Kate Pickett (Department of Health Sciences, York)  
Funder: NIHR PHR

### **PACT – Partnerships at Care Transition: Improving patient experience and safety**

Gerry Richardson  
Funder: NIHR PGfAR

### **Scoping exercise for a model to evaluate the clinical and cost effectiveness of newborn screening for hypoxaemia using pulse oximetry**

Laura Bojke, Susan Griffin  
Funder: PHE

### **Yorkshire lung cancer screening**

Sebastian Hinde, Mark Sculpher  
Funder: Yorkshire Cancer Research

## **PUBLIC HEALTH**

### **Evaluation of Coenzyme Q10 in chronic heart failure**

Claire Rothery  
Funder: NIHR HTA

### **The role of different diets in children who are gastrostomy fed**

Gerry Richardson (CHE), Lorna Fraser, Catherine Hewitt, Jo Taylor (Department of Health Sciences, York), Bryony Beresford (Social Policy Research Unit, York)  
Funder: NIHR HTA

# Courses and Workshops 2021

The ongoing impact of the Covid-19 global pandemic meant that it was still not possible for us to run face-to-face short courses and workshops during 2021. Following the success of our very first 2020 York Online Workshops in Health Economic Evaluation, it was decided to repeat these workshops in a longer format in 2021, in addition to running an online Decision Modelling for Health Economic Evaluation course (in conjunction with LSHTM).

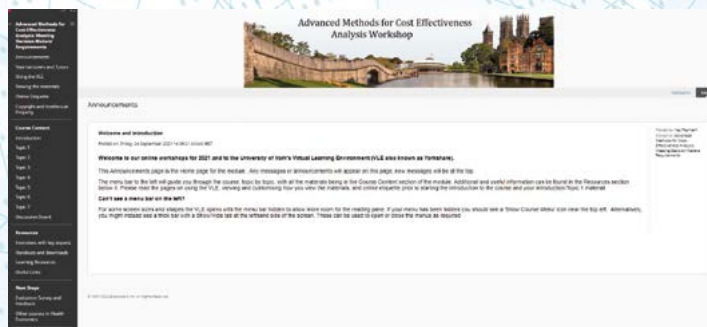
Short courses that were postponed in 2021 due to Covid-19 included:

- Outcomes Measurement and Valuation for Health Technology Assessment York Summer Workshop
- Statistical Methods in Economic Evaluation for Health Technology Assessment – Foundations and Advanced Courses
- Analysing Patient-Level Data Using Hospital Episode Statistics (HES)

## York Online Workshops in Health Economic Evaluation

These online workshops included a mix of recorded lectures, participant exercises, discussion forums, and live question and answer sessions. We welcomed participants from 33 countries across the globe, from academia, pharmaceutical and medical device companies, consultancy, health systems, government and Health Technology Assessment organisations.

- **Foundations of Economic Evaluation in Health Care**  
The online Foundations Workshop ran for 4 weeks from 11 October to 5 November, and was attended by 80 participants. This workshop covered the main design features of evaluation studies, how to handle cost data, and how to analyse economic data alongside clinical studies.  
<https://youtu.be/i3tW1wSorEA>
- **Advanced Methods for Cost-Effectiveness Analysis: Meeting Decision-Makers Requirements**  
The online Advanced Workshop ran for 4 weeks, from 8 November to 3 December, and was attended by 88 participants. This workshop covered more advanced analytical techniques, including evidence synthesis, uncertainty, value of information analysis, and building a



decision analytic model.

<https://youtu.be/ufmBdLM6dRg>

Workshops participants were given access to revisit and view the study materials until early January 2021.

## Online Courses in Decision Modelling for Health Economic Evaluation

Decision analytic modelling is used internationally as a means of estimating the costs, outcomes, and cost-effectiveness of different interventions and programmes in health care and public health. In particular, these methods are often employed to assess the value of new pharmaceuticals as a basis for health systems to determine whether they should be funded.

143 people from 35 countries participated in the first ever online courses in Decision Modelling for Health Economic Evaluation, held in conjunction with LSHTM and facilitated by Open Audience.

## Distance Learning Programmes in Health Economics

The distance learning programmes in health economics are a collaboration between the Department of Economics and Related Studies and the York Health Economics Consortium.

The programmes allow students to gain an accredited qualification whilst continuing in their careers, and offer the flexibility to spread study over a period of years to match professional and personal circumstances.

For more information, visit the Distance Learning Programmes in Health Economics website: <https://www.york.ac.uk/economics/postgrad/distance-learning/>

**“This was an extremely well-organized workshop. It was recommended to me by my colleagues, and I in turn will recommend it to others as well. Thank you for providing such a useful resource.”**

**“The video lessons are very interesting and exhaustive. This type of lessons is perfect for people who work as it is very flexible and allows you to better organize participation in the course, also it allows you to review the most complex passages.”**

**“The lectures were all great. The pace and content was really well thought out & easy to follow...”**

# Publications 2021

## PEER REVIEWED

- Anderson A, Lavender E, Dusabe-Richards E, Mebrahtu T, McGowan L, Conaghan P, Kingsbury S, **Richardson G** et al. Peer mentorship to improve self-management of hip and knee osteoarthritis: A randomised feasibility trial. *BMJ Open* 2021;11(7):e045389.
- Anderson M, Pitchforth E, Asaria M, Brayne C, Casadei B et al (includes **Drummond M, Smith P**). LSE-Lancet Commission on the future of the NHS: re-laying the foundations for an equitable and efficient health and care service after COVID-19. *The Lancet* 2021;397(10288):1915-1978.
- Arabadzhyan A**, Figini P, Vici L. Measuring destination image: a novel approach based on visual data mining. A methodological proposal and an application to European islands. *Journal of Destination Marketing & Management* 2021;20:100611.
- Arabadzhyan A**, Figini P, Zirulia L. Hotels, prices and risk premium in exceptional times: The case of Milan hotels during the first COVID-19 outbreak. *Annals of Tourism Research Empirical Insights* 2021;2(2):100023.
- Aubert J, Durán D, Monsalves M, Rodríguez M et al (includes **Cuadrado C**). Diagnostic properties of the definitions of suspected cases of COVID-19 in Chile, 2020. *Rev Panam Salud Publica* 2021;45:e14.
- Baliunas D, Selby P, **de Oliveira C**, Kurdyak P et al. Primary care-based smoking cessation treatment and subsequent healthcare service utilisation: a matched cohort study of smokers using linked administrative healthcare data. *Tobacco Control* 2021;doi:10.1136/tobaccocontrol-2021-056522.
- Balogun A, Carswell C, Brown J et al (includes **Jacobs R**). Exploring the facilitators, barriers, and strategies for self-management in adults living with severe mental illness, with and without long-term conditions: a qualitative evidence synthesis. *PLOS ONE* 2021;16(10):e0258937.
- Barry R, Rehm J, **de Oliveira C** et al. Rurality as a risk factor for attempted suicide and death by suicide in Ontario, Canada. *Canadian Journal of Psychiatry* 2021;doi:10.1177/070674372111053300.
- Bauer A, Tinelli M, **Weatherly H**, Anderson B et al. Value for money in social care: The role of economic evidence in the guideline development process of the National Institute for Health and Care Excellence in England. *Journal of Long-Term Care* 2021;303-317.
- Beilby H, **Yang F**, Gannon B, McIntyre H. Cost-effectiveness of gestational diabetes screening including prevention of type 2 diabetes: application of the GeDiForCE model in Australia. *The Journal of Maternal-Fetal & Neonatal Medicine* 2021;doi:10.1080/14767058.2021.1973415.
- Bellass S, Lister J, Kitchen C, Kramer L, Alderson S, Doran T et al (includes **Jacobs R**). Living with diabetes alongside a severe mental illness: a qualitative exploration with people with severe mental illness, family members and healthcare staff. *Diabetic Medicine* 2021;38(7):e14562.
- Benkhalti M, Espinoza M, **Cookson R**, Welch V, Tugwell P, Dagenais P. Development of a checklist to guide equity considerations in health technology assessment. *International Journal of Technology Assessment in Health Care* 2021;37:E17.
- Berthung E, Olsen JA, **Gutacker N**, Friborg O, Abelsen B. Who keeps on working? The importance of resilience for labour market participation. *PLOS ONE* 2021;16(10):e0258444.
- Blower S, Berry V, Bursnall M, Cohen J, Gridley N et al (includes **Richardson G, Walker S**). Enhancing Social-Emotional Outcomes in Early Years (E-SEE): Randomized pilot study of incredible years infant and toddler programs. *Journal of Child and Family Studies* 2021;30(8):1933-1949.
- Bojke L, Soares M, Claxton K**, Colson A, Fox A, Jackson C, **Jankovic D** et al. Developing a reference protocol for structured expert elicitation in health-care decision-making: a mixed-methods study. *Health Technology Assessment* 2021;25(37).
- Bojke L, Soares M, Claxton K**, Colson A, Fox A, Jackson C, **Jankovic D** et al. Reference case methods for expert elicitation in health care decision making. *Medical Decision Making* 2021; doi:10.1177/0272989X211028236.
- Bosa I, **Castelli A**, Castelli M, Ciani O, Compagni A, Galizzi M et al. Response to COVID-19: Was Italy (un)prepared? *Health Economics, Policy and Law* 2021;doi:10.1017/S1744133121000141.
- Bosa I, **Castelli A**, Castelli M, Ciani O, Compagni A et al. *Corona-regionalism?* Differences in regional responses to COVID-19 in Italy. *Health Policy* 2021;125(9):1179-1187.
- Buitrago G, **Moreno-Serra R**. Conflict violence reduction and pregnancy outcomes: A regression discontinuity design in Colombia. *PLOS Medicine* 2021;18(7):e1003684.
- Canals M, **Cuadrado C**, Canals A. COVID-19 in Chile: the utility of simple epidemic models in practice. *Medwave* 2021;21(1):e8119.
- Candio P, Meads D, Hill A, **Bojke L**. Taking a local government perspective for economic evaluation of a population-level programme to promote exercise. *Health Policy* 2021;125(5):651-657.
- Celedón N, González C, **Cuadrado C**. Perspectives of patients and consumers on the use of generic medicines. *Medwave* 2021;21(11):e8155.
- Chalkley M**, Hidayat B, Ramadani R, **Aragón MJ**. The sensitivity of hospital coding to prices: evidence from Indonesia. *International Journal of Health Economics and Management* 2021;doi:10.1007/s10754-021-09312-7.
- Chalkou K, Steyerberg E, Egger M, **Manca A**, Pellegrini F, Salanti G. A two-stage prediction model for heterogeneous effects of treatments. *Statistics in Medicine* 2021;40(20):4362-4375.
- Charlesworth A, Anderson M, Donaldson C, Johnson P, Knapp M, McGuire A, McKee M, Mossialos E, **Smith PC** et al. What is the right level of spending needed for health and care in the UK? *The Lancet* 2021;397(10288): 2012-2022.
- Chen Y, **Sivey P**. Hospital report cards: Quality competition and patient selection. *Journal of Health Economics* 2021;78:102484.
- Chetter I, Arundel C et al. (includes **Saramago Goncalves P**). Negative pressure wound therapy versus usual care for Surgical Wounds Healing by Secondary Intention (SWHSI-2 Trial): study protocol for a pragmatic, multicentre, cross surgical specialty, randomised controlled trial. *Trials* 2021;22:739.
- Cleverley K, Stevens K, Davies J, McCann E, Ashley T et al (includes **de Oliveira C**). Mixed-methods study protocol for an evaluation of the mental health transition navigator model in child and adolescent mental health services: the Navigator Evaluation Advancing Transitions (NEAT) study. *BMJ Open* 2021;11(6):e051190.
- Colson A, Morton A, Ardal C, Chalkidou K et al (includes **Sculpher M, Woods B**). Antimicrobial resistance: Is Health Technology Assessment part of the solution or part of the problem? *Value in Health* 2021;doi:10.1016/j.jval.2021.06.002.
- Cookson R**, Doran T, Asaria M, Gupta I, Parra Mujica F. The inverse care law re-examined: a global perspective. *Lancet* 2021;397 828-38.
- Cookson R**, Robson M, **Skarda I**, Doran T. Equity-informative methods of health services research. *Journal of Health Organization and Management* 2021;35(6):665-681.
- Corbacho B, Brealey S, Keding A, **Richardson G**, Torgerson D et al. Cost-effectiveness of surgical treatments compared with early structured physiotherapy in secondary care for adults with primary frozen shoulder: economic evaluation of UK FROST trial. *Bone & Joint Open* 2021;2(8):685-695.

- Coventry P, Young B, Balogun A, Taylor J, Brown J et al. (includes **Jacobs R**). Determinants of self-management of physical health in adults with serious mental illness: a systematic review. *Frontiers in Psychiatry* 2021;12:723962.
- Dalfen A, Wasserman L, Benipal PK, Lawson A, Young B, **de Oliveira C** et al. Virtual psychiatric care for perinatal depression (Virtual-PND): A pilot randomized controlled trial. *Journal of Affective Disorders Reports* 2021;4:100085.
- Daubner-Bendes R, Kovács S, Niewada M, Huic M, **Drummond M** et al. Quo vadis HTA for medical devices in Central and Eastern Europe? Recommendations to address methodological challenges. *Frontiers in Public Health* 2021;8:612410.
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## BOOK CHAPTERS

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## ANY OTHERS

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## CHE RESEARCH PAPERS

- 177** Publicly funded hospital care: expenditure growth and its determinants.  
**Nigel Rice, María José Aragón.**
- 178** A situation analysis of access to refugee health services in Kenya: Gaps and recommendations - A literature review.  
Julie Jemutai, Kui Muraya, Primus Che Chi, Stephen Mulupi.
- 179** Health financing policy reforms for universal health coverage in eastern, central and southern Africa (ECSA)-health community region.  
Takondwa Mwase.
- 180** A synthesis of key aspects of health systems and policy design affecting the refugee populations in Uganda.  
Fred Matovu, Crispus Mayora.
- 181** Financial incentives and prescribing behaviour in primary care.  
Olivia Bodnar, **Hugh Gravelle, Nils Gutacker, Annika Herr.**
- 182** Productivity of the English National Health Service: 2018/19 update.  
**Anastasia Arabadzhyan, Adriana Castelli, Martin Chalkley, James Gaughan, Maria Ana Matias.**
- 183** Paying for health gains.  
Luigi Siciliani, **James Gaughan, Nils Gutacker, Hugh Gravelle, Martin Chalkley.**
- 184** Comparing smoking cessation to screening and brief intervention for alcohol in distributional cost effectiveness analysis to explore the sensitivity of results to socioeconomic inequalities characterised in model inputs.  
**Fan Yang, Colin Angus, Ana Duarte, Duncan Gillespie, Mark Sculpher, Simon Walker, Susan Griffin.**



# PhD Students 2021

## FINN MCGUIRE, PHD STUDENT



I joined CHE as a PhD student, having previously been both an undergraduate and MSc student at the University (with a short break in between). Despite my previous knowledge of the University, I was still incredibly surprised by the extent of the collegial and collaborative environment I found at CHE. In my short career to date, I have already realised how special the environment within CHE is, and continue to appreciate it to this day.

I am now nearing the end of my PhD on Global Health Economics, which has focused on the use of

observational survey data to evaluate population level health system policies. While I have been lucky to have flexibility in working locations during the COVID-19 pandemic, I have missed the social and working environment I experienced during my time based at CHE. However, I have continued to feel connected to the department through regular formal and informal interaction with fellow PhD students, staff and of course my supervisors.

I am looking forward to completing my PhD in the coming months but I hope, and am confident, I will continue to cross paths with CHE staff – past and present – for a long time to come!

## FEI LIU, PHD STUDENT



I started my PhD study in CHE in 2020 after graduating from an MSc in Health Economics at the University of York. My first year was spent during the COVID-19 pandemic. It is not easy to start a PhD journey during a pandemic but fortunately I received invaluable support from my supervisors, the Thesis Advisory Panel members, funding parties (White Rose Network and ARC NIHR), the data provider (CARE75+ team) and the Department of Economics and Related Studies (DERS). My research topic focuses on the economics of social care and uses a cohort study for elderly people, CARE75. I am particularly interested in the causal relationship between social care service utilisation and health outcomes, prediction for services utilisation and future

service planning. My research also aims to propose methodology solutions and innovations on the missing data issue particularly prevalent in social care and older people. Alongside my studies, I am fortunate to have the opportunity to teach undergraduate students in mathematics, statistics and microeconomics. The teaching practice improved my confidence and skills in communication and presentation. This year we can have more in-person meetings, classes and seminars, which motivate and inspire research thoughts and ideas. The supportive and inclusive environment in CHE reassures me that I can get any help I need from all the talented people in Health Economics. The following years will be a challenging but rewarding journey and will build a solid foundation for my academic career. I am very grateful to be part of CHE!

# Presentations 2021

- Jacopo Gabani.** The impact of health financing systems on health system outcomes: a regression analysis across 124 countries, 2000-2017. *Health Economics Study Group (HESG) conference, London School of Hygiene and Tropical Medicine.* January 2021.
- Rowena Jacobs.** Smart data analysis helps understand the role of GP care for people with severe mental illness. *YorkTalks, University of York.* January 2021.
- Sumit Mazumdar.** Quantitative methods for impact evaluation – Key concepts, methods and applications. *Workshop on Advanced Methods in Economics and Econometrics, University of Calcutta, Kolkata, India.* January 2021.
- Sumit Mazumdar.** Leveraging purchasing to influence health system goals in LMICs: Key considerations for a political economy framework of strategic purchasing. *Organised Session on Political Economy of Strategic Purchasing in LMIC, 6th Global Symposium, Health Systems Global 2020.* January 2021.
- Sumit Mazumdar.** Panel discussion on National Family Health Survey (NFHS-5) in Assam. *OKD Institute of Social Change and Development, Guwahati, India.* January, 2021.
- Nils Gutacker.** Bundled incentive payments in healthcare markets, *Leibniz University Hannover, Germany.* January 2021.
- James Gaughan.** The Impact of locating primary care physicians in Emergency Departments. *Webinar Series, Department of Health Policy, London School of Economics and Political Science.* February 2021.
- David Glynn.** Constructing relative effect priors for research prioritisation and trial design: a meta-epidemiological analysis. *Bristol University.* February 2021.
- Rodrigo Moreno-Serra.** The HSRI MRC War & Peace project, summary results in the areas of mental and child health. *Mental Health Department of Fundacion Santa Fe & Universidad de los Andes, Colombia.* February 2021.
- James Gaughan.** The Impact of locating primary care physicians in Emergency Departments. *Health Economics at Lancaster Webinar Series, Lancaster University.* March 2021.
- Nils Gutacker.** Long-term impacts of the hip fracture Best Practice Tariff. *University of Manchester.* March 2021.
- Sebastian Hinde.** Health economics, trial analysis and beyond. *Research Design Service Yorkshire and the Humber.* March 2021.
- James Lomas.** Incorporating affordability concerns within cost-effectiveness analysis for Health Technology Assessment. *Health Data Science Forum, University of Liverpool.* March 2021.
- James Lomas.** Empirical estimates of the marginal cost per unit of health produced by a healthcare system: methodological considerations from country-level estimates. *Workshop Estimating Supply-side Cost-Effectiveness Thresholds for Canada's Public Health Care Systems. Institute of Health Economics, Alberta, Canada.* March 2021.
- Rodrigo Moreno-Serra.** The effects of conflict violence reduction on pregnancy outcomes: Evidence from a natural experiment in Colombia. *Health between Pandemic and Post-Conflict: A Look after the Peace Agreement with the FARC. Dissemination event for the HSRI MRC project War and Peace – the Health and Health System Consequences of Conflict in Colombia.* March 2021.
- Wiktorija Tafesse.** The effect of government contracting with faith-based healthcare providers in Malawi. *Economics Society at the University of Exeter Webinar.* March 2021.
- Simon Walker.** Research priorities. *Roundtable on Population Health Improvement. U.S. Health Care Expenditures: Costs, Lessons, and Opportunities. Virtual Workshop. US National Academies of Sciences, Engineering and Medicine.* March 2021.
- Fan Yang.** Health-related quality of life of a conflict-affected population in Colombia. *Health between Pandemic and Post-Conflict: A Look after the Peace Agreement with the FARC. Dissemination event for the HSRI MRC project War and Peace – the Health and Health System Consequences of Conflict in Colombia.* March 2021.
- Claire de Oliveira.** Improving mental health in the workplace: an economics perspective. *Public Policy Exchange, London.* April 2021.
- James Love-Koh.** Social variation in health opportunity costs. *International Health Economics Association Webinar.* April 2021.
- Andrea Manca.** Generating effectiveness data for HTA: what is the best type of evidence? *The Future of Healthcare in KSA: Health Economics and Policy Perspectives. Organised by ISPOR Saudi Arabia Chapter; Saudi Pharmaceutical Society; Saudi Pharmacoeconomics Experts Group.* April 2021.
- Mike Drummond.** Demonstrating the value of gene therapies: where do we currently stand? *Virtual ISPOR 2021.* May 2021.
- Vijay Gc.** Assessing the potential value of wearable digital health technologies in chronic kidney disease using early HTA methods. *Virtual ISPOR 2021.* May 2021.
- Mark Sculpher.** Can Performance-Based Risk Sharing Arrangements (PBRAS) for Medtech address procurement and market access challenges? Scanning the current horizon and a view to the future. *Virtual ISPOR 2021.* May 2021.
- Maria Ana Matias, Adriana Castelli, James Gaughan.** Hospital speciality level productivity: the case of paediatric departments and specialised children's hospitals. *Health Economics Study Group (HESG), University of Cambridge.* June 2021.
- Luis Fernandes.** Doctors' wages and NHS activity: Evidence from a UK pension reform. *Health Economics Study Group (HESG), University of Cambridge.* June 2021.
- Vijay Gc.** Kidney patients' preferences for a wearable digital health technology to support self-management of CKD- a discrete choice experiment. *HTAi 2021 Virtual Annual Meeting.* June 2021.
- Vijay Gc.** Assessing the potential value of wearable digital health technologies in chronic kidney disease using early HTA methods. *HTAi 2021 Virtual Annual Meeting.* June 2021.
- Julia Hatamyar.** The impact of workplace breastfeeding legislation on labour market outcomes. *Gender Gaps Virtual Conference, University of Warsaw.* June 2021.
- Finn McGuire.** Do quality improvement policies work for all? Heterogeneous effects and the impact of baseline quality levels. *American Health Economics Association Conference.* June 2021.
- Rodrigo Moreno-Serra.** Antenatal care, maternal and child health in times of war and peace. *The York-Maastricht virtual workshop. New Approaches to Improve Antenatal Care in Resource-Limited Settings.* June 2021
- Rodrigo Moreno-Serra.** Health expenditure and its efficiency in Brazil and Latin America. *Postgraduate Programme in Health Economics, Federal University of Parana, Brazil.* June 2021.
- Claire Rothery.** Development of a user friendly tool for Value of Information analysis to assist research prioritisation decisions. *Department of Applied Health Research, University College London.* June 2021.
- Laetitia Schmitt.** Tool for managing uncertainty in the prioritisation of health research. *XL AES Conference.* June 2021.
- Mark Sculpher.** Principles of transferability in economic evaluation. *HTAi Virtual Annual Meeting.* June 2021.
- Simon Walker.** Establishing the value of diagnostic and prognostic tests in Health Technology Assessment. *ISPOR-Australia Chapter Lunchtime Webinar. Tumour Agnostic Therapies.* June 2021.

- | **Helen Weatherly.** The hearing dogs (PEDRO) cost-effectiveness analysis. *NIHR SSCR Webinar Series*. June 2021.
- | **Beth Woods.** Friend or foe in the quest for effective antimicrobials? *HTAi 2021 Virtual Annual Meeting*. June 2021.
- | **Laura Bojke.** Can't see the wood for the trees: Are the challenges in evaluating interventions and policies which cross the divide between health and the environment insurmountable? *iHEA 2021 Congress*. July 2021.
- | **Adriana Castelli.** Corona-regionalism? Differences in regional responses to COVID-19 in Italy. *5th International Conference on Public Policy (ICPP5) Barcelona, Italy*. July 2021.
- | **Claire de Oliveira.** Keynote Speaker. Microsimulation models: Using real world data to inform mental health care policy. *2021 Essen Economics of Mental Health Workshop, Essen, Germany*. July 2021.
- | **Rita Faria.** Economic evaluation of health technologies. *AC Camargo Cancer Centre, São Paulo, Brazil*. July 2021.
- | **Jacopo Gabani.** The impact of health financing systems on health system outcomes: A regression analysis across 124 countries, 2000-2017. *iHEA 2021 Congress*. July 2021.
- | **James Gaughan.** Does containing costs reduce hospital quality? *iHEA 2021 Congress*. July 2021.
- | **Katja Grasic.** Can financial incentives shift health care from an inpatient to an outpatient setting? *iHEA 2021 Congress*. July 2021.
- | **Sumit Mazumdar.** Assessing the impact of universal health coverage interventions on health system outcomes in low- and middle-income countries: A critical review of methodological challenges. *iHEA 2021 Congress*. July 2021.
- | **Finn McGuire.** Do quality improvement policies work for all? Heterogeneous effects and the impact of baseline quality levels. *iHEA 2021 Congress*. July 2021.
- | **Laetitia Schmitt.** Reflecting uncertainty in Health Benefits Package design: Implications for research priorities and investment decisions. *iHEA 2021 Congress*. July 2021.
- | **Vishalie Shah.** Causal machine learning and the heterogeneous impacts of Indonesia's National Health Insurance scheme. *iHEA 2021 Congress*. July 2021.
- | **Marta Soares.** Eliciting expert judgements on the rise of antimicrobial resistance in common surgical procedures and its consequences. *iHEA 2021 Congress*. July 2021.
- | **Sumit Mazumdar.** Healthcare market and health policy landscape in India. *Management Development Programme Series, Amrita Visva Vidyapeetham, Bengaluru, India*. August, 2021.
- | **Noemi Kreif, Julia Hatamyar, Vishalie Shah.** New methods to estimate heterogeneous impacts of the JKN health insurance programme. *The 7th Indonesia Health Economics Association Conference*. September 2021.
- | **Christopher Lubker.** Comparing life course and current social gradients in general health at age 50: a simple measure of inequality of opportunity for health. *Society for Social Medicine Annual Scientific Meeting*. September 2021.
- | **Pedro Saramago Goncalves.** Effectiveness evidence for decision modelling. *National School of Public Health, Lisbon, Portugal*. September 2021.
- | **Simon Walker.** Jointly modelling economics and epidemiology to support public policy decisions for the COVID-19 response: a review of UK studies. *Methods for the Economic Evaluation of Diagnostics (MEED) Research Forum*. September 2021.
- | **Fan Yang.** Economic evaluation and health inequality: why, how and when. *Institute for Global Health and Development, Peking University, China*. September 2021.
- | **Fan Yang.** Developing the EQ-5D-5L value set for Uganda using the 'lite' protocol: Challenges, lessons learnt and results. *EuroQol Valuation Topical Meeting*. September 2021.
- | **Fan Yang.** EQ-5D as a health outcome measure for a conflict-affected population in Colombia. *Populations and Health Systems Topical Meeting*. September 2021.
- | **Claire de Oliveira.** The PSY-SIM model: using real world data to inform mental health care policy. *Centre for Health Economics & Policy Analysis (CHEPA), McMaster University, Canada*. October 2021.
- | **Jacopo Gabani.** Health financing systems effect on health system outcomes. *World Bank Health, Nutrition and Population Global Unit*. October 2021.
- | **Susan Griffin.** Evaluating the distribution of health and the wider impacts of health outcomes. *Department of Health and Social Care Analytical Seminar*. October 2021.
- | **Francesco Longo.** Data visualisation and health economics' workshop. *For Health Economics Study Group (HESG), Early Career Researchers*. October 2021.
- | **Alex Rollinger.** Research administration, contracting and financial autonomy. *Health Research in Africa: Listening, Learning and Building Truly Equitable Partnerships. Black History Month event*. October 2021.
- | **Fan Yang, Susan Griffin.** Quantifying and valuing health inequality impacts in economic evaluation. *Society for Medical Decision Making 2021 Virtual Meeting*. October 2021.
- | **Rita Faria.** Why and how to use cost-effectiveness analysis in healthcare? *RCPCH-NIHR Academic Trainees' Day*. November 2021.
- | **Katja Grasic.** Can financial incentives shift health care from an inpatient to an outpatient setting? *Hamburg University*. November 2021.
- | **Noemi Kreif.** Machine learning for causal inference. *ISPOR Europe 2021*. November 2021.
- | **Sumit Mazumdar.** Some insights and considerations from healthcare market behaviour and response in India during the COVID-19 pandemic. *FLAME University, Pune, India*. November 2021
- | **Helen Weatherly.** Capacity building in health economics and economic evaluation. *The Global Alliance for Chronic Diseases (GACD) in LMICs, Building Implementation Science Capacity and Capability Annual Scientific Meeting*. November 2021.
- | **Fan Yang.** Developing the EQ-5D-5L value set for Uganda using the 'lite' protocol: Methodology and results. *Thanzi la Onse Webinar*. November 2021.
- | **Rita Faria.** Better outcomes and value for money with cost-effectiveness modelling of cascade screening strategies for familial hypercholesterolaemia. *Podium Presentation, ISPOR Europe 2021*. December 2021.
- | **Rita Faria.** Cost-effectiveness analysis of diagnostic and screening strategies: when and how to compare a googolplex of strategies? A case study in cascade screening for familial hypercholesterolaemia. *Workshop Session, ISPOR Europe 2021*. December 2021.
- | **Noemi Kreif.** Machine learning for causal inference (in health economics and beyond). *Stanford AI + Health Conference*. December 2021.
- | **Mark Sculpher.** Methods to estimate the value of new antibiotics in the context of antimicrobial resistance. *Spotlight Session, ISPOR Europe 2021*. December 2021.
- | **Mark Sculpher.** The role of health technology assessment in value-based healthcare development. *The System of Sustainable Development of a Medical Organization: World's Best Practices. International Medical Cluster Foundation, hybrid conference, Moscow*. December 2021.

# Staff 2021

## NEW RESEARCH STAFF

### Julia Hatamyar

*Research Fellow*

Julia earned her PhD in Economics from the University of Miami in 2020. Prior to her studies, she worked as a classical pianist, teaching undergraduate keyboard courses at New York University and performing in the Greater New York City area. She also holds a professional certification in Machine Learning.



### Adrián Villaseñor

*Research Fellow*

Adrián is with the Health Policy team working on mental health. His background is in development economics and he is currently working on understanding how to better provide mental health services within the NHS. Adrián holds a PhD in International Development from the University of East Anglia.



### Thai Han Phung

*Research Fellow*

Han joined CHE in November 2021 after completing the MSc in Health Economics at the University of York (with distinction). Previously, Han had worked in the pharmaceutical industry for 7 years (in Viet Nam) in management roles. His research interests encompass the economic evaluation of health and care interventions.



### Yingying Zhang

*Research Fellow*

Yingying joined CHE in September 2021. Before that, Yingying did her Masters and PhD at the Department of Economics in Lancaster University. Her PhD studies older workers' labour supply transition and its relationship with physical or mental health status in a dynamic framework. She has a strong background in applied econometrics with emphasis on causal inference.



### Shainur Premji

*Research Fellow*

Shainur joined CHE in May 2021. She holds a BA in International Relations, BA Honours in Economics, and MSc in Health Research Methods. She is currently pursuing her PhD in Health Economics at the University of Calgary.



### Leila Meera Safiya Uwais

*Research Fellow*

Leila joined CHE in November 2021, working with Paul Revill on the MRC SHINE project.



## PHD STUDENTS

Jacopo Gabani

Oliver Kaonga

Fei Liu

Christopher Lubker

Finn McGuire

Laurie Rachet Jacquet

Vishalie Shah

## NEW PHD STUDENTS

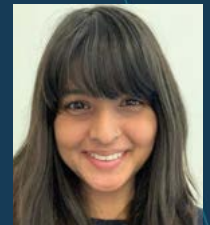
### Peter Murphy

Peter is affiliated with the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). His research interests are in the economic evaluation of policies and interventions, decision analytic modelling and health equity. Peter completed an MSc in Health Economics at the University of York in 2018, graduating with distinction.



### Wajeeha Raza

Wajeeha is affiliated with the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). Her studentship focuses on the economic evaluation of environmental interventions. She holds a BSc in Economics from the Lahore University of Management Sciences, and an MSc in Health Economics from Johns Hopkins University as a Fulbright Scholar.



### Kristina Aluzaitė

Kristina is affiliated with the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). Her work is focused on economic evaluation of policies to tackle antimicrobial resistance (AMR) in human health. Kristina's key interests are in the international, inter-sectoral and inter-temporal aspects of the AMR problem.



### Carlos Balmaceda

Carlos is affiliated with the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). His studentship focuses on heterogeneity in economic evaluation for diagnostic and prognostic tests. Carlos holds a BSc in Pharmacy and an MSc in Epidemiology both from Pontificia Universidad Católica de Chile.



### Refaya Rashmin

Refaya is affiliated with the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). Her research is focused on economic evaluation of healthcare interventions by means of estimating opportunity cost of health policies. She holds an MSc in Economics for Development (Merit) from the Oxford Department of International Development (a.k.a. Queen Elizabeth House), University of Oxford, an MSS (Economics) and BSS (Hons) in Economics from University of Dhaka.



### Newton Chagoma

Newton is affiliated with the Global Health Team. His Doctoral research focuses on analysing health system efficiencies with a particular focus on the effectiveness of development aid in Sub-Saharan Africa. He holds a Bachelors degree in Mathematical Sciences from the Malawi University of Business and Applied Sciences, and an MSc in Health Economics from the University of Birmingham.



### Wei Song

Wei joined CHE in January 2021, and is with the Health Policy Team. His studentship focuses on acute health shock and mental health. Prior to joining CHE, he worked as a research officer at the Li Ka Shing Faculty of Medicine at the University of Hong Kong. BMedSc (WUH), BA(HUST), MPH(HKU), MA(HKU), MSc in Health Economics (YORK)



## CHE RESEARCH FELLOWS ALSO REGISTERED FOR A PHD IN 2021

Luis Fernandes  
Katja Grašič

Laurie Rachet Jacquet  
Yingying Zhang

# Staff 2021

## RESEARCH STAFF

**Mark Sculpher**  
Professor and Director of CHE

**Rowena Jacobs**  
Professor and Deputy Director of CHE

**Anastasia Arabadzhyan**  
Research Fellow

**María José Aragón**  
Research Fellow

**Alastair Bennett**  
Research Fellow

**Laura Bojke**  
Professor

**Adriana Castelli**  
Senior Research Fellow

**Martin Chalkley**  
Professor

**Karl Claxton**  
Professor

**Richard Cookson**  
Professor

**Edward Cox**  
Research Fellow

**Cristóbal Cuadrado**  
Research Fellow

**Claire de Oliveira**  
Reader

**Michael Drummond**  
Professor

**Ana Duarte**  
Research Fellow

**Rita Faria**  
Senior Research Fellow

**Luis Fernandes**  
Research Fellow

**James Gaughan**  
Research Fellow

**Vijay Gc**  
Research Fellow

**David Glynn**  
Research Fellow

**Maria Goddard**  
Professor

**Katja Grasic**  
Research Fellow

**Hugh Gravelle**  
Professor

**Susan Griffin**  
Professor

**Nils Gutacker**  
Senior Research Fellow

**Sebastian Hinde**  
Research Fellow

**Nikita Jacob**  
Research Fellow

**Dina Jankovic**  
Research Fellow

**Panos Kasteridis**  
Research Fellow

**Leonardo Koeser**  
Research Fellow

**Noemi Kreif**  
Senior Research Fellow

**James Lomas**  
Research Fellow

**Francesco Longo**  
Research Fellow

**Samuel Lordemus**  
Research Fellow

**James Love-Koh**  
Research Fellow

**Andrea Manca**  
Professor

**Anne Mason**  
Senior Research Fellow

**Maria Ana Matias**  
Research Fellow

**Sumit Mazumdar**  
Research Fellow

**Sakshi Mohan**  
Research Fellow

**Rodrigo Moreno-Serra**  
Reader

**Georgios Nikolaidis**  
Research Fellow

**Jessica Ochalek**  
Research Fellow

**Stephen Palmer**  
Professor

**Francesco Ramponi**  
Research Fellow

**Paul Revill**  
Professor

**Nigel Rice**  
Professor

**Gerry Richardson**  
Professor

**Claire Rothery**  
Senior Research Fellow

**Rita Santos**  
Research Fellow

**Pedro Saramago Goncalves**  
Senior Research Fellow

**Laetitia Schmitt**  
Research Fellow

**Peter Sivey**  
Reader

**Ieva Skarda**  
Research Fellow

**Peter C Smith**  
Professor

**Marta Soares**  
Senior Research Fellow

**Marc Suhrcke**  
Professor

**Wiktoria Tafesse**  
Research Fellow

**Simon Walker**  
Senior Research Fellow

**Helen Weatherly**  
Reader

**Beth Woods**  
Senior Research Fellow

**Fan Yang**  
Research Fellow

## EMERITUS PROFESSOR

**Tony Culyer**  
**Peter C Smith**

## HONORARY PROFESSORS

**Keith Derbyshire**  
**Keith Abrams**

## HONORARY VISITING FELLOWS

**Manuel Espinoza**

## PROFESSIONAL AND SUPPORT STAFF

**Linda Baillie**  
*Administrator*

**Sally Bowler**  
*Finance and Research Support Administrator*

**Louise Campbell**  
*Project Coordinator*

**Sarah Crust**  
*Administrator and PA to CHE's Director and Deputy Director*

**Katherine Devlin**  
*Project Coordinator*

**Naurin Fatima**  
*Finance and Research Support Administrator*

**Gill Forder**  
*Publications Administrator*

**Kay Fountain**  
*Administrator*

**Tim Glover**  
*Administrator*

**Liz Grant**  
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**Ruth Helstrip**  
*Project Coordinator*

**Vanessa King**  
*Administrative Manager*

**Stephanie Richards**  
*Project Coordinator*

**Alexandra Rollinger**  
*Project Manager*

**Trish Smith**  
*Centre Manager*

**Vanessa Wood**  
*Finance and Research Support Co-ordinator*

## NEW SUPPORT STAFF

**Becky Johnson**  
*Project Manager*

**Anna Payne**  
*Research Centre Coordinator and Manager*

**Luke Thomson**  
*IT Specialist*

**Lucy Shi**  
*Finance and Research Support Administrator*





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