CHE
Centre For Health Economics

Health Economics *News*

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Welcome to the CHE Newsletter

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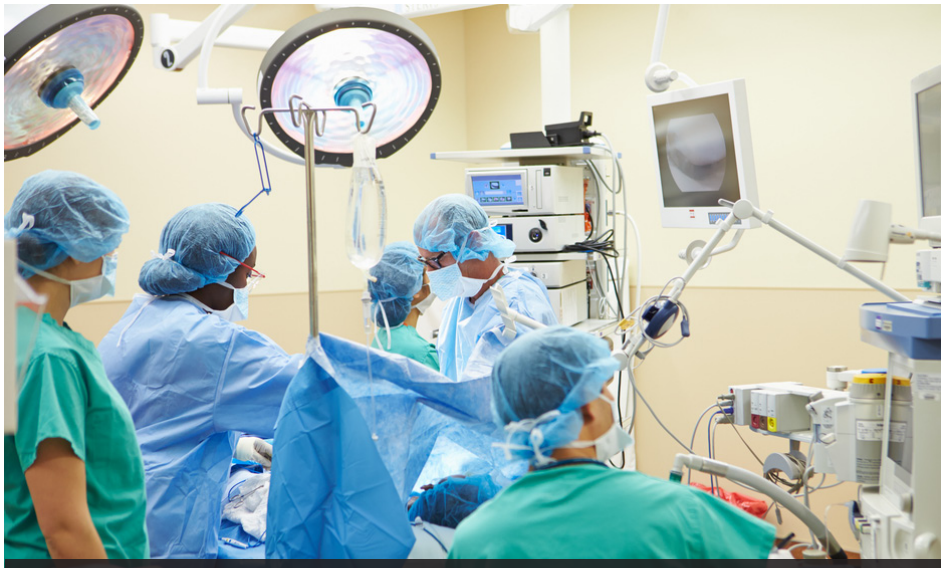
Courses and workshops

Regression methods for health economic evaluation March 2015

Decision analytic modelling for economic evaluation March 2015

York expert workshops in the socio economic evaluation of medicines June/July 2015

Further details: www



Patient surveys of hospital quality need to account for missing data

Research team: Nils Gutacker, Chris Bojke, Andrew Street (CHE), Manuel Gomes (LSHTM)

Failure to account for missing data undermines judgments about which providers are best at improving the health of their patients. CHE research demonstrates why missing data matter and what can be done about it.

The English Patient Reported Outcome Measures (PROMs) programme asks patients about their health status before they have surgery and again several months after. But not all patients complete the questionnaires.

Missing data creates two problems. First, reduced statistical power means that it is more difficult to identify those providers that perform well or poorly. Second, patients that complete their PROM questionnaires may be different from those that do not. If these differences are related to the effectiveness of treatment, performance assessments that use only completed questionnaires may not reflect the true quality of hospital care.

We address these problems using a statistical approach known as multiple imputation. This involves filling in the missing questionnaire with the most likely responses, which are predicted – or imputed – on the basis of the observed characteristics of the patient and provider. Completed and imputed responses are then analysed together to compare providers.

We find that analysis based solely on completed questionnaires understates the variation in health outcomes experienced by patients treated in English hospitals. By applying our imputation method we can draw more accurate conclusions about the relative performance of providers in improving health outcomes.

Full details of the research can be found at : www

Athena SWAN Bronze Award

CHE has been awarded an Athena SWAN bronze award which recognises our commitment to good practice in recruiting, retaining and supporting the careers of women.

At CHE we strive to provide a supportive and family-friendly work environment and to offer equal opportunities to all staff and students. We will continue to build on this success by further improving our processes and ensure fair, flexible, accessible and transparent working conditions for all members of staff.

Professors Maria Goddard, Director of CHE, and Rowena Jacobs, chair of CHE's Athena Swan Committee, said: "CHE is delighted with the award, we have a long-standing commitment to equality and the award provides us with the focus, motivation and impetus to achieve our goals."

For further information see: www

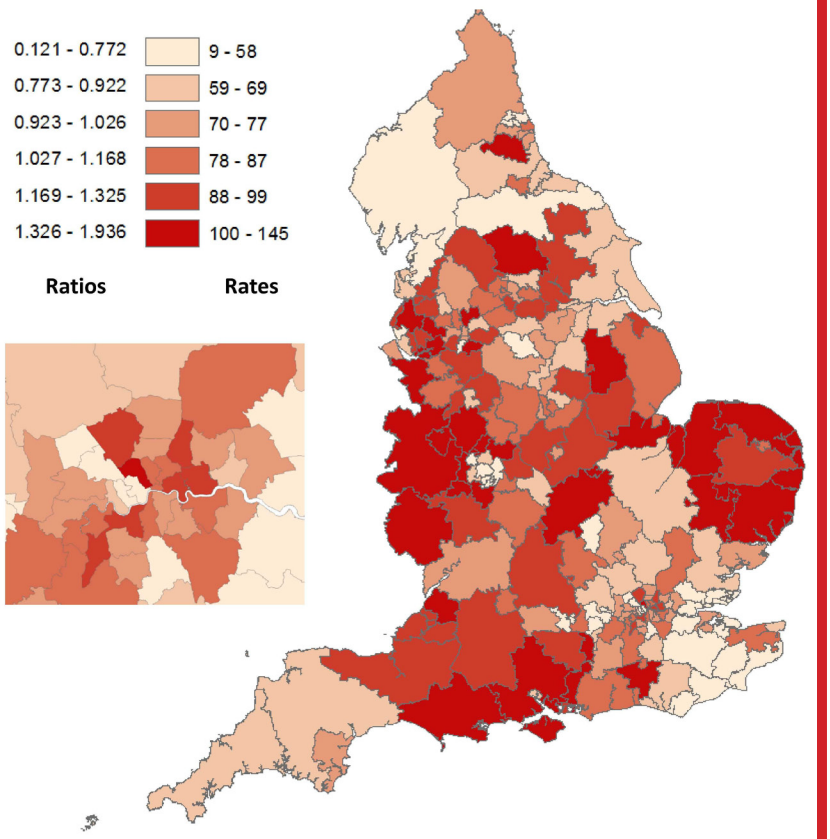
Equity of access for people with serious mental illness

Research team: Nils Gutacker, Rowena Jacobs, Anne Mason (CHE) and Jonathan White (MSc student on placement in CHE)

Serious Mental Illness (SMI) encompasses a range of chronic conditions including schizophrenia, bipolar disorder and psychoses. 'Equal care for equal need' is a key objective in the NHS, but we don't know whether people with SMI who live in income deprived areas are more or less likely to access hospital care or whether this has changed over time. We analysed a five-year dataset of admission rates measured at small neighbourhood area level, with each area covering around 1500 people. As there are other factors that influence admissions, such as level of need or the distance to the nearest hospital, our estimates took account of these. We found that a one percentage point increase in income deprivation was associated with a 1.5% increase in admissions for SMI, and there were no substantial changes in equity over time. This suggests that patients living in deprived areas are generally more likely to access hospital services than those in richer areas. A possible explanation is that they have less access to high quality primary, community or social care as an alternative to hospital care. Figure 1 illustrates geographical inequity by plotting standardised admission rates at local purchaser (Clinical Commissioning Group) level. The darker red areas show above-expected admission rates.

Full details of the research can be found at : www

Figure 1: Clinical Commissioning Group-level maps showing the 2010/11 standardised utilisation rate per 100,000 population aged 15 and above



After standardisation for population, age, sex, need and deprivation (inset: London)

How to invest in improving the use of cost-effective interventions

Research team: Rita Faria, Simon Walker, Stephen Palmer, Mark Sculpher, (CHE); Sophie Whyte, Simon Dixon (ScHARR University of Sheffield)

Cost-effective interventions may be implemented slowly in day-to-day clinical practice, despite their potential to improve health. Investment in activities that address the barriers to implementation could increase utilisation and hence improve population health. Since these investments compete for the same budget as the interventions themselves, their value (cost-effectiveness) should be evaluated in the same manner; i.e. by comparing their costs to their benefits using a method called "value of implementation" analysis. Value of implementation can inform decisions on how much to invest in order to increase implementation and how best to target that investment in order to maximise health.

We developed and applied value of implementation analysis in three phases: (1) literature review, (2) framework development and (3) application to two case studies: on medication for the prevention of stroke and on a test to diagnose chronic heart failure. We show that interventions that produce greater benefits or that benefit larger populations have greater scope for investment in implementation. In addition, investment should depend on the difference between current and target utilisation and on how fast interventions get into practice in the absence of implementation activities. This work shows the benefits of value of implementation analysis to health technology assessment and the challenges in its application.

Full details of the research can be found at: www

Latest News

Chris Bojke has been appointed as an economist on the NICE Safe Staffing Advisory Committee which is the independent body set up to provide guidance on levels and mix of staffing on adult inpatient wards. The committee was set up as a result of staffing level failures in Mid Staffordshire as indicated in the Francis Inquiry Report.

In October, **Richard Cookson** visited Chile where he gave two invited presentations: the first to the Chilean Society of Epidemiology entitled 'Incorporating health inequality impacts into economic evaluation'. The second was to the Chilean National Institute of Public Health, entitled 'Universal coverage and equity in health care'.

From 2015, **Andrea Manca** will be serving as Deputy Chair for the NIHR Doctoral Research Fellowship funding panel.

Mike Drummond was presented with an award by the Center for the Evaluation of Value and Risk in Health, Tufts University, Washington. The award was made at the Cost-Effectiveness Analysis Registry's 15th anniversary symposium held on 10 September 2014 and the citation states "In recognition of outstanding contributions to cost-effectiveness analysis".

Rita Santos has been awarded a

National Institute for Health Research Doctoral Fellowship. Her research is entitled "Measuring and explaining variations in general practice performance". Over 3 years she will be analysing the large variation across general practices in the proportion of patients treated in hospital for particular conditions.

New funding

Economics of Social and Health Care Research Unit (ESHCRU) - Responsive Projects
Health Policy Team
1 April 2014 - 31 Dec 2017
Funder: DoH - Policy Research Unit

Assessing the feasibility of implementing & evaluating a new problem solving model for patients at risk of self-harm and suicidal behaviour in prison
Gerry Richardson (Led by Amanda Perry, Health Sciences, University of York)
1 April 2014 - 30 September 2016
Funder: NIHR RfPB

In collaboration with LSE and PSSRU, University of Kent
Measuring and analysis of NHS productivity growth
Health Policy Team
1 August 2014 – 31 December 2017
Funder: DoH - Policy Research Unit

NIHR Senior Investigator Award
Mark Sculpher
1 April 2014 - 31 March 2017

HIV modelling consortium
Mark Sculpher and **Paul Revill**
1 January 2014 - 31 July 2017
Funder: Bill and Melinda Gates Foundation

Establishing priority-setting institutions in developing countries: International Decision Support Initiative (IDSI)
Mark Sculpher, **Marc Suhrcke** and **Paul Revill**
1 January 2014 - 31 December 2015
Funder: Bill and Melinda Gates Foundation

Health equity impacts: evaluating the impacts of organisations and interventions on social inequalities in health
Richard Cookson
1 January 2014 - 31 December 2018
Funder: NIHR, Senior Research Fellowship

Health Economics by Distance Learning

Distance learning programmes: Postgraduate (PG) Certificate and PG Diploma in Health Economics for Health Care Professionals

MSc in Economic Evaluation for Health Technology Assessment (HTA)

September saw the launch of the University of York's MSc in Economic Evaluation for Health Technology Assessment by Distance Learning. The MSc provides training in the theoretical and practical issues of relevance to economic evaluation for HTA. The programme is designed for those working in the healthcare sector who wish to gain an accredited qualification in health economics, but who are unable to study full-time. Students can enrol in the MSc once they have achieved the Postgraduate Certificate and Postgraduate Diploma qualifications.

Full details can be found at: www

New book

Making mental health count: The social and economic costs of neglecting mental health care. Hewlett E, **Moran V** (eds). OECD Health Policy Studies, OECD Publishing;2014

Latest CHE Research Papers

CHERP100 *The impact of diabetes on employment in Mexico.*

CHERP101 *Addressing missing data in patient-reported outcome measures (PROMs): Implications for comparing provider performance.*

CHERP102 *Testing the bed-blocking hypothesis: does higher supply of nursing and care homes reduce delayed hospital discharges?*

CHERP103 *The costs of specialised care.*

CHERP104 *Understanding the differences in in-hospital mortality between Scotland and England*.

CHERP105 *The impact of hospital financing on the quality of inpatient care in England.*

Free to download here: www

CHE Publications July 2014 - October 2014

Ashby RL, Gabe R, **Ali S**, **Saramago P**, **Soares M**, et al. VenUS IV - compression hosiery compared with compression bandaging in the treatment of venous leg ulcers: a randomised controlled trial, mixed-treatment comparison and decision-analytic model. *Health Technology Assessment* 2014;18(57).

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Chan AK, Ford D, Namata H, Muzambi M, Nkhata MJ, Abongomera G, Mambule I, South A, **Revill P,** et al and the Lablite Team. The Lablite project: A cross-sectional mapping survey of decentralized HIV service provision in Malawi, Uganda and Zimbabwe. *BMC Health Services Research* 2014;14:352.

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Conigliani C, **Manca A**, Tancredi A. Prediction of patient reported outcome measures via multivariate ordered probit models. *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 2014; doi:10.1111/rssa.12072.

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Faria R, Gomes M, Epstein D, White IR. A guide to handling missing data in cost-effectiveness analysis conducted within randomised controlled trials. *PharmacoEconomics* 2014;doi:10.1007/s40273-014-0193-3.

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Hewlett E, **Moran V**. *Making mental health count: The social and economic costs of neglecting mental health care*. OECD Health Policy Studies, OECD Publishing;2014.

Hinde S, **Soares M**, Burch J, Marson A, Woolacott N, **Palmer S**. The added clinical and economic value of diagnostic testing for epilepsy surgery. *Epilepsy Research* 2014;108(4)775-781.

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Jones AM, **Lomas J, Rice N**. Going beyond the mean in healthcare cost regressions: a comparison of methods for estimating the full conditional distribution. *Health Econometrics and Data Group (HEDG), University of York 2014;working paper 14/26*.

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