## Contents

Welcome to the 2018 annual report for the Centre for Health Economics .................. 3

News and events 2018 .......................... 4

Antimicrobial resistant infections .................. 6

Research projects in progress and completed in 2018 ........................................ 7

Tackling underdiagnosis in dementia ................. 9

The effects of government contracting with faith based providers in Malawi on maternal care utilisation .................. 11

Doctor who? The influence of doctors’ socio-demographic characteristics on medical specialty allocation .......................... 13

Who cares about ‘value for money’ in global health? ........................................ 15

How efficient are the health systems of Latin America and the Caribbean – and why? .......... 17

Courses and workshops .......................... 18

Including the health inequality impact of policies in funding decisions .................. 19

Publications 2018 .................................. 20

Funding for mental health services in England: The challenge of an appropriate classification system .................. 21

Fiscal policies for health: Impact evaluations echoing around the world .................. 23

Marie Sklodowska-Curie European Training Network PhD students .................. 27

Presentations 2018 .................................. 29

Staff ........................................ 36
Welcome to the 2018 annual report for the Centre for Health Economics

At the heart of the research we do at CHE is a commitment to make a difference: to inform health and social care policy and practice at local, national and international levels, with the ultimate aim of promoting health and wellbeing and reducing health inequalities. This, as most researchers will know all too well, is far easier to write than it is to deliver! But one key route to maximise the impact of health economics research on national policy, is through the programme of NIHR funded Policy Research Units, in which CHE has been involved for some years. We were therefore delighted to succeed in our bid to lead two of the research units for a further five years, in partnership with colleagues in other institutions, as well as contributing as collaborators to a further two units. We look forward to pursuing some exciting policy research agendas, enhancing our existing links with decision-makers and helping to inform policy decisions.

A strong policy focus also defined much of our research in 2018, at local, national and international level, of which these are just a few examples: evaluating the impact of specialist rehabilitation services in North Yorkshire and Humber; investigation of the prevalence and economic burden of medication errors in order to improve prescribing safety; assessment of local authority commissioning of NHS health-checks; evaluation of the sugar-sweetened beverage tax in Chile; supporting the development of health benefits packages in Malawi; estimating the impact of care plans for people with serious mental illness; and appraisal of alternative delivery strategies for antiretroviral therapy in eleven countries. Underpinning our policy-related research is an equally important focus on conceptual and methods development and during the past year we have published on a wide range of topics, some of which are reflected amongst over 100 published outputs that are documented throughout this report.

Following the sad death of Professor Alan Maynard, we commemorated his immense contribution to the Centre for Health Economics, the University of York and the wider health economics and policy community in a number of ways. These included naming a lecture theatre after him, planting a tree and commissioning a commemorative plaque for the “quiet place” garden on campus, and writing about the enduring influence of Alan – always the “sceptical economist” – on current health policy issues and debates (Goddard and Bloor, 2018). Further activities have also taken place in 2019, including commemorations at the Health Economists Study Group conference in York and details of these have been reported in our newsletters and on our website.

Some of our current and recently completed research projects are profiled in a set of short articles in this report. We also celebrate the achievements and activities of staff and students, including PhD awards and promotion success. We also have progress reports from our two PhD students funded by the Marie Skłodowska-Curie European Training Network, describing their experiences during the first year of training. I was delighted that our Athena SWAN bronze award was renewed and we have ambitions to advance our commitment to equality further in the coming year. Last, it was an immense pleasure that CHE was named as one of the UK’s 100 “Best Breakthroughs” for having a significant impact on people’s lives by making healthcare systems fairer and more effective. That is a fantastic tribute both to the health economics discipline generally and also to the talent and dedication of CHE staff and students over many years.
News and events 2018

NEW POLICY RESEARCH UNITS

The National Institute for Health Research (NIHR) announced a set of 13 new NIHR Policy Research Units. These will provide both a long-term resource for policy research and a rapid-response service to provide evidence for emerging policy needs. The units, which are considered to be an exemplar of good practice in government, will also offer advice to policy makers and analysts on the evidence base and options for policy development.

The Centre for Health Economics (CHE) is leading two of these units. Economic Methods of Evaluation in Health and Social Care Interventions (EEPRU), in collaboration with the University of Sheffield, and Economics of Health Systems and Interface with Social Care (ESHCRU), along with partners at the LSE. CHE is also part of the NIHR Policy Research Unit in Public Health, which is run by the London School of Hygiene and Tropical Medicine, and also contributes to the NIHR Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis, which has a shared post with EEPRU.

“EEPRU works in the field of economic evaluation of interventions, programmes and policies right across the DHSC’s remit, including medical care, social care and public health. It has a role in developing new, and refining existing, methods of economic evaluation, as well as supporting other PRUs in terms of research methods, but also undertakes applied research in the field. The early programme of research includes work to estimate the marginal productivity of the NHS, and the social care and public health sectors; validation of the ‘extended QALY’; and the cost-effectiveness of stratified breast cancer screening.”

Mark Sculpher, Co-Director NIHR Policy Research Unit in Economic Methods of Evaluation in Health and Social Care Interventions

“The unique focus of our Unit – ESHCRU II – is on the interactions between the health and care systems, the cross-cutting issues facing both sectors, and their interdependencies. By applying state-of-the-art tools of economic and statistical analysis, our research will help ensure that policies are designed to take full account of the impact on patients and citizens across the entire health and care landscape, rather than focusing on the effect in one sector in isolation.”

Anne Mason, Director NIHR Policy Research Unit in Economics of Health Systems and Interface with Social Care

UK’s best breakthrough

CHE was named as one of the UK’s 100 best breakthroughs for its significant impact on people’s everyday lives by making healthcare systems fairer and more effective.

The list was compiled by Universities UK, the umbrella group for UK universities, as part of the MadeAtUni campaign to change public perceptions of universities and bring to life the difference they make to people and communities across the UK.

Alan Maynard

We were very sad to announce the death of Alan Maynard, founder of CHE, who died on 2 February 2018. A massive influence in the national and international world of health economics and policy, and quite simply, a lovely and genuine person, he will be missed greatly by all of us.

A series of commemorations and events have taken place over the last year in honour of Alan’s life.

CHE IN THE MEDIA

In January, Karl Claxton provided expert analysis for BBC2’s ‘Trust me I’m a Doctor’ programme, looking at the relationship between the cost of new medicines and how much the NHS can afford to pay for the benefits they offer.

Rowena Jacobs explained in a series of interviews with the NIHR how a new study is, for the first time ever, bringing data together from a range of sources to identify ways of improving the quality of primary care for patients with serious mental illness and the impact it is likely to have.

Articles were written by CHE staff for the The Conversation including: ‘Fact check: are there more beds available across the NHS?’ by Katja Grašič and ‘The NHS and the Budget 2018’, ‘The NHS explained in eight charts’ and ‘Is the 3.4% spending increase enough to ‘save’ the NHS?’ by Maria Goddard.

NHS70

The NHS celebrated its 70th birthday year in 2018. CHE marked this event with various activities:

- Celebrating York’s role in the rise of evidence-based healthcare. In an interview with Maria Goddard, Karen Bloor and Karl Atkin, the role of health economics – past and present – in supporting evidence-based healthcare, was explored.

- In April, Maria Goddard gave some short interviews with six local radio stations as part of a BBC radio series looking at ‘What would life be like without the NHS?’
News and events 2018

Staff achievements

Richard Cookson, Andrew Mirelman, Susan Griffin, Miqdad Asaria, Bryony Dawkins, Ole Norheim, Stephane Verguet and Tony Culver, authors of the paper ‘Using cost-effectiveness analysis to address equity concerns’, won The 2018 ISPOR ‘Value in Health Paper of the Year Award’. Andrew Mirelman (pictured with other award winners), accepted the award on behalf of the authors.

Claire Rothery received the International Society for Pharmaco-economics and Outcomes Research (ISPOR) Distinguished Service Award for excellent leadership of the Task Force on Emerging Good Practices for Value of Information Analysis.

Research ‘Identifying primary care quality indicators for people with serious mental illness’ made the top 10 list in the British Journal of General Practice for 2017. The study, authored by Chris Kronenberg, Tim Doran, Maria Goddard, Tony Kendrick, Simon Gilbody, Lauren Aylott and Rowena Jacobs, provided a systematic review of potential quality indicators which could be captured using routine data, and which could be used to monitor or incentivise better-quality primary care for patients with schizophrenia, bipolar disorder, and other psychoses.

The authors identified 59 indicators, of which 52 could be assessed using routine data. They conclude that the evidence base underpinning these indicators is relatively weak and, before the indicators can be used to monitor or incentivise primary care quality, more robust links need to be established with improved patient outcomes.

PHD SUCCESS FOR:

PROMOTION SUCCESS FOR:
Antimicrobial resistant infections are a major global health concern. For some time, governments and international bodies have recognised the need to provide appropriate incentives to drug manufacturers to encourage the development of new antibiotics. However, it is now being recognised that these incentives should be commensurate with health gains the new antibiotics are expected to bring.

Antimicrobial resistance is a major concern, as infectious organisms become increasingly resistant to available treatments. Pharmaceutical and biotechnology industries, however, are becoming reluctant to develop new drugs, citing limited return on investment. Currently, a conventional payment method is employed to fund new antimicrobials, which is based on how much of the drug the NHS uses. Some new antimicrobials are held in reserve for use only when existing products are ineffective due to resistance, but this strategy limits revenues to manufacturers, reducing the attractiveness of developing new antimicrobials. The government is therefore considering a novel payment approach where the NHS pays for access to the drug; this means that payment is ‘delinked’ from the amount of the drug that is actually used. Establishing appropriate levels of payment, however, is complex.

As part of the Policy Research Unit in Economic Methods of Evaluation in Health and Social Care Interventions (EEPRU), we considered how the National Institute for Health and Care Excellence (NICE) could appraise these new drugs so that the NHS can make informed decisions on sustainable funding. Antimicrobials offer a range of benefits that are not typically offered by other treatments. For example, introduction of a new antibiotic may impact the spread of resistant infections amongst the population. This work demonstrates how these benefits can be quantified in terms of population health, whilst appropriately accounting for the health benefits that could be produced if resources needed for the new drugs were devoted to other NHS activities. The work addresses the evidential and modelling challenges faced when quantifying the effects of introducing a new antimicrobial. Recommendations also address how NICE appraisal processes could be modified to accommodate antimicrobials. There are likely to be high levels of uncertainty about the long-term benefits of new antimicrobials. The report recommends that funding decisions are flexible over time, to accommodate the emergence of new research and surveillance data.

The importance of these issues and the CHE report have been recognised by Chief Medical Officer for England, Professor Dame Sally Davies, who said: “Ensuring the NHS pays a fair price for new antimicrobials whilst conserving their use is essential and this report provides a platform to deliver this.” The work is expected to provide the foundation for pilot NICE assessments of new antimicrobials due to start this year.

Research projects in progress and completed in 2018

CHE funders

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:

- Bill and Melinda Gates Foundation
- British Heart Foundation
- Department for International Development (DFID)
- Economic & Social Research Council (ESRC)
- Engineering and Physical Sciences Research Council (EPSRC)
- European Commission
- European & Developing Countries Clinical Trials Partnership (EDCTP)
- European Commission
  - Innovative Medicines Initiative (IMI) H2020 programme
- European Union Horizon 2020 research and innovation programme: Marie Skłodowska-Curie grant
- EuroQol Research Foundation
- German Ministry for Education and Research
- Harrogate and District NHS Foundation
- Health Foundation
- Inter-American Development Bank
- International Development Research Centre (IDRC), Canada
- Luxembourg Institute of Health
- Medical Research Council (MRC)
  - GCRF Foundation
  - Newton Fund
- National Institute for Health Research (NIHR)
  - Central Commissioning Facility (CCF)
  - Collaboration for Leadership in Applied Health Research and Care Yorkshire and Humber (CLAHRC YH)
  - Department of Health and Social Care (DHSC)
  - Economics of Social and Health Care Research Unit (ESHCRU)
  - 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)
  - Policy Research Unit in Economic Evaluation of Health and Care Interventions (EERPU)
  - Programme Grants for Applied Research (PgPR)
  - Public Health Research (PhR)
  - Public Health Research Consortium (PHRC)
  - Research and Development (R&D) Programme
  - Research Capability Funding (RCF)
  - Research for Patient Benefit (RfPB)
  - School for Social Care Research (SSCR)
  - Technology Assessment Reviews (TARS)
- NHS London Clinical Networks
- Northern Health Science Alliance (NHSA)
- Oxford Consultants for Social Inclusion
- Public Health England
- Patented Medicine Prices Review Board – Government of Canada (PMPRB)
- Research Council of Norway
- Research Councils UK
  - GCRF
- The World Bank
- University of York
  - Centre for Future Health
  - HEFCE GCRF QR (Pump-Priming for ODA-Compliant Research & Activities)
- Wellcome Trust
- Yorkshire Cancer Research (YCR)
- Yeovil District Hospital NHS Foundation Trust
- York Teaching Hospital NHS Foundation Trust
- National Institute for Health and Care Excellence (NICE)
- NHS England
Research projects in progress and completed in 2018

**Economic evaluation**

Assessing a brief Value of Information (VoI) method for its potential use in assisting panel and board decision making
Claire Rothery, Karl Claxton, David Glynn
Funder: NIHR HTA

Canadian CE threshold to inform price setting
Jessica Ochalek, James Lomas, Karl Claxton (CHE), Chris McCabe (University of Alberta)
Funder: PMPRB

Cost-effectiveness analysis of CE-MARC II (Clinical Evaluation of 3T Magnetic Resonance imaging for the management of patients with Coronary heart disease)
Simon Walker, Edward Cox, Mark Sculpher (CHE), John Greenwood (University of Leeds)
Funder: British Heart Foundation

De-linking reimbursement of antimicrobials from volumes sold: assessing alternative arrangements and implications for NICE appraisal
Claire Rothery, Beth Woods, Mark Sculpher, Laetitia Schmitt, Stephen Palmer, Karl Claxton
Funder: DHSC PRP EEPRU

Developing a reference protocol for expert elicitation in health care decision making
Laura Bojke, Marta Soares, Karl Claxton, Aimée Fox, Dina Jankovic
Funder: MRC

Developing peer Mentorship to improve self-management of Osteoarthritis: A feasibility study (aMiGO study)
Gerry Richardson
Funder: NIHR RfPB

Economic evaluation of the Accelerate, Coordinate and Evaluate (ACE) programme for the early diagnosis of cancer
Sebastian Hinde, Susan Griffin, Mark Sculpher
Funder: DHSC PRP EEPRU

Economic evaluation of public health programmes with costs and effects falling outside the NHS and local authority
Mark Sculpher, Susan Griffin, Simon Walker (CHE), Miqdad Asaria (LSE)
Funder: DHSC PHRC

Estimating health opportunity costs (the cost-effectiveness threshold) for the NHS
Karl Claxton, James Lomas, Marta Soares, Mark Sculpher (CHE), Steve Martin (Department of Economics and Related Studies, York)
Funder: DH PRP EEPRU

Exploring and quantifying preferences towards self-management support interventions
Andrea Manca
Funder: Health Foundation

Facilitating patient choice in haematology-oncology
Andrea Manca, Hyacinthe Kankeu, Alastair Bennett
Funder: NIHR Programme Grant

FARSTER – Feasibility study of early outpatient review and early cardiac rehabilitation after coronary artery bypass grafting
Sebastian Hinde
Funder: NIHR HTA

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, Mark Sculpher
Funder: NIHR HTA

Healthcare Alliance for resourceful medicines offensive against Neoplasms in Haematology (HARMONY)
Andrea Manca
Funder: European Commission IMI H2020 programme

Health economics of personalised medicine
Andrea Manca (CHE), Cynthia Iglesias (Department of Health Sciences, York)
Funder: Luxembourg Institute of Health Economics and outcomes measurement
Laura Bojke, Gerry Richardson, Sebastian Hinde, James Lomas (CHE), Tracey Young, John Brazier (University of Sheffield)
Funder: NIHR CLAHRC YH

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

MDS-RIGHT: providing the right care to the right patient with MyeloDysplastic Syndrome at the right time
Andrea Manca, Thomas Patton (CHE), Cynthia Iglesias, Alexandra Smith, Simon Crouch, Tom Johnston, Ge Yu, (Department of Health Sciences, York)
Funder: European Commission

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, Sebastian Hinde, James Lomas, Pedro Saramago Goncalves
Funder: NIHR TARS

**Health economics of personalised medicine**

Andrea Manca (CHE), Cynthia Iglesias (Department of Health Sciences, York)
Funder: Luxembourg Institute of Health Economics and outcomes measurement
Laura Bojke, Gerry Richardson, Sebastian Hinde, James Lomas (CHE), Tracey Young, John Brazier (University of Sheffield)
Funder: NIHR CLAHRC YH

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

MDS-RIGHT: providing the right care to the right patient with MyeloDysplastic Syndrome at the right time
Andrea Manca, Thomas Patton (CHE), Cynthia Iglesias, Alexandra Smith, Simon Crouch, Tom Johnston, Ge Yu, (Department of Health Sciences, York)
Funder: European Commission

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, Sebastian Hinde, James Lomas, Pedro Saramago Goncalves
Funder: NIHR TARS

NICE Economic and Methodological Unit (EMU)
Helen Weatherly, Susan Griffin, Simon Walker, Rita Faria, Mark Sculpher (With York Health Economics Consortium)
Funder: NICE

Partners at Care Transitions (PACT): Improving patient experience and safety at transitions of care
Gerry Richardson
Funder: NIHR PGfAR

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 Kaltenhaler (University of Sheffield)
Funder: DHSC PRP EEPRU

PREVAIL – PREVenting infection using Antibiotic Impregnated Long lines
Laura Bojke, Rita Faria, Alessandro Grosso (CHE), Ruth Gilbert (UCL)
Funder: NIHR HTA NETSCC
In 2009, just half of people with dementia had received a formal diagnosis. NHS England announced a package of measures to tackle the problem of ‘underdiagnosis’ and improve care and support for patients and their families. The package included two voluntary financial incentive schemes in primary care. These were designed to raise the dementia diagnosis rate to two-thirds of the ‘expected’ number of cases – the predicted number based on age, sex, and care home residency.

Our studies examined whether the schemes had worked, and whether there were any unintended consequences – either positive or negative.

First, did they work? The schemes were introduced at different times, they overlapped, and practices dropped in and out. Isolating their impact was therefore very challenging. Difference-in-differences methods go beyond simple ‘before and after’ comparisons, by comparing changes in those that took part with changes in those that did not. Our design has another layer of complexity, in that it allows for multiple schemes.

The outcome was the percentage of expected cases of dementia that was recorded on the practice dementia register (the ‘rate’). During the time the schemes were active, the average practice rate rose from 52% to 69%. Only part of this increase was due to the two schemes: together, they increased GP dementia registers nationally by around 40,000 cases; this figure would have been almost 50,000 if all practices had chosen to take part.1

Second, we looked at possible unintended effects on the quality of care and on patient experience. Both schemes were linked to higher quality care for existing dementia patients, and for people with other conditions. But the effects on patient experience were mixed. Both schemes were linked to small reductions in confidence and trust in the GP and to lower continuity of care, though effects on the other measures of patient experience were inconsistent.2 As these patient experience measures are from the GP Patient Survey, which covers a small fraction of practice patients, we need to be cautious. More detailed research is needed to check these findings, and to understand what might be done to prevent any ‘side effects’ arising in future.

<table>
<thead>
<tr>
<th>SCHEME</th>
<th>DATES</th>
<th>DESCRIPTION</th>
<th>TOTAL BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed Enhanced Service 18 (DES18)</td>
<td>April 2013 – March 2016</td>
<td>Aim: to facilitate timely diagnosis and support for people with dementia. Paid GPS for assessing ‘at risk’ patients. People diagnosed with dementia invited to develop and advanced care plan and carers offered a health check.</td>
<td>£126m</td>
</tr>
<tr>
<td>Dementia Identification Scheme (DIS)</td>
<td>Sept 2014 – March 2015</td>
<td>Paid GPs £55 for each additional case on the practice dementia register, based on the change in the register between September 2014 and March 2015.</td>
<td>£5m</td>
</tr>
</tbody>
</table>

**Publications**


Partnerships between deaf people and hearing dogs: a mixed methods realist evaluation
Bryony Beresford (SPRU, York), Catherine Hewitt (Department of Health Sciences, York), Helen Weatherly, Simon Walker (CHE)
Funder: NIHR HTA

REVIVED – REvascularisation for Ischaemic VEntricular Dysfunction: a randomised comparison of percutaneous coronary intervention (with optimal medical therapy) versus optimal medical therapy alone for patients referred to secondary care with a frozen shoulder (adhesive capsulitis)
Gerry Richardson (CHE), Amar Rangan (The James Cook University Hospital) Funder: NIHR HTA

Health policy

Characterising end-of-life hospital expenditure
Nigel Rice, Panos Kasteridis, Rita Santos
Funder: NIHR PRP ESHCRU

Determinants of provider responsiveness to financial incentives to improve quality and efficiency (BPT)
Nils Gutacker, James Gaughan (CHE), Luigi Siciliani (DERs, York)
Funder: NIHR PRP ESHCRU

Does commuting affect health and well being?
Nigel Rice, Nikita Jacobs
Funder: ESRC

European Training Network: Improving Quality of Care in Europe (IQCE)
Martin Chalkley (CHE), Luigi Siciliani (DERS, York) in collaboration with Universiteit Hamburg (Lead), Universidade de Lisboa, University of Southern Denmark, Bocconi University, Erasmus University Rotterdam.
Funder: European Commission (FP7)

Modelling demand for health care expenditures
Anne Mason, Nigel Rice, Martin Chalkley, Maria Aragón, Idaira Rodríguez Santana
Funder: NIHR PRP ESHCRU

Organisation, size, and outcomes in general practice: GP hubs, federations and chains
Hugh Gravelle, Rita Santos, Dan Liu
Funder: NIHR PRP ESHCRU

Providers’ response on the pay for performance incentives
Katja Grašič
Funder: NIHR CCF (Doctoral Research Fellowship)
Up to 70% of health care in some countries in Sub-Saharan Africa is delivered by faith based organisations. Faith based health facilities are often situated in rural and deprived areas and traditionally have charged user fees. In order to increase equitable access to health care, most faith based providers across Africa are becoming integrated in national public health systems using different types of contracts. Research on the effects of these arrangements on health care utilisation and population health is limited.

Ongoing research as part of the Thanzi la Onse programme, analyses the impact of the Government of Malawi contracting-out health care to nonprofit providers from the Christian Health Association of Malawi (CHAM), in the form of service-level agreements (SLAs). The study finds that SLAs reduced the proportion of women giving birth at home by increasing the uptake of institutional deliveries at CHAM hospitals. The results also point to an increase in births being assisted by skilled health workers.

The government of Malawi has entered into service-level agreements (SLAs) with individual CHAM facilities since 2006. SLAs mostly cover maternal and neonatal health care services. Under this agreement, a CHAM facility is liable to provide agreed services for free and will be reimbursed retrospectively by the district health office on a pre-defined fixed cost of inputs. Therefore, SLAs comprise both of a payment reform and a removal of user-fees.

The authors estimate the impact of SLAs on health care utilisation, by exploiting spatial and temporal variation in the staggered implementation of SLAs across facilities. Information on women’s births in 2005-2010 and related health service utilisation during pregnancy, from the 2010 Malawi Demographic and Health Survey, is used for the analysis. The location of the sampled villages from the survey is spatially linked to all health facilities in Malawi including information on the time of SLAs implementation per facility. This quasi-experimental method allows for the estimation of differential effects on pregnancy related health care utilisation for births with and without exposure to SLAs over time.

While the findings point to a large effect of SLAs increasing skilled institutional birth delivery, positive effects are not found on the demand for prenatal care. Preliminary findings suggest a reduction in some specific services during prenatal care. The lack of positive effects on prenatal care services may explain why there is no significant impact on child survival or birth weight.

As contractual arrangements with non-governmental providers involving both supply- and demand-side reforms are increasing across low income countries, this study is an important first insight into the possible effects of such policies.
Research projects in progress and completed in 2018

- **Mental health**
  
  **CODI – Costs and Outcomes of Digital Interventions to improve mental health**
  Laura Bojke, Pedro Saramago Goncalves
  Funder: NIHR NETSCC
  
  **Does better quality of primary care improve outcomes for patients with serious mental illness (SMI)? An analysis of the relationship between SMI management and outcomes using the first linked data on the full patient care pathway**
  Rowena Jacobs, Maria Goddard, Hugh Gravelle, Nils Gutacker, Anaya Montes, Idaira Rodríguez (CHE), Anne Mason, Nigel Rice, Jemimah Ride
  Funder: York Hospital Trust
  
  **The impact of extending working hours as employees adapt and respond to change: a mixed methods evaluation of employee and organisational outcomes**
  Rowena Jacobs, Martin Chalkley, Misael Anaya Montes, Idaira Rodríguez (CHE), with colleagues across University of York
  Funder: York Hospital Trust
  
  **Conducting for secure mental health services**
  Martin Chalkley, María José Aragón, Rowena Jacobs
  Funder: DH PRP EEPRU
  
  **Closing the GAP Mental Health Network**
  Rowena Jacobs, María José Aragón, with colleagues across University of York
  Funder: UK Research & Innovation
  
  **IMPACT: Improving Outcomes in Mental and Physical Multimorbidity in South Asia**
  Rowena Jacobs with colleagues from across University of York and partner institutions
  Funder: NIHR – Global Health Research

- **Equity in health and health care**
  
  **Case studies of local NHS equity indicator trends: have some NHS areas tackled health inequality more effectively than others, and if so how?**
  Richard Cookson
  Funder: ESRC
  
  **Health equity impacts: evaluating the impacts of organisations and interventions on social inequalities in health**
  Richard Cookson
  Funder: NIHR, Senior Research Fellowship
  
  **Tracing causes of inequalities in health and well-being: analysis of rich longitudinal data**
  Nils Gutacker
  Funder: Research Council of Norway via University of Tromso

- **Global health**
  
  **A one stop shop for cost-effectiveness evidence? Recommendations for improving disease control priorities**
  Matthias Arnold, Susan Griffin, Jessica Ochalek, Paul Revill, Simon Walker
  Funder: MRC GCRF RCUK Thanzi la Onse project 2018
  
  **Children with HIV in Africa – pharmacokinetics and acceptability of simple antiretroviral regimens (CHAPAS 4)**
  Paul Revill, Jessica Ochalek, Beth Woods, Alex Rollinger
  Funder: EDCTP
  
  **Contracting for health service provision at Christian health facilities**
  Martin Chalkley, Viktoria Tafesse (CHE), Gerald Manthalu (Ministry of Health, Malawi)
  Funder: MRC GCRF RCUK Thanzi la Onse project 2018
  
  **Cross-sectoral analysis of the social cash transfer programme**
  Karel Haal, Finn McGuire, Viktoria Tafesse, Paul Revill, Susan Griffin
  Funder: MRC GCRF RCUK Thanzi la Onse project 2018
Doctor who? The influence of doctors’ socio-demographic characteristics on medical specialty allocation

Concerns regarding the healthcare workforce extend beyond the problem of general shortages, to issues such as the over-subscription of some specialties, constant recruitment problems in others, or the under-supply of doctors in rural areas. These are manifestations of imbalance in the workforce, between what training doctors want and what the health system needs. Such imbalances are closely related to the recent major changes in the composition of the medical workforce: the feminisation of the profession; the increased representation of Black and Minority Ethnic (BME) doctors and those coming from deprived socioeconomic backgrounds; and the increased reliance on foreign-graduated doctors.

This research seeks to understand and disentangle the origins of the large imbalances observed for UK doctors, recognising that the allocation of individuals to specialties is a sequential process. Doctors make decisions regarding which specialties to apply for and their applications are then assessed to determine their suitability. At each stage of this process, there is selection, either by the doctors themselves or by the selectors reviewing their applications, that might result in specialties becoming unbalanced in terms of social, economic, gender and ethnic characteristics. Thus, our principal objective is to understand how demographic and socioeconomic characteristics impact the different stages of that process. We develop a framework that describes the functioning of the specialty allocation process in the UK and serves as a base for the empirical analysis. The data used to evaluate the framework come from the UK Medical Education Database, which collates data on the performance and career progression of doctors who started medical studies in the UK in 2007 and 2008.

After accounting for previous academic attainment, medical school effects and other relevant elements, there are clear and significant effects, of doctors’ demographic and socioeconomic backgrounds on where they apply, the number of applications they submit and selectors’ judgements. In particular, the results show strong evidence with respect to choices by women, BME and doctors from better-off socioeconomic backgrounds with regard to their application patterns. The analysis sheds light on doctors’ perception of success and shows that BME and older doctors are more likely to submit multiple applications. At the selection stage, the results suggest the existence of unexplained interview score differences in favour of white and female doctors, relative to BME and male doctors. Results also confirm that making more than one application has a negative effect on interview scores.

These findings can assist policy makers and regulators to design and target better workforce planning and recruitment strategies, and hence make better use of resources to improve access to care and the efficiency of health service delivery.

Research projects in progress and completed in 2018

Developing a district resource allocation formula for Malawi
Finn McGuire, Paul Revill, Peter C Smith (CHE), Sakshi Mohan, Pakwanja Twea (Ministry of Health, Malawi)
Funder: MRC GCRF RCUK Thanzi la Onse project 2018

Developing a roadmap for health system financing policy in India
Sumit Mazumdar, Rodrigo Moreno-Serra, Peter C Smith, Marc Suhrcke
Funder: GCRF QR Funding Schemes

Development of a new paradigm in differentiated care for HIV Patients
Paul Revill, Simon Walker
Funder: MRC

Distributional impact of the Malawian essential health package
Susan Griffin, Matthias Arnold (CHE), Dominic Nkhoma (College of Medicine, Malawi)
Funder: MRC GCRF RCUK Thanzi la Onse project 2018

Economic analysis for health benefits package design
James Love-Koh, Matthias Arnold, Jessica Ochalek, Paul Revill, Susan Griffin, Simon Walker, Mark Sculpher, (CHE), Eddie Kataika, Sibusiso Sibandze (East Central and Southern Africa Health Community)
Funder: MRC GCRF RCUK Thanzi la Onse project 2018

Estimating cost-effectiveness thresholds: a case study on Indonesia
Marc Suhrcke, Karl Claxton, Paul Revill, Andrew Mirelman, Noemi Kreif, Rodrigo Moreno-Serra, Alex Rollinger
Funder: Gates Foundation via NICE International

Evaluation of South Africa's excise tax on sugar-sweetened beverages
Marc Suhrcke, Andrew Mirelman
Funder: International Development Research Centre (IDRC), Canada

Evaluating the role of fiscal policy in improving diets and preventing chronic disease in Chile
Marc Suhrcke, Andrew Mirelman
Funder: MRC Newton Fund

Extension to the economic analysis of the REALITY trial of prophylactic strategies in advanced HIV patients in Africa
Simon Walker, Edward Cox, Paul Revill, Marta Soares
Funder: MRC

HIV Modelling Consortium: 4 year programme grant
Mark Sculpher, Paul Revill, Claire Rothery, Karl Claxton, Beth Woods
Funder: Bill and Melinda Gates Foundation

Incorporating concerns for equity into health resource allocation: A guide for practitioners
James Love-Koh, Susan Griffin, Paul Revill, Simon Walker (CHE), Edward Kataika, Sibusiso Sibandze (East Central and Southern Africa Health Community)
Funder: MRC GCRF RCUK Thanzi la Onse project 2018

Implementation of COPD case finding and self-management action plans in low and middle income countries
Andrew Mirelman
Funder: MRC

Informing the rapidly evolving policy landscape in health care decision making in India: state specific health opportunity costs
Jessica Ochalek
Funder: ESRC IAA

LeishPathNet: Towards a research network for the molecular pathological stratification of Leishmaniasis
Paul Revill, Mark Sculpher, Rita Santos
Funder: MRC, GCRF Foundation Award

Levels and determinants of health system efficiency in Latin America and the Caribbean
Rodrigo Moreno-Serra, Peter C Smith, Misael Anaya Montes
Funder: Inter-American Development Bank

Macroeconomic and welfare consequences of road traffic injuries in low and middle income countries
Marc Suhrcke, Andrew Mirelman
Funder: The World Bank

MRC Global Health: (TRACT)
Transfusion and Treatment of severe Anaemia in African Children: a randomised controlled Trial
Pedro Saramago Goncalves, Aimée Fox, Martin Harker, Paul Revill, Simon Walker
Funder: MRC

NIHR global health research group on Global Health Econometrics and Economics (GHE2)
Marc Suhrcke, Rodrigo Moreno-Serra, Noemi Kreif, Sumit Mazumdar, Andrew Mirelman, Mark Sculpher, Paul Revill, Stephen Palmer, Martin Chalkley, Nigel Rice, Richard Cookson (CHE), With PRICELESS SA, Wits University School of Public Health (South Africa). Foundation Economic Research Institute (FIPM), University of São Paulo (Brazil). Center for Health Economics and Policy Studies (CHEPS), Universitas Indonesia (Indonesia)
Funder: NIHR - Global Health Research

Setting research priorities in global health: appraising the value of evidence generation activities to support decision-making in health care
Beth Woods, Claire Rothery, Paul Revill, Karl Claxton (CHE), Timothy Hallett (Imperial College London), Andrew Phillips (UCL)
Funder: Bill and Melinda Gates Foundation

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, Laure Bedecarrax, Beth Woods, Simon Walker, Peter C Smith, Susan Griffin,Wiktoria Tafesse, Matthias Arnold, Marc Suhrcke, Martin Harker, Ajay Rangaraj (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
However, effectiveness evidence alone is not enough to determine whether an investment in a particular programme is worth the cost. Facing tight resource constraints, decision-makers ought to weigh costs and benefits of alternative causes of action, and health economic evaluation methods provide a suitable framework to inform resource allocation decisions.

In a recent manuscript, CHE authors explore to what degree economic evaluations have been conducted alongside published health impact evaluations. We undertook a systematic search of repositories of published studies, including the specialised repository of impact evaluations by the International Initiative for Impact Evaluations. Out of more than 10,000 published impact evaluations, only 70 studies were found that combined impact and economic evaluations, confirming that appropriate economic tools are indeed under-utilised in impact evaluations. We then assessed the quality of the economic evaluation in those studies, using quality assessment criteria derived from the International Decision Support Initiative Reference Case for Economic Evaluation, previously co-designed by CHE authors.

The resulting picture was one of highly variable quality across the studies. Only a small minority of studies met the basic requirements for economic evaluation – eg stating the perspective of the analysis, using generic health measures that can be compared across diseases, or suitably reflecting uncertainty. Future work should direct greater effort towards bringing the fields of impact evaluation and economic evaluation more closely together, in order to inform better resource allocation decisions in global health.

The demand for more and better evidence on ‘what works’ in development policy has soared in recent years, in health and beyond. This demand has been met by a considerable growth in ‘impact evaluations’, or studies that seek to causally attribute changes in an outcome to a given intervention. Not only has the quantity of such studies increased, but the quality has also improved, as impact evaluations have adopted increasingly rigorous (experimental and quasi-experimental) methodologies.

Who cares about ‘value for money’ in global health?

References

War and Peace: the health and health system consequences of conflict in Colombia
Rodrigo Moreno-Serra, Noemi Kreif, Andrew Mirelman, Marc Suhrcke (CHE). With Department of Politics, University of York. Universidad de los Andes, Colombia. London School of Hygiene and Tropical Medicine. Funder: MRC/ESRC/DFID/Wellcome

Health and social care
Evaluation of South Somerset’s complex care and enhanced primary care arrangements (Vanguard)
Panos Kasteridis, Anne Mason (CHE), Andrew Street (LSE). Led by NHS South, Central and West Commissioning Support Unit. Funder: Yeovil District Hospital NHS Foundation Trust

Evaluation of the integrated personal commissioning programme
Helen Weatherly, Rita Farla, Francesco Longo. Funder: DoH PRP

Harrogate Vanguard 2
Gerry Richardson, Laura Bojke, Sebastian Hinde. Funder: Harrogate and District NHS Foundation

Intensive behavioural interventions for young children with autism
Claire Rothery. Funder: NIHR HTA

PACT – Partners at Care Transition: Improving patient experience and safety
Gerry Richardson. Funder: NIHR Prog Grant

Public Health England framework 2018: Social Care
Helen Weatherly. Funder: Public Health England

Understanding the interdependencies between health and social care resources and arrangements
Anne Mason, Dan Liu, Maria Pace, Maria Goddard, Rowena Jacobs (CHE), Raphael Wittenberg (LSE). Funder: NIHR PRP ESHCRU

Vision rehabilitation services: investigating the impacts of two service models
Helen Weatherly, Pedro Saramago Goncalves. Funder: NIHR SSCR

York CCG collaboration
Rehabilitation: Ana Duarte, Laura Bojke, Gerry Richardson Care hubs: Ana Duarte, Laura Bojke, Gerry Richardson (CHE), Chris Bojke (University of Leeds) Health checks: Sebastian Hinde, Gerry Richardson, Laura Bojke. Funder: NIHR

Yorkshire lung cancer screening
Mark Sculpher. Funder: YCR

Public health
BREEZE – A feasibility randomised controlled trial of a complex breathlessness intervention in Idiopathic Pulmonary Fibrosis
Gerry Richardson. Funder: NIHR RfPB

CAPITAL4HEALTH – Capabilities for active lifestyle
Marc Suhrcke. Funder: German Ministry for Education and Research

CLAHRC II – health economics and outcomes measurement
Mark Sculpher, Laura Bojke, Gerry Richardson, Susan Griffin (CHE), Karen Bloor (Department of Health Sciences, York). Funder: NIHR CCF

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
Susan Griffin, Ana Duarte, Simon Walker, Fan Yang. Funder: DHSC PRP: PHRC

Enhancing social-emotional health and wellbeing in the early years: a community-based randomised controlled trial (and economic) evaluation of the incredible years infant & toddler (0-2) parenting programmes
Tracey Bywater, Amanda Mason-Jones, Kate Pickett (Department of Health Sciences, York), Gerry Richardson, Simon Walker (CHE), Kathleen Kiernan (SPSW, York). Funder: NIHR PHR

Evaluation of Coenzyme Q10 in chronic heart failure
Claire Rothery. Funder: NIHR HTA

Northern Health Science Alliance (NHSA) health inequalities in the north report
Nigel Rice. Funder: NHSA

Tees Esk and Wear Valleys identifying and linking individual patient data to access alternative services
Gerry Richardson, Laura Bojke, Sebastian Hinde. Funder: NIHR RCF
How efficient are the health systems of Latin America and the Caribbean – and why?

Most Latin America and Caribbean (LAC) countries have achieved great improvements in population health since the early 2000s. Yet LAC countries devoting similar amounts of resources to health vary significantly in terms of the population health indicators achieved. The mixed health results achieved in the region have taken place under increasing pressure on health budgets. Identifying the countries that do better than others in translating health resources into better outcomes, and the reasons for these differences in performance, are essential steps for the development of policies that ensure sustained progress towards universal health coverage.

Research undertaken seeks to identify the levels of spending efficiency and their possible determinants across LAC health systems. We measure efficiency through achievements in various health system outputs, including health outcomes (e.g., life expectancy, under-five mortality) and care access indicators (e.g., skilled birth attendance rate and its ratio between poorest and richest people). We use annual data for the period 2006-2015 for 71 countries, including 27 LAC countries, complemented by the OECD economies and selected middle-income countries from other regions, so as to benchmark the performance of LAC countries.

The analyses reveal that LAC countries could make large gains in health outcomes and access to services for their current health budget. For example, at current spending levels, LAC countries could improve life expectancy at birth by 4 years on average if they followed best practices. LAC health systems perform especially poorly regarding the provision of equitable access to services for their levels of health spending. Chile, Costa Rica, Cuba, Jamaica and Uruguay are consistent efficiency frontrunners, while consistent underperformers include Bolivia, Guatemala, Panama, Peru and Suriname.

One policy implication of the analyses is that LAC countries should seek ways to improve the care access indicators and health outcomes achieved for their current levels of resources, rather than seek to reduce their health spending levels – which are already low compared to typical per capita expenditures among OECD countries. The research finds that efforts to increase health system efficiency in LAC could focus on general governance aspects but also improvements in the quality of health institutions. Countries with ‘better’ health system institutions – in the sense of having a medium-term sectoral vision aligned with the overall government strategy, and results-based management of health service provision – achieve wider access to health services, for a given level of health spending.

This study has provided key technical input for the 2018 edition of the flagship Inter-American Development Bank publication ‘Development in the Americas’.

References
Courses and workshops

In 2018 we welcomed 281 delegates to York for our short courses from 38 countries worldwide, spanning six continents and organisations such as pharmaceutical and medical technology companies, universities, hospitals, government bodies and charities.

Details of our current short courses can be found on our website: york.ac.uk/che/courses/

York Summer Workshops in Health Economic Evaluation

Foundations of Economic Evaluation in Health Care
This five-day workshop, held in June, covered all the key issues in the methodology and practice of economic evaluation and was attended by 53 delegates.

Advanced Methods for Cost-Effectiveness Analysis: Meeting Decision Makers’ Requirements
This five-day workshop, also held in June, dealt with advanced methods in economic evaluation in health care, and was attended by 55 delegates.

Outcomes Measurement and Valuation for Health Technology Assessment
This three-day workshop included new material linked directly to the needs of organisations, such as NICE, which make decisions about health care delivery and funding. 26 delegates attended this workshop held in July.

Decision Analytic Modelling for Economic Evaluation
The two-day Foundations course and three-day Advanced course are run jointly between the Centre for Health Economics and the University of Glasgow. 106 delegates in total attended both courses, designed to inform and promote understanding in key areas of quality of life assessment and health economic evaluation.

Statistical Methods in Economic Evaluation for Health Technology Assessment
74 delegates in total attended the two-day Foundations course and the three-day Regression Methods course, intended for people currently undertaking, reviewing or commissioning analyses of health economics and outcomes research (HEOR) data within the pharmaceutical and medical device industries, consultancy, academia or the health services.

Analysing Patient-Level Data Using Hospital Episode Statistics (HES)
This three-day course included instruction on how to understand, manage, manipulate, evaluate, aggregate and cost HES data; construct and analyse key variables such as waiting times or length of stay; and link inpatient and outpatient HES records together and to other datasets. The course was held in December and 32 delegates attended.

Health Economics by Distance Learning
The York Distance Learning Programmes in Health Economics for Health Care Professionals offer students the opportunity to study for university-accredited qualifications at the postgraduate level. The programmes are designed to allow students to study 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.
A framework for distributional cost-effectiveness analysis was developed to provide decision makers with information about the gainers and losers from alternative policy options. Where concern is expressed for reducing inequality in health outcomes between population groups, for example by socioeconomic status, distributional cost-effectiveness analysis can be applied to estimate how policies would change health outcomes for each group. From this, an estimate of how policies change health inequality can be summarised, alongside how they change health overall. The distributional cost-effectiveness framework quantifies any trade-offs between increasing population health and reducing health inequality. It requires the value judgements made in the analysis to be clearly specified, which facilitates testing of whether alternative reasonable value judgements might alter the choice of policy.

Fundamental inputs required to undertake this type of analysis have been developed at York. In his PhD, James Love-Koh assessed differences in healthy life expectancy between individuals according to their sex, age, and neighbourhood level of deprivation. For those same groups he determined the differences in the amount their health would improve from a change in NHS expenditure. Matthew Robson and colleagues asked members of the public by how much they would prioritise health gains to the poor over the same gains to the rich. Susan Griffin and James Love-Koh worked with the National Institute for Health and Care Excellence on how impacts on health inequality could inform their recommendations. Using a simplified form of distributional cost-effectiveness analysis, they showed the potential for public health recommendations to reduce the 13.78 year gap in healthy life expectancy between the healthiest and least healthy groups in England and Wales by 0.44 years.

Further work is showing how inclusion of health inequality concerns might alter policy choices in other settings, such as the determination of which interventions to include in Malawi’s health benefits package, or outside of the health sector in terms of the preferred way to implement a low emission zone. This area of research is one that CHE continues to develop in collaboration with a range of stakeholders and partners.

Decisions about which health interventions to fund are often informed by cost-effectiveness analysis. This entails evaluating by how much people’s health would be improved with a policy, and testing whether the resources to provide it would have generated better improvements in health if devoted to other activities. The analyses produced to inform funding decisions typically evaluate how policies improve health on average. As they are not provided with information about who in the population gains from alternative policies, or from other ways the resources could be used, decision makers cannot base their choice on how policies change health inequality.

References

Peer Reviewed


Mental health services in England face particular challenges. Services suffer from chronic underfunding, and lack a payment system that links activity with reimbursement. Unlike acute physical health hospital services, where payment is based on the number of treatment episodes, mental health services are mostly funded through block contracts that do not relate payment to activity or outcomes.

Mental health hospitals are being encouraged to move away from block contracts to payment systems based on episodes and/or outcomes, or to payments based on the populations they serve (‘capitation payments’). All approaches require a transparent classification system. Mental health service providers categorise patients into 20 groups designed to capture similar levels of need, called clusters. Clusters are important for grouping patients with similar costs to calculate episodic payments; and for defining the units of activity necessary for allocating resources and defining capitation payments.

Clinicians make clustering decisions, supported, if they wish, by the Mental Health Clustering Tool. This algorithm provides an external reference for benchmarking clustering behaviour. We investigated the degree of mismatch between actual and predicted clustering, to test for systematic differences in providers’ clustering behaviour.

We found systematic variation across hospitals in their probability of mismatch, but this was not consistently associated with observed hospital characteristics (e.g., hospital cost structures, staff engagement, or deprivation of the population they serve).

We also found that clusters are not performing well as a classification system by capturing similarities and differences between patients. The categories of the current classification system appear to be neither case-mix nor resource homogeneous. There was large variation in both activity and costs within clusters and between providers.

We believe that clusters can provide the basis for a better classification system that makes mental health services more transparent and accountable. Clusters should be a starting point for evolving a better funding system, and to abandon the clustering approach at this stage would undo important progress made in helping mental health services demonstrate their claim on NHS resources.

Publications


In a special series in the Lancet, we and co-authors provided an overview of the equity issues related to fiscal policies for health. This work shows that, while the wealthy tend to spend more on unhealthy items overall, the poor bear a larger burden relative to their means when prices increase. However, in many circumstances the poor can potentially gain more of the health benefit.

CHE staff have been involved in several empirical evaluations of fiscal policies. In a project with partners at the Universidad de Chile, Marc Suhrcke, Ryota Nakamura, Andrew Mirelman and co-authors evaluated a Sugar-Sweetened Beverage (SSB) tax that was implemented in Chile in 2014. The results indicate that there were reductions in purchasing of SSBs in certain population sub-groups. A counter-intuitive result was found, where the largest reductions appeared to be in the wealthiest sub-groups. Further work has also been completed in Barbados, where CHE’s Marc Suhrcke has been involved with the evaluation of an SSB tax that was introduced in 2015. Here, the tax was found to both successfully raise the prices of SSBs and to reduce purchasing among consumers.

Overall, the amount of evaluations of actual SSB tax-policies remains small, and what little does exist so far is being watched carefully in other countries interested in adopting such policies. With their predominantly encouraging findings, they are entering the policy toolkit in a growing number of high-income countries as well as low- and middle-income countries.

References
Publications 2018


Yang F, Devlin N, Luo N. Cost-utility analysis using EQ-5D-5L data: does how the utilities are derived matter? *Value in Health* 2018;doi:10.1016/j.jval.2018.05.008.


**Books and Book Chapters**


Marie Skłodowska-Curie European Training Network PhD students

Laurie Rachet Jacquet

2018 was an intense year but it will remain a memorable one, both professionally and personally.

In September 2017, I relocated from France to the UK and started my PhD under the Marie Curie European Training Network (ETN). The first months were spent travelling to the partner universities (Hamburg, Lisbon, Milan, Odense and Rotterdam) to attend a set of short courses on econometrics, microeconomics and health economics, together with 14 other ETN fellows.

Equipped with a comprehensive toolbox – as well as a solid knowledge of Manchester airport – I started on my PhD work, which looks at the volume-outcome effect in healthcare. The core idea is to test whether healthcare providers benefit from a ‘learning by doing’ effect in quality of care. Despite policy efforts to concentrate the provision of care or introduce volume thresholds for hospitals across OECD countries, there is little evidence of a causal effect running from volume to quality beyond a positive correlation.

My first chapter looks at the causal effect of hospital volumes on patient-reported health outcomes (PROMs) for hip replacement patients in England using large administrative data (Hospital Episode Statistics) and accounting for the endogeneity of hospital volumes. I presented results of this first study at the EuHEA conference in Maastricht, in Catania and at the HESG meeting in York.

I was also grateful for the very inclusive and supportive environment that characterises CHE, especially because I came to York without knowing anyone. Definitely, 2018 was a great year.

Luis Fernandes

The year of 2018 was a turning point in my life. I left behind my medical career to join CHE and start my PhD. I also became a fellow of a Marie Skłodowska-Curie European Training Network, a consortium of industrial and academic institutions, which works towards improving the quality and performance of European health care systems.

Regardless of this transition, my current research does not fall far from my medical background. I focus on understanding how physicians practicing in the English NHS respond to different economic incentives. It is reasonable to assume that the desired vision of patient-centred care will be unmet if the people working in the system are forgotten. They are vital in achieving better efficiency and quality of care. My utmost aspiration is to turn the evidence emerging from my research into actionable insights that support policy making for the health workforce.

CHE has proved to be the right place for this journey. Notwithstanding its long tradition in health economics, CHE accumulates unmatched technical knowledge in remarkable and very supportive people. There is no door I cannot knock on for help in here. Finally, CHE is a place where visitors from every corner of the world come and go, leaving invaluable lessons of distinct ways to pursue higher standards of health care. I am grateful to be part of this centre!

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 721402.
Publications 2018


**Other**


**Tafesse W.** The effect of mandatory iodine fortification on cognitive test scores in rural India. *Health, Econometrics and Data Group (HEDG), University of York 2018; working paper 18/10.*

**CHE Research Papers**

**151** Spatial competition and quality: evidence from the English family doctor market. **Hugh Gravelle, Dan Liu, Carol Propper, Rita Santos.**

**152** Productivity of the English National Health Service: 2015/16 update. **Adriana Castelli, Martin Chalkley, Idaira Rodríguez Santana**

**153** Accounting for the quality of NHS output. Chris Bojke, Adriana Castelli, Katja Grašič, Anne Mason, Andrew Street.

**154** Cost, context and decisions in Health Economics and cost-effectiveness analysis. **Anthony J Culyer.**

**155** Setting research priorities in Global Health: Appraising the value of evidence generation activities to support decision-making in health care. **Beth Woods, Claire Rothery, Paul Revill, Timothy Hallett, Andrew Phillips, Karl Claxton.**

**156** The determinants of health care expenditure growth. **Nigel Rice, María José Aragon.**

**157** Paying for efficiency: Incentivising same-day discharges in the English NHS. **James Gaughan, Nils Gutacker, Katja Grašič, Noemi Kreif, Luigi Siciliani, Andrew Street.**

**158** Estimating the marginal productivity of the English National Health Service from 2003/04 to 2012/13. **James Lomas, Stephen Martin, Karl Claxton.**

**159** Recommendations for the development of a health sector resource allocation formula in Malawi. **Finn McGuire, Paul Revill, Pakwanja Twea, Sakshi Mohan, Gerald Manthalu, Peter C Smith.**


Mark Sculpher. More money alone is not the cure for the crisis in the NHS. YorkTalks Research in the Spotlight, University of York, UK. January 2018.


Presentations 2018


**Richard Cookson.** Equity-informative health economic evaluation. Invited presentation at a meeting organised by the International Decision Support Initiative on ‘Equity-relevant considerations in transmission modelling’. London School of Hygiene and Tropical Medicine, London, UK. March 2018.


**Nils Gutacker.** Pay-for-efficiency in the English NHS. April 2018.


**Laura Bojke.** Expert elicitation in Health care decision-making. NICE Technical Forum, UK. April 2018.

**Mike Drummond.** Should we approve drugs by indication? AMCP (Academy of Managed Care and specialty Pharmacy) Annual Meeting, Boston, USA. April 2018.

**Rita Faria.** Cost-effectiveness of mpMRI, TRUS-biopsy and TPM-biopsy to diagnose clinically significant prostate cancer. NICE, Manchester, UK. April 2018.

**Nils Gutacker.** Pay-for-efficiency in the English NHS. University of Duisburg-Essen, Germany. April 2018.

**Helen Weatherly.** Methodological issues in the economic evaluation of interventions with intersectoral costs and benefits. LSHTM/DSI meeting on Taking a Disaggregated Societal Perspective in Economic Evaluation. Johannesburg, South Africa. April 2018.


**Mike Drummond.** Effectively communicating and presenting your research. ISPOR Annual Meeting, Baltimore, USA. May 2018.


**Susan Griffin.** Podium presentation. An analytical framework for economic evaluation of interventions with effects on multiple outcomes, costs falling on different budgets, and involving more than one decision maker. ISPOR Annual Meeting, Baltimore, USA. May 2018.


**Mark Sculpher.** Evidence for health technology assessments: The role of clinical trials versus real world evidence and how to judge value. The Memorial Sloan Kettering Cancer Centre, New York, USA. May 2018.


Susan Griffin. Talk and webinar. Distributional cost effectiveness analysis (DCEA) applied to health inequalities. PHE South East Public Health Information Group Meeting, UK. June 2018.


Rowena Jacobs. Invited keynote presentation. The organisation and funding of mental health services. Essen Economics of Mental Health Workshop, University of Duisburg-Essen, Germany. June 2018.


Marta Soares. Experiences of structured elicitation for cost-effectiveness analyses. Centre for Statistical Methodology, London School of Hygiene and Tropical Medicine, UK. June 2018.
Presentations 2018


**Simon Walker.** The value of air pollution interventions in West Yorkshire: An economic evaluation considering multiple outcomes, inequality impacts and costs falling on different decision makers. MDM European Conference, Leiden, the Netherlands. June 2018.

**Mike Drummond.** Challenges in the economic evaluation of cancer drugs. 4th St Petersburg International Oncology Forum. St Petersburg, Russia. July 2018.


**Francesco Ramponi.** Cross-sectoral economic evaluation of public health interventions: a case study on alcohol consumption. European Health Economics Association (EuHEA) Conference 2018, Maastricht, the Netherlands. July 2018

**Nigel Rice.** The disutility of commuting? The effects of gender and local labour markets. 6th Italian Health Econometrics Workshop, Bergamo, Italy. July 2018.


Jemimah Ride. Is the HoNOS a therapeutically meaningful clinical outcome measure, or a bureaucratic tick-box exercise? Qualitative analysis of the views of mental health service providers in the UK. Fourth Meeting on Patient Reported Outcomes and Person Centered Care in Mental Health, Washington DC, USA. September 2018.


Mark Sculpher. The basis to establish an appropriate price for a new pharmaceutical. ISPOR, Tokyo, Japan. September 2018.
Presentations 2018


Mark Sculpher. The use of QALYs in HTA. ISPOR. ISPOR, Tokyo, Japan. September 2018.


Susan Griffin. Distributional cost effectiveness analysis of low emission zone policies. ISPOR pre-summit session - New Approaches to Value Assessment: Towards More Informed Pricing in Healthcare, Washington, USA October 2018


James Love-Koh. Incorporating concerns for equity into health resource allocation. Presentation to Senior Policymakers and Academics from East, Central and Southern Africa (ECSA), University of York, UK. October 2018.

Jessica Ochalek. Matthias Arnold. Health benefit package design. Presentation to Senior Policymakers and Academics from East, Central and Southern Africa (ECSA), University of York, UK. October 2018.


Peter Smith. Fiscal sustainability: are health systems the problem or the solution? Opening Plenary, 21st European Health Forum, Gastein, Austria. October 2018.


Matthias Arnold. Thanzi la Onse (Health of all): Health benefits package design in LMIC. Institute of Health Economics and Health Care Management, Helmholtz Zentrum München, German Research Center for Environmental Health, Neuherberg, Germany. November 2018


Presentations 2018


Mark Sculpher. What is good for the environment is good for healthcare – how to consider green sustainability in value assessments and purchasing decisions. ISPOR Europe 2018, Barcelona, Spain. November 2018.


Andrew Mirelman. Equity and economic evaluation in low- and middle-income countries. Measuring and Improving Health Equity Conference, USC Schaeffer Center for Health Policy and Economics, University of Southern California, USA. December 2018.


New Research Staff

**Misael Anaya Montes**  
*Research Fellow*  
Misael joined the Health Policy Team in January 2018. His research focuses on economic analysis for health policy in the Peruvian health system and he is funded by the Peruvian government through Programa Reto Excelencia of the Autoridad Nacional del Servicio Civil – SERVIR.

**Karel Haal**  
*Research Fellow*  
Karel Haal joined CHE in October 2018 as a Research Fellow working on the Thanzi la Onse research programme.

**Matthias Arnold**  
*Research Fellow*  
Matthias joined CHE in May 2018 as a research fellow for the Thanzi la Onse project. Matthias holds degrees from the University of Heidelberg (Master-level degree in economics), University College London (MSc Global Health and Development), and LMU Munich (Master of Business Research).

**Martin Harker**  
*Research Fellow*  
Martin joined CHE in September 2018 as a research fellow in the Team for Economic Evaluation and Health Technology Assessment, working on a number of global health projects, including the Thanzi la Onse programme. He holds a BA in Natural Sciences (Genetics) from the University of Cambridge and an MSc in Public Health (Health Economics) from the London School of Hygiene & Tropical Medicine.

**Alastair Bennett**  
*Research Fellow*  
Alastair joined the Team for Economic Evaluation and Health Technology Assessment in August 2018. He completed an MSc in Operational Research in 2015 and a BSc in Mathematics in 2014. His interests lie in facilitating informed decision-making in haematology-oncology and using advanced modelling methods to elicit cost effective treatments.

**Sumit Mazumdar**  
*Research Fellow*  
Sumit joined the Global Health Economics Group in April 2018. Until recently he worked as Assistant Professor (Health Economics and Policy) at the Institute of Public Health Kalyani (IPHK), West Bengal, India. He holds a PhD in Health Economics and a Masters in Population Studies from the International Institute of Population Sciences, Mumbai, along with a university degree in Economics.
New Research Staff

Maria Lucia Pace  
Research Fellow  
Maria joined the Health Policy Team in February 2018. She has a PhD in Public Economics from the Università Cattolica del Sacro Cuore in Milan (October 2017). During the PhD she focused on the study of inequality of Opportunity in Italy and its impact on GDP growth.

Wiktoria Tafesse  
Research Fellow  
Wiktoria joined CHE in May 2018 as a research fellow for the Thanzi la Onse project. She holds a PhD in Economics from the University of Sussex which was funded by the Economic and Social Research Council. Her doctoral thesis focussed on the causes and consequences of nutrition in the UK and India. She also holds a MSc in Development Economics from the University of Sussex and a BSc in Economics and Political Science from the University of Stockholm.

Adrián Villaseñor-Lopez  
Research Fellow  
Adrian joined the Health Policy team in January 2018. Before joining CHE, he held a postdoctoral position at the Pontifical Catholic University of Chile applying impact evaluation methodologies to environmental programmes. He has now moved to the Department of Environment here at York.

PhD Students 2018

Gowokani Chirwa  
Georgios Nikolaidis  
David Glynn  
Francesco Ramponi  
Richard Mattock  
Anika Reichert  
Finn McGuire

New PhD students 2018

Finn McGuire  
Finn was awarded the CHE PhD studentship in 2018. His research interests are in the economic evaluations of health technologies and quantitative evaluations of health policies applied in low and middle-income countries. Prior to joining CHE he worked as a Research Fellow in Health Economics and Policy at the London School of Hygiene & Tropical Medicine and as an economist at the Ministry of Health in Malawi under the ODI Fellowship Scheme.

Research Fellows also registered for a PhD in 2018

Luis Fernandes  
Rita Santos  
James Gaughan  
Ieva Skarda  
Katja Grašič  
Jemimah Ride  
Laurie Rachet  
Jacquet
Research Staff 2018

Michael Drummond
Professor

Ana Duarte
Research Fellow

Rita Faria
Research Fellow

Luis Fernandes
Marie Curie Early Stage Researcher

Aimée Fox
Research Fellow

Francesco Fusco
Research Fellow

James Gaughan
Research Fellow

Vijay Gc
Research Fellow

Katja Grašič
Research Fellow

Hugh Gravelle
Professor

Susan Griffin
Senior Research Fellow

Alessandro Grosso
NIHR Research Methods Fellow

Nils Gutacker
Senior Research Fellow

Karel Haal
Research Fellow

Martin Harker
Research Fellow

Sebastian Hinde
Research Fellow

Nikita Jacob
Research Fellow

Rowena Jacobs
Professor

Dina Jankovic
Research Fellow

Hyacinthe Kankeu
Research Fellow

Panos Kasteridis
Research Fellow

Noemi Kreif
Research Fellow

Dan Liu
Research Fellow

James Lomas
Research Fellow

Francesco Longo
Research Fellow

James Love-Koh
Research Fellow

Andrea Manca
Professor

Anne Mason
Senior Research Fellow

Sumit Mazumdar
Research Fellow

Andrew Mirelman
Research Fellow

Rodrigo Moreno-Serra
Reader

Jessica Ochalek
Research Fellow

Maria Lucia Pace
Research Fellow

Stephen Palmer
Professor

Thomas Patton
Research Fellow

Laurie Rachet
Jacquet
Marie Curie Early Stage Researcher

Paul Revill
Senior Research Fellow

Nigel Rice
Professor

Gerry Richardson
Professor

Jemimah Ride
Research Fellow

Idaira Rodriguez
Santana
Research Fellow

Claire Rothery
Senior Research Fellow

Ieva Skarda
Research Fellow

Peter C Smith
Professor

Marta Soares
Senior Research Fellow

Marc Suhrcke
Professor

Wiktoria Tafesse
Research Fellow

Adrian Villaseñor-Lopez
Research Fellow

Simon Walker
Senior Research Fellow

Helen Weatherly
Reader

Beth Woods
Senior Research Fellow

Fan Yang
Research Fellow

Emeritus
Professor

Tony Culyer

Honorary Professors

Keith Derbyshire
Honorary Visiting Fellows

Marco Barbieri
Mark Dusheiko
David Epstein
Manuel Espinoza
Rob Hettle

Visitors to CHE

Josh Carlson
University of Washington, USA

Illya Zarubin
University of Cologne, Germany
Ijeoma Edoka
PRICELESS Group, University of Witwatersrand, Johannesburg, South Africa
Nishant Jain
Indo-German Social Security Programme of the Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ), New Delhi, India
Olivia Bodnar
Dusseldorf Institute for Competition Economics, Heinrich-Heine University of Düsseldorf, Germany

Tony Scott
The University of Melbourne, Australia
Giuseppe Moscelli
University of Surrey, UK
Jan Hakon Rudolflsen
University of Tromso, Norway
Tilman Bruck
International Security and Development Center, Germany
Martin Harker
National Guidelines Centre, Royal College of Physicians, London, UK

Abigail Colson, Alec Morton
University of Strathclyde, UK
Kaat de Corte
London School of Hygiene and Tropical Medicine, UK
Jonathan Siverskog
Linköping University, Sweden
Martin Henrikson
Linköping University, Sweden

CHE Visiting Fellows

In 2018, Giancarlo Buitrago Gutierrez and Ankur Pandya were awarded Fellowships and will visit CHE in 2019. Giancarlo is from Pontificia Universidad Javeriana, Bogota, Colombia and his research project will be ‘Effects of armed conflict during birth and the first three months of life on mortality and the use of healthcare services among infants under 1 year of age’. Ankur is from Harvard T.H. Chan School of Public Health, Boston, USA and his research project will be ‘Leveraging cost-effectiveness analysis to identify and reduce low-value care’.

Administrative and Support Staff

Kerry Atkinson
Administrator
Linda Baillie
Administrator
Laure Bedecarrax
Project Coordinator
Louise Campbell
Administrator
Gill Forder
Publications Administrator
Kay Fountain
Administrator
John Galloway
Computer Support Officer

Liz Grant
Finance and Research Support Officer
Ruth Helstrip
Project Coordinator
Vanessa King
Administrator and Assistant to the Director
Deborah Marston
Finance and Research Support Administrator
Joanne Milner
Finance and Research Support Administrator
Stevie Paterson
Ambitious Futures Placement

Stephanie Richards
Administrator
Gillian Robinson
Administrator
Alexandra Rollinger
Project Manager
Trish Smith
Centre Manager
Vanessa Wood
Finance and Research Support Co-ordinator

Deborah Marston
Finance and Research Support Administrator
Joanne Milner
Finance and Research Support Administrator
Stevie Paterson
Ambitious Futures Placement
Stephanie Richards
Administrator