

Health Economics *News*

issue 35 • July 2019 www.york.ac.uk/che

Welcome to the CHE Newsletter

If you are viewing this newsletter electronically and would like further details on particular topics, click on the icon marked www, or if reading from a hard copy go to our website www.york.ac.uk/che/publications

Follow us on and



Courses and Workshops

The Centre for Health Economics (CHE) offers a programme of short courses and workshops in health economics.

More details here www

We recently released the 2018 annual report for the CHE.

The full report can be found here www







Good value compared to what, and for whom? Empirical analysis to inform Health Technology Assessment in India

Project Team: Jessica Ochalek, James Lomas, Sumit Mazumdar, Karl Claxton (CHE), Miqdad Asaria (LSE), Pei Fen Chuar (Monash University Malaysia)

In recent years, much attention has been devoted to ongoing healthcare reform in India as part of the effort to achieve universal health coverage. Of note is Health Technology Assessment in India (HTA-In), which has recently been established with a view to 'maximise health, minimise out-of-pocket expenditures and counter inequities'.

In order to improve, rather than reduce, overall health outcomes, we need to quantify the health that would have been possible if the money required to reimburse or fund one intervention was instead made available for other interventions (i.e. the health opportunity cost).

Quantifying these health opportunity costs is challenging in such a complex and heterogeneous healthcare system as India. However, it is important that efforts be made to address this question empirically, rather than resorting to outdated international norms that do not reflect the nuances of healthcare in India.

Our research focuses on quantifying the health returns from expanding public expenditure on healthcare in 21 Indian states, which represents an alternative use of resources to committing them towards specific interventions or types of health insurance. We find that the cost-effectiveness of such an expansion varies greatly across states, but is always much greater (lower cost-per-disability adjusted life year) than implied by international norms. This suggests that HTA-In employing a single national cost-effectiveness threshold based on these norms could lead to recommended interventions doing more harm than good.

Link to CHE Research Paper 161 here www

Photo by kind consent of the Health Policy Research Unit, IEG, Delhi

Congratulations to *Rachel Meacock* who was awarded a visiting <u>CHE Research Fellowship</u> and will start her visit to CHE later this year. Rachel is from the University of Manchester and her research project will be 'Developing a method for estimating the impact of health policy interventions in terms of QALYs'.

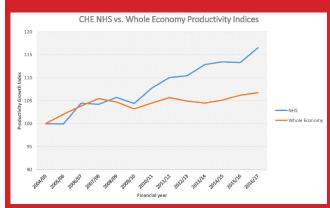


In 2018 Research fellowships were awarded to *Giancarlo Buitrago Gutierrez* and *Ankur Pandya*, who are both at present visiting CHE.

National Health Service (NHS) productivity growing twice as fast as the economy

CHE Project Team: Adriana Castelli, Martin Chalkley, James Gaughan, Idaira Rodriguez Santana, Maria Lucia Pace

CHE has produced an annual update of the growth in NHS productivity since 2012. Productivity is measured as the ratio of outputs - treatments provided to patients adjusted for their quality (e.g. survival rates, change in health status before and after treatment, blood pressure monitoring) - to inputs - (i.e. labour, capital and materials). Productivity growth is positive when the growth in outputs is higher than growth in inputs.



The latest update shows that overall NHS productivity grew by 2.86% between 2015/16 and 2016/17, a rate that is higher than both the average productivity growth in the NHS between 2004/05 and 2016/17 (1.3%) and that of the wider economy in England (see graph below). It also represents a sharp increase from the growth registered between 2014/15 and 2015/16, (-0.15%).

Overall, quality adjusted output growth between 2015/16 and 2016/17 amounted to 3.51%, equivalent to £3.96bn of value in 2015/16 prices. Using our preferred measure, inputs grew by 0.64% (£722 million in 2015/16 prices). A detailed breakdown of growth in specific care settings for

outputs and input groups is also provided. The largest contributor to overall output growth is inpatient care (33%) and for input growth it is expenditure on labour (42%).

CHE Research Paper 163 can be found here www

Using economic evidence in WHO global health goals and disease management guidelines

Paul Revill and Mark Sculpher

International organizations can influence health sector priorities in low- and middle-income countries (LMICs) by affecting how much funding is available for healthcare delivery and by imposing restrictions on how that funding is used. The World Health Organization (WHO) holds particular influence, through the formulation of overarching goals and guidelines for specific disease areas. Ministries of health can feel compelled to follow these and there is a perception that receipt of overseas funding sometimes depends on doing so. But, for the most part, the ways in which goals and guidelines have been set do not account for limited country resources or the potential alternative uses of those resources. As such, they risk distorting resource allocation and result in missed opportunities to improve health.

A Working Group co-convened by the Center for Global Development, the CHE-led Thanzi la Onse programme and the HIV Modelling Consortium explored how economic evidence could be incorporated into WHO goals and guidelines, in ways congruent with widely varying budgets, contexts and social preferences across countries. Launched in May, the Working Group report gave recommendations under two objectives. Firstly, to empower countries to develop and analyse appropriate evidence to set health priorities for their populations e.g. through investment in local analytic capacity. Secondly, to strengthen the WHO guidelines program to inform resource allocation e.g. by establishing clear and robust principles, methods and standards for economic evidence to be included within WHO guidelines.

Links to the full report here www and key findings summarised here www

MSc Health Economics students in CHE

We are delighted this summer to welcome a bumper set of Health **Economics students from the University's residential MSc** course. Thirteen students are undertaking their placements at CHE, working on a wide range of topics with CHE supervisors and producing their dissertation in September. The placements address a whole host of interesting issues of national and international relevance, including: evaluation of digital interventions in depression, analysis of emergency readmissions, impact of conflict on health in Colombia, role of GPs, and impact of the smoking ban on birth weight, amongst others. We look forward to hosting and working with all the students and we are pleased to be able to contribute to capacity building in the health economics community.

The association between antipsychotic polypharmacy, use of hospital care and mortality

Project team: Panagiotis Kasteridis, Jemimah Ride, Nils Gutacker, Maria Goddard, Hugh Gravelle, Anne Mason, Nigel Rice, Rowena Jacobs (CHE), Tim Doran, Simon Gilbody, Najma Siddiqi (Dept of Health Sciences), Tony Kendrick (University of Southampton), Rachael Williams (MHRA), Lauren Aylott, Ceri Dare (Experts by Experience)

Serious mental illness (SMI) includes schizophrenia, bipolar disorder and other psychoses for which patients may often be prescribed an antipsychotic medication. Although UK and international guidelines recommend the use of a single antipsychotic at a time, antipsychotic polypharmacy – the concurrent use of two or more different antipsychotic agents – is common in clinical practice.

Because of concerns about significant risks associated with polypharmacy, it is widely believed that polypharmacy increases mortality and hospitalisations. However, there is a lack of sound evidence to support this assumption.

Our research used patient-level linked primary care, hospital and mortality data to investigate associations between polypharmacy and patient outcomes. We found no evidence of a positive or negative effect of polypharmacy on mortality, inpatient hospitalisations, and A&E presentations. However, our results showed a negative association between monotherapy and hospitalisations, providing support for current UK guidance of antipsychotic monotherapy as a treatment option.

These findings do not rule out polypharmacy options but highlight the need for further research that assesses the appropriateness of polypharmacy against other clinical outcomes such as efficacy and tolerability. The contribution of this study lies in providing real-world evidence on the effectiveness of polypharmacy.

More information on this research can be found here with and here with



Staff news



Congratulations to CHE staff recently promoted, **Ana Duarte** and **James Lomas**.

On 27 March, CHE hosted delegates from the HTA Center, New Sunshine Charity

Foundation, Beijing. Mark Sculpher presented an overview of CHE, HTA in the UK and CHE international activity. Andrea Manca, James Lomas, Helen Weatherly, Fan Yang and Han I Wang (Health Sciences, U ofniversity of York) gave a range of presentations



At the Fourteenth Workshop on Costs and Assessment in Psychiatry, held in Venice, on 29 March 2019.

Rowena Jacobs received the Willard Manning Award in Mental Health Policy and Economics Research for 2019, on behalf of Valerie Moran and herself. This was received for

their paper 'Costs and Performance of English Mental Health Providers' published in the Journal of Mental Health Policy and Economics.

We were very saddened by the news that a former York MSc health economics student has recently

passed away.

Jeshika Singh was known to several CHE staff and will be very much missed.



Adriana Castelli, Martin Chalkley, James Gaughan, Idaira Rodriguez Santana and Rodrigo Moreno Serra hosted two governmental officials from the Malaysian Productivity and Competitiveness Corporation (MPC), 30 April - 1 May, during which time they held a workshop on healthcare system productivity and discussed potential future collaborations.



Please visit our website for more of CHE's latest news items

See our website for full details of CHE staff presentations and visits Presentations and visits.

CHE Publications March - June 2019

Arnold M, Griffin S, Ochalek J, Revill P, Walker S. A one stop shop for cost-effectiveness evidence? Recommendations for improving Disease Control Priorities. Cost Effectiveness and Resource Allocation 2019:17:7.

Arnold M, Pfeifer K, Quante AS. Is risk-stratified breast cancer screening economically efficient in Germany? *PLoS ONE* 2019;14(5):e0217213.

Atella V, Belotti F, Bojke C, Castelli A, Grasic K, et al. How health policy shapes healthcare sector productivity? Evidence from Italy and UK. *Health Policy* 2019;123(1):27-36.

Barbosa E, **Cookson R**. Multiple inequity in health care: An example from Brazil. *Social Science & Medicine* 2019 May;228:1-8.

Beresford B, Mann R, Parker G, Kanaan M, Faria R, Rabiee P, Weatherly H, Clarke S, Mayhew E, Duarte A, et al. Reablement services for people at risk of needing social care: the MoRe mixedmethods evaluation. *Health Services and Delivery Research* 2019;7(16).

Cambiano V, Johnson C, Hatzold K, et al. (includes **Revill P**). The impact and cost-effectiveness of community-based HIV self-testing in sub-Saharan Africa. A health economic and modelling analysis. *Journal of the International Aids Society* 2019;22(S1):e25243.

Conner M, Grogan S, West R, Simms-Ellis R, et al. (includes **Schmitt L**). Effectiveness and cost-effectiveness of repeated implementation intention formation on adolescent smoking initiation: A cluster randomized controlled trial. *Journal of Consulting and Clinical Psychology* 2019;87(5):422-432.

Cox E, Wade R, Peron M, Dietz K, Eastwood A, Palmer S, Griffin S. The clinical and cost-effectiveness of Inotuzumab Ozogamicin for the treatment of adult relapsed or refractory B-cell acute lymphoblastic Leukaemia: An evidence review group evaluation of a NICE single technology appraisal. *PharmacoEconomics* 2019;doi:10.1007/s40273-019-00779-4.

Drummond M, Neumann P, Sullivan S, et al. Analytic considerations in applying a general economic evaluation reference case to gene therapy. *Value in Health* 2019;doi:10.1016/j. jval.2019.03.012.

Emerson J, Panzer A, Cohen J, Chalkidou K, Teerawattananon Y, **Sculpher M** et al. Adherence to the iDSI reference case among published cost-per-DALY averted studies. *PLoS ONE* 2019;14(5):e0205633.

Feng Y, **Gravelle H**. Details matter: Physician responses to multiple payments for the same activity. *Social Science and Medicine* 2019;doi:10.1016/j.socscimed.2019.05.048.

Gabrio A, Baio G, **Manca A**. Bayesian statistical economic evaluation methods for Health Technology Assessment. In Jones AM, editor. *Oxford Research Encyclopedia of Economics and Finance*. Oxford: Oxford University Press. 2019.

Gammon C, Morton K, Atkin A, Corder K, et al, (includes **Suhrcke M**). Introducing physically active lessons in UK secondary schools: Feasibility study and pilot cluster-randomised controlled trial. *BMJ Open* 2019;9(5):e025080.

Garrison LP, Jansen J, Devlin N, **Griffin S**. Novel approaches to value assessment within the cost-effectiveness framework. *Value in Health* 2019;22(6):S12-S17.

Gc VS, Alshurafa M, Sturgess DJ, et al. Costminimisation analysis alongside a pilot study of early Tissue Doppler Evaluation of Diastolic Dysfunction in Emergency Department Non-ST Elevation Acute Coronary Syndromes (TEDDy-NSTEACS). *BMJ Open* 2019;9(5):e023920.

Gridley K, Aspinal F, Parker G, **Weatherly H**, **Faria R**, **Longo F**, van den Berg B. Specialist nursing support for unpaid carers of people with dementia: A mixed-methods feasibility study. *Health Serv Deliv Res* 2019:7(12).

Hinde S, Bojke L, Harrison AS, Doherty PJ. Improving cardiac rehabilitation uptake: Potential health gains by socioeconomic status. *European Journal of Preventive Cardiology* 2019;doi:10.1177/2047487319848533.

Hinde S, Setters J, **Bojke L**, Hex N, **Richardson G**. Does the integration of response services lead to meaningful change in healthcare activity? A Case Study Evaluation. *Journal of Integrated Care* 2019;doi:10.1108/JICA-03-2019-0009.

Howdon D, **Lomas J**, Paulden M. Implications of non-marginal budgetary impacts in health technology assessment: a conceptual model. *Value in Health* 2019;doi:10.1016/j.jval.2019.04.001.

Jacob N, Munford L, **Rice N**, Roberts J. The disutility of commuting? The effect of gender and local labor markets. *Regional Science and Urban Economics* 2019:77:264-275.

Justo N, Espinoza M, Ratto B, Nicholson M, et al, (includes **Drummond M**). Real-World Evidence in healthcare decision-making: Global trends and case studies from Latin America. *Value in Health* 2019;22(6):739-749.

Kanavos P, Angelis A, **Drummond M**. An EU-wide approach to HTA: An irrelevant development or an opportunity not to be missed? *European Journal of Health Economics* 2019;20(3):329-332.

Kasteridis P, Ride J, Gutacker N, Aylott L, Dare C, Doran T, Gilbody S, Goddard M, Gravelle H, Kendrick T, Mason A, Rice N, Siddiqi N, Williams R, Jacobs R. Association between antipsychotic polypharmacy and outcomes for people with serious mental illness in England. *Psychiatric Services* 2019;doi:10.1176/appi.ps. 201800504.

Lim M, Beyer T, Babayan A, Bergmann M, et al, (includes **Soares M**). Advancing biomarker development through convergent engagement: Summary report of the 2nd International Danube Symposium on Biomarker Development, Molecular Imaging and Applied Diagnostics; March 14–16, 2018; Vienna, Austria. *Molecular Imaging and Biology* 2019;doi:10.1007/s11307-019-01361-2.

Lomas J, Martin S, **Claxton K**. Estimating the marginal productivity of the English National Health Service from 2003/04 to 2012/13. *Value in Health* 2019;doi:10.1016/j.jval.2019.04.1926.

Longo F, Faria R, Parker G, Gridley K, Aspinal F, Van Den Berg B, Weatherly H. Investigating the economic case of a service to support carers of people with dementia: a cross-sectional survey-based feasibility study in England. *Health and Social Care in the Community* 2019;doi:10.1111/hsc.12799.

Love-Koh J, Cookson R, Gutacker N, Patton T, Griffin S. Aggregate distributional costeffectiveness analysis of health technologies. *Value in Health* 2019;22(5):518-526.

Moreno Serra R, Anaya Montes M, Smith PC. Potential determinants of health system efficiency: Evidence from Latin America and the Caribbean. PLoS ONE 2019;14(5):e0216620.

Peden C, Stephens T, Martin G, Kahan B, Thomson A, Rivette K, Wells D, **Richardson G**, et al, on behalf of the Enhanced Peri-Operative Care for High-risk patients (EPOCH) trial group. Effectiveness of a national quality improvement programme to improve survival after emergency abdominal surgery (EPOCH): a stepped-wedge cluster-randomised trial. *The Lancet* 2019; 393(10187):2213-2221.

Selinger C, Bershteyn A, Dimitrov DT, Adamson BJS, **Revill P**, et al. Targeting and vaccine durability are key for population-level impact and cost-effectiveness of a pox-protein HIV vaccine regimen in South Africa. *Vaccine* 2019:37(16):2258-2267.

Seuring T, Serneels P, **Suhrcke M**. The impact of diabetes on labour market outcomes in Mexico: A panel data and biomarker analysis. *Social Science & Medicine* 2019;233:252-261.

Taraldsen K, Mikolaizak AS, Maier A, Boulton E, et al (includes Yang F). Protocol for the PreventIT feasibility randomised controlled trial of a lifestyle-integrated exercise intervention in young older adults. *BMJ Open* 2019;9(3);e023526.

Toffolutti V, **Suhrcke M**. Does austerity really kill? *Economics & Human Biology* 2019;33:211-223.

Walker S, Griffin S, Asaria M, Tsuchiya A, Sculpher M. Striving for a societal perspective: A framework for economic evaluations when costs and effects fall on multiple sectors and decision makers. *Applied Health Economics and Health Policy* 2019;doi:10.1007/s40258-019-00481-8.

These and other CHE publications can be found on our website here:

Latest CHE research papers

162 Effects of market structure and patient choice on hospital quality for planned patients. Giuseppe Moscelli, Hugh Gravelle, Luigi Siciliani.

163 Productivity of the English National Health Service: 2016/17 update.

Adriana Castelli, Martin Chalkley, James Gaughan, Maria Lucia Pace, Idaira Rodriguez Santana.

164 The impact of primary care incentive schemes on care home placements for people with dementia.

Panos Kasteridis, Dan Liu, Anne Mason, Maria Goddard, Rowena Jacobs, Raphael Wittenberg, Daniel Howdon.

165 Economic analysis for health benefits package design.

James Love-Koh, Simon Walker, Edward Kataika, Sibusiso Sibandze, Matthias Arnold, Jessica Ochalek, Susan Griffin, Paul Revill, Mark Sculpher.

166 Is an ounce of prevention worth a pound of cure? Estimates of the impact of English public health grant on mortality and morbidity.
Stephen Martin, James Lomas, Karl Claxton.

Free to download here: www

New funding

(TRACT) Transfusion and Treatment of severe Anaemia in African Children: a randomised controlled Trial

Pedro Saramago Goncalves, Martin Harker, Paul Revill, Simon Walker, Aimee Fox Funder: MRC Global Health Sept 2018 - Sept 2019

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

Rowena Jacobs, Andrew Mirelman, Marc Suhrcke, Noemi Kreif Funder: MRC Jan 2019 - Dec 2021



