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News from CHE

CHE Centre For Health Economics

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Staff news

Paul Kind will be retiring on 30 November 2007 after 23 years of working at York. Paul is one of the longest-serving members of CHE, and has been central to establishing our reputation in health status measurement, so he will be hugely missed by all of us. Paul will maintain an active association with CHE, including participation in our Expert Workshops.

Stop press

On 15 November it was announced at a ceremony at St James' Palace that the Centre has been awarded a **Queen's Anniversary Prize**. The Prizes are national awards recognising exceptional achievement in higher and further education. Prize-winners are required to demonstrate value and benefit to their University and to the wider community. Our submission was entitled "*Health Economics: changing how we think about health and healthcare*", and gave examples of innovative methodology, impact on policy and public understanding, and professional leadership. A full report on the prize-winning submission will be included in the March issue of the newsletter.

Welcome to the second edition of the Centre for Health Economics electronic newsletter. The objective of the newsletter is to keep policy makers, researchers and practitioners informed about recent developments at the Centre, including completed research and forthcoming events. For further information please visit our website www.york.ac.uk/inst/che

Examining the link between health care expenditure and health outcomes Nigel Rice

One of the most fundamental yet unresolved issues in health policy is the extent to which additional health care expenditure yields patient benefits, in the form of improved health outcomes. The existing literature on this topic has relied extensively on aggregate country-level analyses and has not led to any consensus on the extent of health benefits secured from additional funding. A recent report[1] from the Centre, funded by the Health Foundation, has exploited a major new English dataset to cast new light on this problem. Since 2004, English Primary Care Trusts have been required to collect programme budgeting data, which estimate the amount of spending across all types of health care in 23 broad disease categories. These data are a major new departure, and have allowed us to examine the link between spending and health outcomes in a number of disease programmes. The study concentrates on two of the major spending categories, cancer and circulatory disease, and reports detailed econometric modelling of spending decisions and health outcome. It finds that the cost of saving a life year is about £13,000 in cancer and £8,000 in circulatory disease.

Results such as these have a number of important policy implications. First, they can help the National Institute for Health and Clinical Excellence (NICE) determine whether its threshold for accepting new technologies is set at an appropriate level. Secondly, they can support the Department of Health and PCTs in making evidence-informed decisions about where their limited budgets are best spent. Finally, they can inform the national debate on whether health care expenditure offers value for money when compared to other calls on public expenditure.

We believe that programme budgeting is a major initiative that should be actively and vigorously promoted by the Department of Health. It brings together for the first time clinical data (in the form of health outcomes) and expenditure data, and therefore has the potential to engage health care professionals in value-for-money issues where more conventional budgetary approaches have failed. Our preliminary study has offered a glimpse of its potential in this respect, and we are currently extending the analysis to other programmes of care.

Stephen Martin, Nigel Rice and Peter C Smith (2007), The link between health care spending and health outcomes: evidence from English programme budgeting data, Centre for Health Economics Research Paper RP24, available at: http://www.york.ac.uk/inst/che/pdf/rp24.pdf

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Does more freedom make a difference to NHS Foundation Trusts?

Georgia Marini, Marisa Miraldo, Rowena Jacobs, Maria Goddard




In 2003 the UK Parliament passed the Health and Social Care Act to create a new type of organisation transforming English NHS Trusts into Foundation Trusts (FTs). FTs are independent not-for-profit public benefit corporations. They are required to meet national targets, like any other Trust, but have more freedom to decide how they achieve these standards. FTs are given greater financial flexibility than non-FTs; are allowed not to break even, to retain surpluses, to invest in buildings and new services, to manage their own assets, to borrow both from the public and the private sector and to recruit and reward staff with more competitive salaries. The policy has been introduced in a phased manner and is voluntary, with eligibility conditional on the highest performance rating. In April 2004 the best performing Trusts became fully operational as NHS FTs (Wave 1), followed by a second wave in July 2004 (Wave 2) and a third wave in January 2005 (Wave 3).

Our research explores whether the new financial freedoms enjoyed by FTs have produced any difference in the financial management of FTs when compared to non-FTs. Using two measures: the retained surplus and the reference cost index (RCI), we evaluate the financial management of FTs by comparing the change in financial measures for FTs before and after the policy intervention with the change in financial measures for Trusts in a comparator group that is not undergoing the intervention, over the same period, namely all non-FTs.

Some of our results from evaluating the difference in financial management between FTs and non-FTs are summarised in Box 1. For the FT policy to have had an effect in changing behaviour with respect to financial management, we would expect the difference in surplus to be positive and significant in 2004/05, and the difference in RCI to be negative and significant in 2004/05. Instead we see significant differences between FTs and non-FTs over a sustained period of time, and not just in 2004/05 (column (1)). RCI results show that FTs have always tended to outperform non-FTs by achieving a lower RCI.

When disaggregating FT results by wave, we see that particularly Wave 3 FTs have had a stronger financial position compared to non-FTs. These differences have been long-standing and are not brought about specifically by the policy change in 2004/05 (column (4)). In particular Wave 1 FTs have a lower RCI of around 8 percentage points over the entire period (column (2)). We do not observe a change in RCI brought about by the policy.

Our research suggests that differences between these groups are explained by longstanding differential trends. Whether these trends will prevail as the policy is rolled out to additional hospitals, or whether improved financial performance is gained at the expense of quality, is a matter for future study.

Related publications:

Marini G, Miraldo M, Jacobs R, Goddard M. Giving greater financial independence to hospitals – does it make a difference? The case of English NHS Trusts. *Health Economics*. Forthcoming

Marini G, Miraldo M, Jacobs R, Goddard M. Foundation Trusts in the NHS: does more freedom make a difference? *Health Policy Matters* 2007; 13: 1-8. Download here

Box 1: Difference between FTs and non-FTs in each year

Retained Surplus

	(1)	(2)	(3)	(4)
	All FTs vs non-FTs	**Wave 1 FTs vs non-FTs**	**Wave 2 FTs vs non-FTs**	**Wave 3 FTs vs non-FTs**
Difference in 2000/01	-0.027	-0.019	-0.023	-0.051*
Difference in 2001/02	0.007	0.001	0.021	-0.013
Difference in 2002/03	0.050	0.063	0.039	0.041*
Difference in 2003/04	0.063*	0.035	0.087*	0.066*
Difference in 2004/05	0.047	-0.061	0.105*	0.145*
RCI				
Difference in 2000/01	-6.180*	-8.778*	-3.246	-7.001
Difference in 2001/02	-4.428*	-9.351*	1.005	-5.281
Difference in 2002/03	-3.100	-8.792*	0.177	1.447
Difference in 2003/04	-3.964*	-10.152*	0.524	-0.876
Difference in 2004/05	-3.871*	-7.994*	-0.129	-3.434*

* *Indicates statistically significant result*

An Introduction to Measuring Efficiency in Public Sector Organisations: Analytical Techniques and Policy 20th to 22nd February 2008

This three-day workshop held at the University of York will provide an introduction to the use of techniques for measuring the relative efficiency of public sector organisations. The two measurement tools concentrated on will be Stochastic Frontier Analysis (SFA) and Data Envelopment Analysis (DEA). SFA and DEA have been described as the most advanced techniques to measure relative efficiency, with the Chief Secretary of the UK Treasury stating they have "wide potential application across all public services". These techniques have been applied to analyse organizational efficiency across all sectors of the economy, including: agriculture, banking, education, health, public services, and non-profit organisations.

Areas to be covered include:

- the context and purpose of productivity and efficiency measurement
- the economic theories underpinning efficiency measurement techniques
- how to conduct analysis
- the similarities and differences between techniques and
- the interpretation and application of results to support policy objectives

The workshop will introduce participants to computer software (including Limdep, Stata, DEAP, and Frontier Analyst) with which they will be able to apply the techniques to data during practical sessions. Throughout the workshop there will be a strong focus on the policy interest in these techniques. The presenters have worked extensively in this area and will guide participants through the potential pitfalls of measuring efficiency using case studies and practical examples.
The presenters for this course will be: Rowena Jacobs, Peter C Smith and Andrew Street. They are joint authors of the book, *Measuring efficiency in health care: analytic techniques and health policy*, published by Cambridge University Press.

For further information please go to our website
www.york.ac.uk/inst/che/training/measurecourse.htm

Advanced Modelling Methods for Health Economic Evaluation 17th -19th March 2008: York, UK

A three-day course focusing on advanced modelling methods for economic evaluation. This course is a collaboration between the University of Glasgow and the Centre for Health Economics at the University of York.

The course is designed for participants who are familiar with basic decision modelling who wish to learn how to use more advanced modelling methods.

It is envisaged that participants will currently be undertaking modelling for health economic evaluation within the pharmaceutical and medical device industries, consultancy, academia or the health service.

By the end of the course, participants will be able to:

- Model and populate a Markov model with and without time-dependent probabilities.
- Make a model probabilistic to reflect parameter uncertainty and to run Monte Carlo simulation.
- Present the results of a probabilistic model using net monetary benefits and cost-effectiveness acceptability curves.
- Assess the expected value of perfect information.

The course will start with standard Markov models and add greater sophistication as building blocks over the 3-day course. This will include adding time dependency to Markov models, making models probabilistic, populating decision models using regression models, presenting the results of probabilistic models and undertaking value of information analysis.

The course is also offered on 23rd - 25th July 2008: Vancouver, British Columbia, Canada.
15th - 17th September 2008: Glasgow, Scotland.

For further information please go to our website
www.york.ac.uk/inst/che/training/modelling.htm

York Expert Workshops in the Socio Economic Evaluation of Medicines 2008

The York Expert Workshops are now in their 15th year. Over this period, decision-makers' demands for information on the cost-effectiveness of health technologies have become more extensive and more sophisticated. At least seven European countries and several managed care groups in the USA now require formal submissions of economic data as part of the reimbursement process for medicines.

In order to keep pace with these developments, the York Expert Workshops programme was re-designed in 2004, with great success. The major change was that our Advanced Workshop was extended from 3 to 5 days and structured according to the main steps necessary to generate estimates of cost-effectiveness for a specific decision maker, such as a reimbursement agency or health care payer. The Advanced Workshop goes beyond the exposition of general principles and includes detailed discussion of the analytic approaches required to compile an economic dossier, using a mixture of presentations, tutored sessions and practical exercises.

In 2008 our Foundations Workshop will also be extended from 3 to 5 days, in response to participants' requests for more case studies and exercises. In addition, the statistical issues will be discussed in more depth so that participants are better prepared for more advanced study.

Our 3-day Quality of Life Workshop provides a detailed introduction to the theory and practice of quality of life measurement with particular emphasis on its use in economic evaluation.

MODULE1 - Foundations of Economic Evaluation in Health Care
23rd – 27th June 2008 *(5 days)*
St. William's College, York, UK
Course Leaders: Michael Drummond, Mark Sculpher

MODULE 2 - Meeting Decision-Makers' Requirements: Advanced Methods for Cost-Effectiveness Analysis
30th June – 4th July 2008 *(5 days)*
St. William's College, York, UK
Course Leaders: Mark Sculpher, Michael Drummond, Karl Claxton

MODULE 3 - Quality of Life
7th – 9th July 2008 *(3 days)*
St. William's College, York, UK
Course Leader: Paul Kind

For further details please go to our website
www.york.ac.uk/inst/che/training/expert.htm

Publications

Asseburg C, Bravo Vergel Y, **Palmer S**, Fenwick E, de Belder M, Abrams A, **Sculpher M**. Assessing the effectiveness of primary angioplasty compared to thrombolysis and its relationship to time delay: a Bayesian evidence synthesis. *Heart.* 2007;93:1244-50.

Bojke L, Hornby E, **Sculpher M**, on behalf of the REFLUX Trial Team. A Comparison of the Cost Effectiveness of Pharmacotherapy or Surgery (Laparoscopic Fundoplication) in the Treatment of GORD. *Pharmacoeconomics*. 2007;25(10):829-41.

Bravo Vergel Y, **Palmer S**, Asseburg C, Fenwick E, De Belder M, Abrams A, **Sculpher M**. Is primary angioplasty cost effective in the UK? Results of a comprehensive decision analysis. *Heart*. 2007;93:1238-43.

Briggs A, Mihaylova B, **Sculpher M**, et al. The cost-effectiveness of perindopril in reducing cardiovascular events in patients with stable coronary artery disease using data from the EUROPA study. *Heart.* 2007;93:1081-6.

Claxton K, Culyer A. Rights, responsibilities and NICE: a rejoinder to Harris. *Journal of Medical Ethics*. 2007;33:462-4.

Colbourn T, Asseburg C, **Bojke L**, Philips Z, Welton N, **Claxton K**, et al. Preventive Strategies for Group B Streptococcal and other Bacterial Infections in Early Infancy: Cost Effectiveness and Value of Information Analyses. *British Medical Journal*. 2007;Sept 29(335(7621)):655.

Drummond MF, Mason AR. In reply (letter responding to Low E. Many new cancer drugs in the United Kingdom are facing negative NICE rulings. *Journal of Clinical Oncology* 2007;25(18):2637-2638. Available at http://jco.ascopubs.org/cgi/reprint/25/18/2637

Griffin S, Claxton K, Hawkins N, Sculpher M. Decision models need to be fit for purpose for decision making: response to Caro et al. *Value in Health*. 2007;10(4):319.

Hole AR. A comparison of approaches to estimating confidence intervals for willingness to pay measures. *Health Economics*. 2007;16:827-40.

Kennedy A, Reeves D, Bower P, Lee V, Middleton E, **Richardson G**, et al. The effectiveness and cost effectiveness of a national lay led self care support programme for patients with long-term conditions: a pragmatic randomised controlled trial. *Journal of Epidemiology and Community Health.* 2007;61:254-61.

Manca A, Lambert PC, **Sculpher M, Rice N**. Cost-effectiveness analysis using data from multinational trials: the use of bivariate hierarchical modelling. *Medical Decision Making*. 2007;27:471-90.

Marini G, Miraldo M, Jacobs R, Goddard M. Foundation Trusts in the NHS: does more freedom make a difference? *Health Policy Matters* 2007; 13:1-12.

Marini G, Street A. A transactions costs analysis of changing contractual relations in the English NHS. *Health Policy.* 2007;83:17-26.

Richardson G, Kennedy A, Reeves D, Bower P, Lee V, Middleton E, et al. Cost-effectiveness of the expert patient programme (EPP) for patients with chronic conditions. *Journal of Epidemiology and Community Health*. 2007;In press. 10.1136/jech.2006.057430.

CHE has a research paper series which gives early release of research findings. The following have recently been published and are free to download

www.york.ac.uk/inst/che/publications/publicationsbyyear.htm

RP28 Doctor behaviour under a pay for performance contract: Evidence from the quality and outcomes framework - **Hugh Gravelle**, Matt Sutton and Ada Ma

RP29 Modelling the dynamics of a public health care system: evidence from time-series data - Fabrizio Iacone, Steve Martin, **Luigi Siciliani and Peter C Smith**

RP30 Introducing activity-based financing: A review of experience in Australia, Denmark, Norway and Sweden - **Andrew Street**, **Kirsi Vitikainen**, Afsaneh Bjorvatn and Anne Hvenegaard

RP31 Mark versus Luke? Appropriate methods for the evaluation of public health interventions—**Karl Claxton, Mark Sculpher and Tony Culyer**

Conference, seminar and workshop presentations

Andrea Manca gave a series of invited seminars on Bayesian methods in cost-effectiveness analysis and the analysis of multinational cost-effectiveness data, at the following Institutions in Canada - Centre for Health Evaluations and Outcomes Sciences, University of British Columbia, Vancouver; The Institute of Health Economics, Edmonton, Alberta; and the Centre for Health and Policy Studies, University of Alberta, Calgary.

Peter Smith presented a paper on health care payment mechanisms to a seminar organized for the Swedish health minister in Stockholm. He also presented a paper on how much it costs the NHS to save a life year to the National Institute for Health and Clinical Excellence (NICE), and gave oral evidence on the same topic to the House of Commons Health Select Committee, as part of its investigation into NICE.

Peter gave a keynote speech on "Composite indicators of performance: statistical properties and incentive effects" at the 23rd Annual Meeting of Patient Classification Systems International in Venice. He also gave papers on strengthening health system performance at sessions organized by the World Health Organization at the European Health Forum in Gastein, Austria, and the annual meeting of the European Public Health Association in Helsinki.

In August ***Mark Sculpher*** taught in a workshop on advanced decision analytic modelling in Sydney, Australia.

In October **Mark** presented a paper entitled 'Conditional Reimbursement: Assessing Uncertainty and the Value of Research' at a plenary session of the International Society of Pharmacoeconomics and Outcomes Research (ISPOR) in Dublin in October. In November he attended an advisory meeting in Berlin held by the German Federal Ministry of Health on methods of economic evaluation in decision making about the funding of pharmaceuticals.

Claire McKenna Gave a presentation to the Operational Research Society Annual meeting held in Edinburgh in September entitled 'Uncertainty and value of information when allocating resources within and between multiple healthcare programmes.'

In October **Andrew Street** gave a talk on health system productivity in Copenhagen, Denmark, and in November he gave invited presentations at conferences on hospital financing in Reykjavik, Iceland and on hospital competition policy in Rotterdam.

In September a one-day workshop, jointly organized by **Richard Cookson** (York) and Carol Propper (Bristol), was held in York entitled *Evaluating health policy: new evidence from administrative data. It* brought together senior health academics and policy makers to discuss recent health policy findings from analysis of administrative data.

CHE Seminar Series

Date/time:	Monday 26 November 1.00pm to 2.15pm
Venue:	CHE Alcuin A Block, A019/A020
Speaker:	**Dr. Peter Brambleby**, Director of Public Health, North Yorkshire and York PCT
Title:	*Using programme budgeting to inform spending decisions in the NHS*

Date/time:	Thursday 6 December 2.00pm to 3.30pm
Venue:	ARRC Auditorium RC/014
Speaker:	**Professor Jennifer Roberts**, University of Sheffield
Title:	*Reservation wages, labour market participation and health*

Date/time:	Monday 7 January 2008 2.00pm to 3.30pm
Venue:	ARRC Auditorium RC/014
Speaker:	**Professor Tony Culyer**, University of York
Title:	TBA

Date/time:	Thursday 7 February 2008 2.00pm to 3.30pm
Venue:	ARRC Auditorium RC/014
Speaker:	**Professor Stirling Bryan,** University of Birmingham
Title:	TBA

Visit our website for further details on CHE Seminars:
www.york.ac.uk/inst/che/seminars/index.htm