

THE UNIVERSITY *of* York

ANNUAL
REPORT
2011

ECONOMIC ANALYSIS
OF WORLDWIDE
REPUTE

INFORMING
POLICY AND
PRACTICE

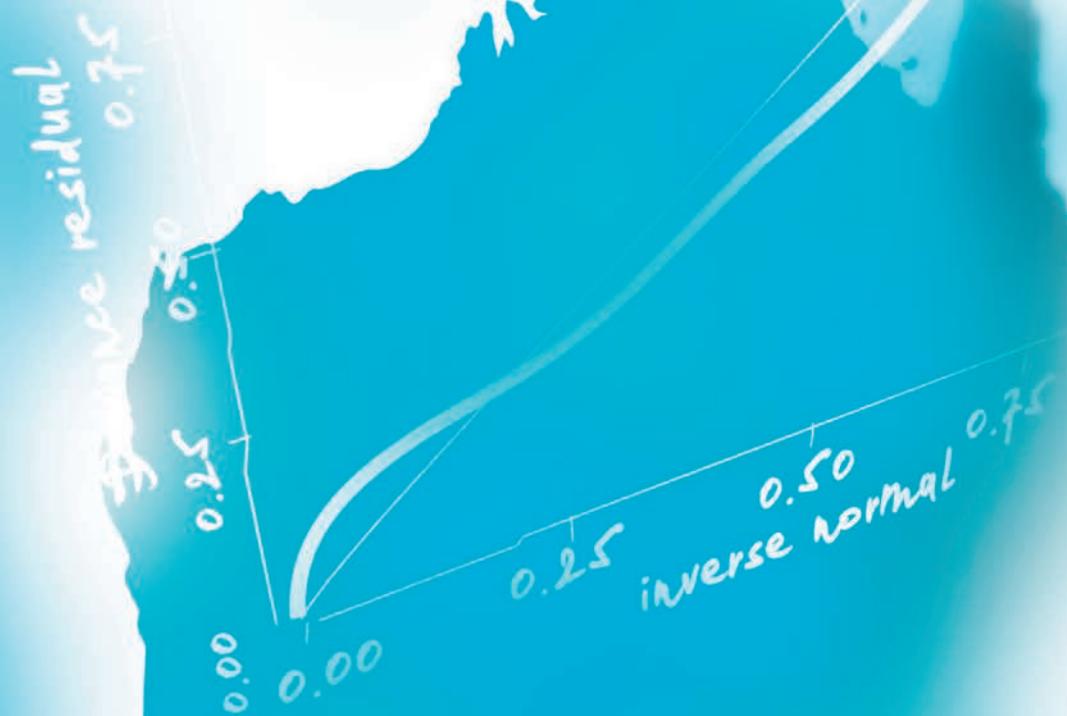


Indicator name	Indicator description
sleep rough	percentage of people living
mortality	Standardised mortality ratio
life expectancy	life expectancy



2011: CHE Facts & Figures

3 major new
programmes



**ANNUAL
REPORT
2011**

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2011: CHE Facts & Figures

Income of
£3.5m/year

70%

£60,000

WELCOME

Welcome to the 2011 annual report for the Centre for Health Economics (CHE); I hope you find it interesting and informative. Now in our 29th year, we are still striving to address questions of importance to society and to develop and apply innovative methodologies that enable us to answer these questions robustly. Amongst the many issues our research has addressed, we have asked: "do smoking bans work?"; "should hospitals be paid more for specialised services?"; "how should medicines be purchased in the NHS?"; "has hospital competition in the NHS harmed equity?"; "how productive is the NHS?"; "what is the cost-effectiveness of new diagnostic technologies in the NHS?"

A highlight for us was the launch of 3 new major research programmes: two policy research units funded through the Department of Health's policy research programme, one focusing on the Economics of Social and Health Care Research (ESHCRU) and one looking at the Economic Evaluation of Health and Care Interventions (EEPRU); as well as a renewed programme of Technology Assessment Reviews for NICE. These 5 year programmes will allow us to explore new areas of research and provide a robust evidence base to inform policy and practice in the NHS. We are also pleased that the programmes not only build on existing collaborations with colleagues inside and outside the University of York, but also facilitate new relationships with high quality partners with whom we look forward to a productive time ahead.



It was a busy year on the “people front” and it was a pleasure to welcome 5 new members of staff to CHE: Martin Chalkley, Richard Cookson, Aurora Ortiz-Nunez, Paul Revill and Irene Sanchez. A long-serving member of CHE, Professor Roy Carr-Hill, retired in 2011 but we are pleased he will be retaining his links with us through honorary status. We also had 6 new PhD students, as well as 10 overseas visitors to CHE, all of whom helped to make CHE a rich and vibrant research environment. Several members of staff and students won awards and accolades from prestigious organisations for their research output or in recognition of their contribution to the health economics field. We also re-launched the Alan Williams Research Fellowships which were set up after Alan’s death in order to provide funding for early and mid-career researchers to spend time at CHE undertaking projects that link with the interests of the Centre. We will host two fellows in the 2011/12 period, from Italy and from the USA.

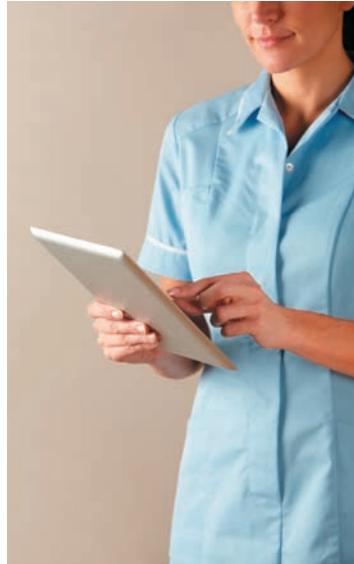
CHE organised the winter meeting of the Health Economics Study Group in January 2011 and welcomed 120 participants to York from universities, the policy sector, NHS and industry. Throughout the year, 330 people from all over the world came to York to take part in 7 short courses and workshops run by CHE staff, covering a wide range of methodological and applied topics. We are pleased to have these regular opportunities to forge new links with colleagues from a wide range of backgrounds, including the policy and practice communities.

I am looking forward to the future. Whilst I am sure it will bring many challenges, especially in the current constrained research funding environment, I am confident that our new research agendas and our excellent team of staff will stand us in good stead and we are ready to rise to the challenges ahead.

M. K. Gedda

Professor Maria Goddard, Director

HIGHLIGHTS



Improving the productivity of the NHS



Purchasing system for medicines



Richard Cookson



Claire McKenna

6

JANUARY

- Health Economists' Study Group (HESG) conference hosted in York.
- *Improving the productivity of the NHS* – Research Bulletin published.

FEBRUARY

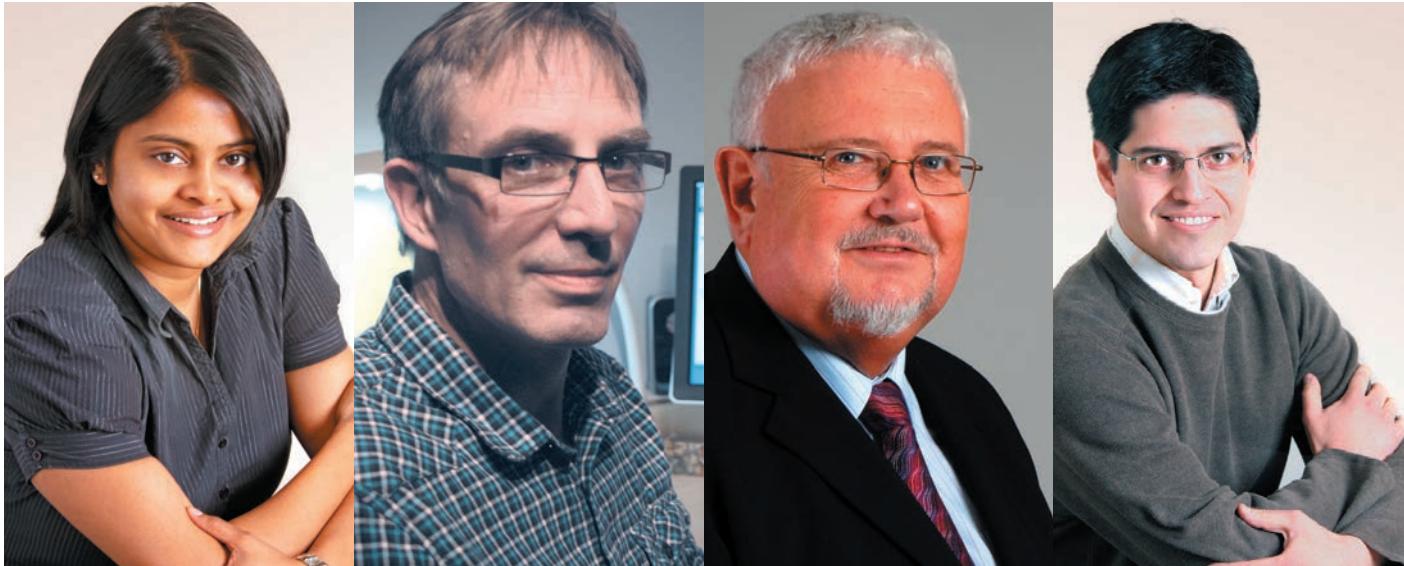
- Announcement of major new research initiatives for CHE – The establishment of the Economics of Social and Health Care Research Unit (ESHCRU) with PSSRU at University of Kent; and the Economic Evaluation Policy Research Unit (EEP RU) with University of Sheffield.
- New price regulation mechanism would 'benefit the NHS' – Health economists from CHE say a robust framework is needed for a new purchasing system for medicines to make sure it delivers anticipated benefits for the NHS. – CHE Research Paper 60.

APRIL

- Richard Cookson joined CHE. His work will focus on developing methods for analysing the health equity outcomes of health care reforms and public health programmes and incorporating them within economic evaluation.
- Funding awarded for NICE Technology Assessment Reviews which is in collaboration with the Centre for Reviews and Dissemination at the University of York.
- Maria Goddard elected as Fellow of the Learned Society of Wales for making a distinguished contribution to health economics.

JUNE

- Claire McKenna won an award from the Society for Medical Decision Making (SMDM) for Outstanding Paper by a Young Investigator.



Ranjeeta Thomas

Martin Chalkley

Michael Drummond

Manuel Espinoza

JULY

- Ranjeeta Thomas won the prize for the best student paper at the World Congress of the International Health Economics Association (iHEA) in Toronto.
- Research paper published on NHS Foundation Trusts which found that giving hospitals greater autonomy may not lead to enhanced productivity and performance.
- Alan Williams Fellowships awarded to Cinzia Di Novi and Marco Huesch.

AUGUST

- Professor Martin Chalkley joined us from the University of Dundee. He is interested in the role of incentives and motivation in the delivery of health care especially with a view to controlling costs and ensuring the delivery of high quality services.

OCTOBER

- Professor Michael Drummond was inducted as a foreign member into the US Institute of Medicine of the National Academy of Sciences, his citation being: "in recognition of outstanding contribution to the field of health".

NOVEMBER

- Manuel Espinoza won the Best Student Podium Presentation prize at the 14th Annual European Congress of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR).

2011: CHE Facts & Figures

25 grants
started in
2010/11
 (£10m)

RESEARCH PROJECTS

IN PROGRESS AND COMPLETED IN 2011

Health Policy

Measuring the productivity of the NHS

Chris Bojke, Adriana Castelli, Andrew Street, Padraic Ward
Funder: NIHR-CCF

Combining routinely collected data and patient outcomes to measure the outcome/cost ratios of hospital procedures and identify variation across providers (PROMS). Two projects: (i) Risk adjusted published rates, (ii) Linking HES data with PROMS.

Chris Bojke, Silvio Daidone, Nils Gutacker, Andrew Street
Funder: NIHR-CCF

Foundation Trusts (Performances in comparison with non FTs. Policy on performance in hospitals, staff satisfaction)

Maria Goddard, Rowena Jacobs, Rossella Verzulli
Funder: Department of Health

Avoidable mortality and quality

Chris Bojke, Adriana Castelli
Funder: Department of Health

Multi morbidity and patient resource use

Hugh Gravelle (CHE), Sandra Hollingsworth, Frank Windmeijer, Sarah Purdy, Chris Salisbury (Bristol)
Funder: NIHR

CQUIN: evaluation of P4P for hospital quality

Hugh Gravelle (CHE), Matt Sutton (Manchester), Ruth MacDonald (Nottingham), Bruce Guthrie (Dundee)
Funder: Department of Health

Hospital productivity: trust level analysis

Adriana Castelli, Andrew Street, Rossella Verzulli, Padraic Ward
Funder: Department of Health

Social and health care productivity

Chris Bojke, Adriana Castelli, Andrew Street, Padraic Ward, with PSSRU partners
Funder: Department of Health

Costs of specialised services

Silvio Daidone, Andrew Street
Funder: Department of Health

Co-ordination of health and social care resources

James Gaughan, Hugh Gravelle, Rita Santos, Luigi Siciliani
Funder: Department of Health

Hospital acquired infections in the English NHS

Bernard van den Berg, Andrew Street, Rossella Verzulli
Funder: Department of Health

Competition and hospital quality

Hugh Gravelle, Rosalind Goudie, Luigi Siciliani
Funder: Department of Health

Demand for GPs and quality

Hugh Gravelle, Rita Santos, Carol Propper (Imperial College)
Funder: Department of Health

Commissioning trends

Mark Dusheiko, Maria Goddard, Hugh Gravelle, Rossella Verzulli
Funder: Department of Health

Examining variations in costs in the hip fracture care pathway

Adriana Castelli, Silvio Daidone, Rowena Jacobs, Andrew Street
Funder: Department of Health

Quality of care for chronic conditions and ambulatory care sensitive admissions

Mark Dusheiko, Hugh Gravelle
Funder: Department of Health

Labour supply functions for GPs

Hugh Gravelle, Rita Santos (CHE), Matt Sutton (Manchester)
Funder: Department of Health

Updating and enhancing a resource allocation formula at general practice level based on individual characteristics (PBRA 3)

Hugh Gravelle, Nigel Rice, Steve Martin
Funder: Department of Health

Resource allocation formula for mental health hospital services

Hugh Gravelle (CHE), Matt Sutton (Manchester)
Funder: Department of Health

Circulatory disease

Chris Bojke, Adriana Castelli (CHE), Peter C Smith (Imperial College)
Funder: QQuip

EuroDRG project (3 year study, 11 countries, using common methods to look at ten diseases)

James Gaughan, Anne Mason, Andrew Street, Padraic Ward
Funder: 7th EU Framework Programme.

Examining the impact of public service organisations on quality of life

Adriana Castelli, Maria Goddard, Rowena Jacobs
Funder: ESRC Public Services Programme

Topical treatments for chronic plaque psoriasis: systematic review update

Anne Mason

Funder: the Psoriasis Association.

GP responses to changes in QOF

Hugh Gravelle (CHE), Matt Sutton (Manchester), Ada Ma,
Diane Skatun (HERU), Bruce Guthrie (Dundee)

Funder: Scottish Government

PbR for substance misuse services

Alan Maynard, Andrew Street

Economics of scope in A&E

Maria Goddard, Rosalind Goudie, in collaboration with OHE.

Funder: OHE

Valuation of patient time

Bernard van den Berg

Funder: VU University, Amsterdam via Netherlands
Organisation for Health Research and Development

Factors affecting the relative effectiveness of medicines in the EU

Anne Mason, in collaboration with OHE

Funder: Pfizer

Changing cultures, relationships and performance in local healthcare economies

Rowena Jacobs

Funder: NIHR SDO

Efficiency and performance of mental health systems

Rowena Jacobs

Funder: OECD

Pricing, quality and competition amongst Australian general practitioners

Hugh Gravelle (CHE), Anthony Scott (Melbourne)

Funder: Australian Research Council

2011: CHE Facts & Figures

**67,842 visits
to our website**

RESEARCH PROJECTS

IN PROGRESS AND COMPLETED IN 2011

Health, Econometrics and Data Group (HEDG)

The Health, Econometrics and Data Group is funded through an Economic and Social Research Council Large Grant (RES-060-25-0045). Projects completed and ongoing in 2011 are organised under three research themes:

INEQUALITY OF OPPORTUNITY

Long-term effects of cognitive skills, social adjustment and schooling on health and lifestyle: evidence from a reform of selective schooling

Andrew Jones, Pedro Rosa Dias, Nigel Rice

Sponsor: the ESRC

Equalising opportunities in health through educational policies

Andrew Jones, Pedro Rosa Dias, John Roemer

Sponsor: the ESRC

Long-term health returns to quality of schooling: the role of self-selection and heterogeneity

Anirban Basu, Pedro Rosa Dias, Andrew Jones

Sponsor: the ESRC

Empirical definition of social types in the analysis of inequality of opportunity: a latent class approach

Pedro Rosa Dias, Paolo Li Donni, Juan Gabriel Rodriguez

Sponsor: the ESRC

Catching the habit: a study of inequality of opportunity in smoking-related mortality

Silvia Balia, Andrew Jones,

Socioeconomic inequalities in bodily pain by age and gender: evidence from Australia, Britain and Germany

Andrew Jones, Stefanie Schurer, Michael Shields

THE PERFORMANCE OF HEALTH SYSTEMS AND ORGANIZATIONS

Inequality and polarisation in health systems responsiveness: a cross-country analysis

Andrew Jones, Nigel Rice, Silvana Robone, Pedro Rosa Dias

Sponsor: the ESRC

Does disease management in primary care reduce hospital costs? Evidence from English primary care.

Hugh Gravelle, Mark Dusheiko, Stephen Martin, Nigel Rice, Peter Smith

Health systems' responsiveness and its characteristics: a cross-country comparative analysis

Silvana Robone, Nigel Rice, Peter Smith

Sponsor: the ESRC

Non-parametric versus parametric approaches to cross-country comparative analysis

Andrew Jones, Nigel Rice, Silvana Robone

Sponsor: the ESRC

Applying beta-type size distributions to healthcare cost regressions

Andrew Jones, James Lomas, Nigel Rice

Sponsor: the ESRC

Comparison of estimators for health care cost regression: a quasi-experimental approach

Andrew Jones, James Lomas, Nigel Rice

Sponsor: the ESRC

THE EVALUATION OF PUBLIC HEALTH INTERVENTIONS THROUGH ECONOMETRIC METHODS AND MICROSIMULATION

The evaluation of health policies through dynamic microsimulation methods

Eugenio Zucchelli, Andrew Jones, Nigel Rice

Sponsor: the ESRC

A model of the impact of smoking bans on smoking with evidence from bans in England and Scotland

Andrew Jones, Audrey Laporte, Nigel Rice, Eugenio Zucchelli

Sponsor: the ESRC

A dynamic structural model of lifetime smoking consumption, health and addiction

Andrew Jones, Audrey Laporte, Nigel Rice, Eugenio Zucchelli

Sponsor: the ESRC

Parental income and smoking participation in adolescents: implications of misclassification error in empirical studies of adolescent smoking participation

Ijeoma Edoka

Sponsor: the ESRC

Decomposing differences in cotinine distribution between children and adolescents from high and low socioeconomic backgrounds

Ijeoma Edoka

Sponsor: the ESRC

Time and chance happen to them all? Duration modelling versus lifetime incidence of cancer

Daniel Howdon

Sponsor: the ESRC

Team for Economic Evaluation and Health Technology Assessment (TEEHTA)

TECHNOLOGY ASSESSMENTS FOR NICE

MTAs CURRENT

DySIS, a digital video colposcope to aid the diagnosis of cervical cancer

Eldon Spackman, Simon Walker, Mark Sculpher

Omalizumab for severe, persistent allergic asthma in patients aged 6+ and adults

Claire McKenna, Rita Faria, Belen Corbacho, Stephen Palmer

MTAs PAST

EOS 2D/3D x-ray imaging system

Claire McKenna, Rita Faria, Mark Sculpher

STAs PAST

Dabigatran etexilate for the prevention of stroke or systemic embolism in people with atrial fibrillation

Rita Faria, Eldon Spackman, Stephen Palmer

Advisory group for national specialised services (AGNSS)

- pilot of the processes underpinning decision-making by AGNSS on treatments for very rare conditions

Simon Walker, Rita Faria, Stephen Palmer

Fingolimod for the treatment of relapsing-remitting multiple sclerosis

Marta Soares, Miqdad Asaria, Seb Hinde, Stephen Palmer

HTAs CURRENT

The place of minimal access surgery amongst people with gastro-oesophageal reflux disease – extended follow-up REFLUX-2

Rita Faria, Laura Bojke, David Epstein, Belen Corbacho, Mark Sculpher

HTAs PAST

The clinical and cost-effectiveness of technologies used to visualise the seizure focus in people with refractory epilepsy being considered for surgery: a systematic review and decision analytical model

Marta Soares, Seb Hinde, Stephen Palmer

NICE DECISION SUPPORT UNIT

Development of the National Institute for Health and Clinical Excellence Decision Support Unit (DSU)

Stephen Palmer, Mark Sculpher, Karl Claxton

2011: CHE Facts & Figures

5 new
members
of staff

RESEARCH PROJECTS

IN PROGRESS AND COMPLETED IN 2011

Team for Economic Evaluation and Health Technology Assessment (TEEHTA)

METHODOLOGICAL RESEARCH

Methods of extrapolating RCT evidence for economic evaluation

Stephen Palmer, Andrea Manca, Laura Bojke (CHE), Alan Brennan (Sheffield), Andrew Stevens (Sheffield), Paul Tappenden (Sheffield), Chris Jackson (Cambridge), Keith Abrams (Leicester).
Funder: Medical Research Council Methodology Research Programme (2010-12)

VAC therapy for pressure ulcers: value of information analysis and feasibility study

Marta Soares, Karl Claxton
Funder: Medical Research Council

Informing a decision framework for when NICE should recommend the use of health technologies only in the context of an appropriately designed programme of evidence development

Karl Claxton, Steve Palmer, Eldon Spackman, Laura Bojke (CHE), Louise Longworth (Brunel University).
Funder: Medical Research Council Methodology Research Programme

Methods for estimation of the NICE cost-effectiveness threshold

Mark Sculpher, Karl Claxton, Steve Martin, Nigel Rice, Eldon Spackman, Ling-Hsiang Chaung, Sebastian Hinde (CHE), Nancy Devlin (Office of Health Economics), Peter C Smith (Imperial College).
Funder: Medical Research Council Methodology Research Programme

Developing economic evaluation methods for decision making: the value of access to individual patient data

Andrea Manca Fellowship
Funder: NIHR Career Development Award (2010-2014)

Identifying appropriate methods to incorporate concerns about health inequalities into economic evaluations of health care programmes

Mark Sculpher, Nigel Rice, Susan Griffin, Karl Claxton, Richard Cookson, Tony Culyer, Miqdad Asaria.
Funder: Department of Health Policy Research Programme through the Public Health Research Consortium

Academic Fellowship in Health Economics and Public Health

Susan Griffin Fellowship

Funder: Research Council UK Academic Fellowship in Health Economics and Public Health

Identifying appropriate methods to incorporate concerns about health inequalities into economic evaluation of health care programmes (Public Health Research Consortium)

Mark Sculpher, Nigel Rice, Karl Claxton, Richard Cookson, Susan Griffin.

Funder: NIHR-CCF

Valuation of patient time

Bernard Van Den Berg.

Funder: VU University Amsterdam via a Dutch Research Council

APPLIED RESEARCH

VenUS IV (Venous leg Ulcer Study IV): A randomised controlled trial of compression hosiery versus compression bandaging in the treatment of venous leg ulcers

Marta Soares, Cynthia Iglesias

AntiRetroviral Research for Wattoto (ARROW) = Young Lives: the social contexts and economic realities of paediatric anti-retroviral therapy

Mark Sculpher, Paul Revill, Susan Griffin, Bernard van den Berg.
Funder: DFID (via MRC-CTU)

Optimising clinical care strategies and laboratory monitoring for cost-effective roll-out of antiretroviral therapy in Africa: the lab-lite project

Paul Revill.
Funder: the Department for International Development (DFID) (via the Medical Research Council - Clinical Trials Unit (MRC-CTU))

A review of the evidence on financial integration across health and social care

Helen Weatherly, Anne Mason, Maria Goddard, Kath Wright.
Funder: Scottish Government

Acupuncture for chronic pain and depression in primary care

Mark Sculpher, Andrea Manca

Funder: NIHR

An exploratory randomised controlled trial of guided self-help for women with chronic pelvic pain (CPP) in primary care

Gerry Richardson

Funded from the National Institute for Health Research, Research for Patient Benefit (NIHR RfPB)

Cost-effectiveness of screening for depression in cancer patients

Gerry Richardson, Stephen Palmer, Mark Sculpher

Funder: Cancer Research UK

Cost-effectiveness of celecoxib in bladder cancer using data from the BOXIT trial

Mike Paulden, Mark Sculpher

Cost-effectiveness of the WISE approach in the management of long-term conditions

Gerry Richardson

Funder: NIHR

Investigating cost-effectiveness of treatments for people with long term conditions

Gerry Richardson

Funder: NIHR

Economic evaluation using evidence from the Clinical Evaluation of Magnetic Resonance imaging in Coronary heart disease (CE-MARC) study

Mark Sculpher, Simon Walker

Funder: British Heart Foundation

PREDICT (A randomised controlled trial of continuous positive airway pressure treatment in older people with obstructive sleep apnoea hypopnoea syndrome)

Susan Griffin, Mark Sculpher, Rita Faria

Funder: NCCHTA

Cost-effectiveness analysis of Care Planning in the Treatment of Long Term Conditions (CAPITOL)

Gerry Richardson

Funder: Department of Health

Evaluating the family nurse partnership programme in England: a randomised controlled trial

Gerry Richardson

Funder: DH PRP

ICON 7 – A randomised, two-arm, multicentre Gynaecologic Cancer InterGroup trial of adding bevacizumab to standard chemotherapy (carboplatin and paclitaxel) in patients with epithelial ovarian cancer

Mark Sculpher

Sponsor: the MRC.

Transfusion alternatives pre-operatively in sickle cell disease randomised controlled trial (TAPS RCT)

Mark Sculpher, Eldon Spackman.

Funder: NHS Blood & Transplant

METRI°C (ME education, training and resources for primary care)

Gerry Richardson

Funder: NIHR-CCF

Surgical wounds

Karl Claxton & Marta Soares

Funder: NIHR-CCF

Screening for psychological and mental health differences of young people who offend

Steve Palmer

Funder: NIHR-CCF

Breathing techniques for breathlessness in lung cancer

Gerry Richardson

Funded from the National Institute for Health Research, Research for Patient Benefit (NIHR RfPB)

A project mapping hospital utilisation and outcomes in six European Union countries (“ECHO” – European Collaboration for Healthcare Optimization)

Richard Cookson

Funder: the European Union



Foundations York expert workshops 2011

CHE offers a wide-ranging programme of workshops and courses in methodological and applied topics for members of the health economics field, including health economists, health care professionals and students. Throughout 2011, over 300 people from all over the world came to York to take part in 7 short courses and workshops run by CHE staff.

York expert workshops in the socio economic evaluation of medicines

To inform and promote understanding in key areas of quality of life assessment and health economic evaluation and to learn how to:

- decide whether a particular evaluation is necessary
- choose a particular methodology
- identify the data required and appropriate instruments for data collection
- undertake appropriate analysis
- communicate the results effectively

There are three different York Expert Workshop courses:

- Quality of life: A three-day workshop providing a detailed introduction to the theory and practice of quality of life measurement with particular emphasis on its use in economic evaluation.
- Foundations of economic evaluation in health care: This five-day workshop comprehensively covers all key issues in the methodology and practice of economic evaluation.

- Advanced methods for cost-effectiveness analysis: A five-day workshop dealing with advanced methods in cost-effectiveness analysis for pharmaceuticals and other health care technologies.

Advanced modelling methods for health economic evaluation

A three-day course focusing on advanced modelling methods for economic evaluation. This course is a collaboration between the University of Glasgow and CHE. The course is aimed at health economists and those health professionals with experience of health economics who wish to learn about recent methodological developments in cost-effectiveness analysis. It is designed for participants who are familiar with basic decision modelling who wish to learn how to use more advanced modelling methods.

Regression methods for health economic evaluation

This course is intended for people currently undertaking health economic evaluations within the pharmaceutical and medical device industries, consultancy, academia or the health service who wish to learn how to use regression methods to analyse individual patient-level cost, effect and cost-effectiveness data. The course includes a mixture of taught modules and practical exercises. This three-day course focuses on the use of regression analysis methods for health economic evaluation of individual patient-level cost, effect and cost-effectiveness data.



Advanced York expert workshops 2011

Introduction to applied health economics: methods for the analysis of health care cost data

A three-day course focusing on the use of applied quantitative methods for the analysis of health care cost data. The course is run by the Health, Econometrics and Data Group (HEDG). The course will provide an outline of applied health economics methods used to model health care costs relevant to the analysis of data obtained from administrative or observational sources.

Topics to be covered will include:

- linear regression on levels of costs and on transformations of costs
- nonlinear models based on exponential conditional means
- generalized linear models and extended estimating equations
- more flexible parametric and semi-parametric estimators

Advanced course in applied health economics

A two and a half-day course focusing on the use of duration data with wide applicability to research in health economics. Econometric models of durations are used to model the length of time spent in a given state before transition to another state. Durations may, for example, consist of time to death, time spent in a health state or free from ill-health, and time spent in hospital. Typically, standard regression based techniques are not appropriate for modelling such data and instead attention needs to be given to the choice of distribution function, the sampling scheme used to derive durations, the censored nature of duration spells and possible transitions to one of several states. Duration spells or the probability of a transition out of a state may be modelled.

Analysing patient data using hospital episode statistics (HES) to evaluate healthcare policy and practice

This course includes instruction on how to:

- understand, manage and manipulate the data
- construct and analyse key variables such as waiting times or length of stay
- link inpatient and outpatient HES records together and to other datasets
- analyse individual patient records defined as Finished Consultant Episodes, Provider Spells and Continuous Inpatient Spells
- monitor emergency readmissions
- aggregate data by Healthcare Resource Group, hospitals, and groups of general practices
- evaluate Patient Reported Outcome Measures (PROMs)
- use the data for benchmarking and policy evaluation

Introduction to measuring efficiency in public sector organisations: analytical techniques and policy

Areas to be covered in this course 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
- 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.

Peer reviewed

Backhouse M, Wonder M, Hornby E, Kilburg A, **Drummond MF**, Mayer FK. Early dialogue between the developers of new technologies and pricing and reimbursement agencies. *Value in Health* 2011;14(4):608-615.

Barnett PG, Chow A, Joyce VR, Bayoumi AM, **Griffin S**, Nosyk B, Holodniy M, Brown ST, **Sculpher MJ**, Anis AH, Owens DK. Determinants of the cost of health services used by veterans with HIV. *Medical Care* 2011;49(9):848-56.

Basu A, **Manca A**. Regression estimators for generic health-related quality of life and quality-adjusted life years. *Medical Decision Making* 2011. DOI:10.1177/0272989X11416988

Bloudek LM, **Spackman DE**, Blankenburg M, Sullivan SD. Review and meta-analysis of biomarkers and diagnostic imaging in Alzheimer's disease. *J Alzheimers Dis* 2011;26(4).

Bloudek LM, **Spackman DE**, Veenstra DL, Sullivan SD. CDR state transition probabilities in Alzheimer's disease with and without cholinesterase inhibitor intervention in an observation cohort. *J Alzheimers Dis* 2011;24(3).

Bojke L, Epstein D, Craig D, Rodgers M, Woolacott N, Yang H, **Sculpher M**. Modelling the cost-effectiveness of biologic treatments for psoriatic arthritis. *Rheumatology* 2011;50:iv39-iv47.

Brown S, Dietrich M, **Ortiz-Nuñez A**, Taylor K. Self-employment and attitudes towards risk: timing and unobserved heterogeneity. *Journal of Economic Psychology* 2011;32:425-33.

Brown S, **Ortiz-Nuñez A**, Taylor K. What will I be when I grow up? An analysis of childhood expectations and career outcomes. *Economics of Education Review* 2011;30:493-506.

Cabrieses B, **Espinoza M**. Translational research and its contribution to the decision making process in health policies (in Spanish) *Rev Peru Med Exp Salud Publica* 2011;28(2):288-97.

Cabrieses B, **Espinoza M**, Zitko P. How to face the increased prevalence of individual health-risk behaviours in Chile (letter) (in Spanish). *Rev Med Chile* 2011;139:686-88.

Cabrieses B, Zitko P, Pinedo R, Albor C, **Espinoza M**. How has social status been measured in health research? A review of the international literature (in Spanish). *Rev Panam Salud Publica* 2011;29(6):457-68.

Campbell HE, Epstein D, Bloomfield D, **Griffin S, Manca A**, Yarnold J, Bliss J, Johnson L, Earl H, Poole C, Hiller L, Dunn J, Hopwood P, Barrett-Lee P, Ellis P, Cameron D, Harris AL, Gray AM, **Sculpher MJ**. The cost-effectiveness of adjuvant chemotherapy for early breast cancer: a comparison of no chemotherapy and first, second, and third generation regimens for patients with differing prognoses. *European Journal of Cancer* 2011;Nov 47(17):2517-30.

Carr-Hill R. A large-scale donor attempt to improve educational status of the poor and household income distribution; the experience of PEDC in Vietnam. *International Journal of Educational Development* 2011;31(3):251-61.

Castelli A, Laudicella M, **Street A, Ward P**. Getting out what we put in: productivity of the English NHS. *Health Economics, Policy and Law* 2011;6:313-335.

Chalkley M, Rennie J, Tilley C. An analysis of patient expenditure in the GDS in Scotland 1998-2007. *British Dental Journal* 2011; 11(2):p.E3.

Chalkley M, Stewart G. International trade and the incentive for merger. *Applied Economics* 2011;43(13).

Chalkley M, Stewart G. Trade liberalisation, market structure and the incentive to merge. *The World Economy* 2011;34(8):1327-47.

Chase R, **Culyer AJ**, Dobrow M, Coyte P, Sawka C, O'Reilly S, Laing K, Trudeau M, Smith S, Hoch J, Morgan S, Peacock S, Abbott R, Sullivan T. Access to cancer drugs in Canada: looking beyond coverage decisions. *Healthcare Policy* 2011;6:27-35.

Chuang LH, **Soares MO**, Watson JM, Bland JM, Cullum N, **Iglesias C**, Kang'ombe AR, Torgerson D, Nelson EA, on behalf of the VenUS III team. Economic evaluation of a randomized controlled trial of ultrasound therapy for hard-to-heal venous leg ulcers. *British Journal of Surgery* 2011;98(8):1099-1106.

Claxton K, Paulten M, **Gravelle H**, Brouwer W, **Culyer AJ**. Discounting and decision making in the economic evaluation of health care technologies. *Health Economics* 2011;20:2-15.

Cookson R. The tough test for the NHS isn't cost but care. *Parliamentary Brief* 2011;13(6).

Cookson R, Laudicella M. Do the poor cost substantially more? The relationship between small area income deprivation and length of stay for elective hip replacement in the English NHS from 2001/2 to 2007/8. *Social Science and Medicine* 2011;72:173-84.

Cooper NJ, Kendrick D, Achana F, Dhiman P, He Z, Wynn P, Le Cozannet E, **Saramago P**, Sutton A. Network meta-analysis to evaluate the effectiveness of interventions to increase the uptake of smoke alarms. *Epidemiologic Reviews* 2011;doi:10.1093/epirev/mxr015

Culyer AJ, Bombard Y. An equity framework for health technology assessments. *Medical Decision Making* 2011; DOI:10.1177/0272989X11426484.

de Preux L. Anticipatory ex ante moral hazard and the effect of Medicare on prevention. *Health Economics* 2011;20(9):1056-72.

Dixon J, Smith PC, **Gravelle H**, Martin S, Bardsley M, **Rice N**, Georghiou T, **Dusheiko M**, Billings J, De Lorenzo M, Sanderson C. A person based formula for allocating commissioning funds to general practices in England: development of a statistical model. *British Medical Journal* 2011;343:d6608.

Drummond MF, Augustovski F, Melendez G, Lemgruber A. Implementing pharmacoeconomic guidelines in Latin America: lessons learned. *Value in Health* 2011;14(5 Latin American Supplement): S3-S7.

Drummond MF, Jönsson B, Rutten F, Stargardt T. Reimbursement of pharmaceuticals: reference pricing versus health technology assessment. *The European Journal of Health Economics* 2011;12:263-71.

Drummond MF, Towse A. Is it time to reconsider the role of patient co-payments for pharmaceuticals in Europe? *European Journal of Health Economics* 2011;DOI:10.1007/s10198-011-0353-8.

Dusheiko M, Doran T, **Gravelle H**, Fullwood C, Roland M. Does higher quality of diabetes management in family practice reduce unplanned hospital admissions? *Health Services Research* 2011;46:27-46.

Dusheiko M, **Gravelle H**, Martin S, **Rice N**, Smith PC. Does disease management in primary care reduce hospital costs? Evidence from English primary care. *Journal of Health Economics* 2011;30(5):919-32.

Elston J, Santaniello-Newton A, Meigh J, Harmer D, Allgar V, Allison T, **Richardson G**, Meigh R, Palmer SR, Barlow G. Increasing incidence of invasive pneumococcal disease and pneumonia despite improved vaccination uptake-surveillance in Hull and East Yorkshire, United Kingdom, 2002-2009. *Epidemiology and Infection* 2011;DOI:10.1017/S0950268811001907.

Epstein D, Sutton A. Modelling correlated clinical outcomes in health technology appraisal. *Value in Health* 2011;14(6):793-99.

Espinoza M. Economic evaluation in health care in Chile: towards a broader framework (letter) (in Spanish). *Rev Méd Chile* 2011;139:816-19.

Espinoza M, Cabieses B. A call for a broader framework for health research in Chile (letter). *Panamerican Journal of Public Health* 2011;29(5):382.

Espinoza M, Cabieses B, Pedreros C, Zitko P. Evaluation of the first training on clinical clinical research methodology in Chile (In Spanish). *Rev Panam Salud Publica* 2011;23(3):203-10.

Espinoza M, Castillo-Riquelme M, Zarate V. Economic evaluations of health technologies: a global perspective for their implementation in Latinoamerica (In Spanish). *Rev Peru Med Exp Salud Publica* 2011;28(3):535-39.

Espinoza M, Cabieses B. National Agency for Medicaments (ANAMED, Chile): An opportunity not to be missed (In Spanish). *Rev Med Chile* 2011;139:1649-50.

Felix J, Andreozzi V, **Soares M**, Borrego P, Gervasio H, Moreira A, Costa L, Marcelo F, Peralta F, Furtado I, Pina F, Albuquerque C, Santos A, Passos-Coelho JL. For the Portuguese group for the study of bone metastases. Hospital resource utilization and treatment cost of skeletal-related events in patients with metastatic breast or prostate cancer: An estimation for the Portuguese National Health System. *Value in Health* 2011;14(4):499-505.

Fleetcroft R, **Cookson R**, Steel N, Howe A. Correlation between prescribing quality and pharmaceutical costs in English primary care: national cross-sectional analysis. *British Journal of General Practice* 2011;61:554-55.

Garau M, Shah K, Mason A, Wang Q, Towse A, **Drummond M**. Using QALYs in cancer: a review of the methodological limitations. *Pharmacoeconomics* 2011;29(8):673-85.

Gravelle H, Hole AR, **Santos R**. Measuring and testing for gender discrimination in physician pay: English family doctors. *Journal of Health Economics* 2011;30(4):660-74.

Griffin S, **Claxton K**, **Palmer S**, **Sculpher M**. Dangerous omissions: the consequences of ignoring decision uncertainty. *Health Economics* 2011;20:212-24.

Peer reviewed

Harrison M, Bansback N, Marra C, **Drummond MF**, Tugwell B. Valuing health for clinical and economic decisions: directions relevant for rheumatologists. *The Journal of Rheumatology* 2011;38(8):1770-75.

Hassink WHJ, **Van den Berg B**. Time-bound opportunity costs of informal care: Consequences for access to professional care, caregiver support, and labour supply estimates. *Social Science and Medicine*. 2011;73(10):1508-16.

Hastrup LH, **Van den Berg B**, Gyrd-Hansen D. Do informal caregivers in mental illness feel more burdened? A comparative study of mental versus somatic illnesses. *Scandinavian Journal of Public Health* 2011;39:598-607.

Hawkins N, Richardson G, Sutton A, Cooper N, Griffiths C, Rogers A, Bower P. Surrogates, meta-analysis and cost-effectiveness modelling: a combined analytic approach. *Health Economics* 2011; DOI:10.1002/hec.1741.

Hvenegaard A, Nielsen Arendt J, **Street A**, Gyrd-Hansen D. Exploring the relationship between costs and quality: does the joint evaluation of costs and quality alter the ranking of Danish hospital departments? *European Journal of Health Economics* 2011;12:541-551.

Ishikawa N, Pridmore P, **Carr-Hill R**, Chaimuangdee K. The attitudes of primary school children in Northern Thailand towards their peers who are affected by HIV and AIDS. *Aids Care* 011;23:237-44.

Jackson CH, **Bojke L**, Thompson SG, **Claxton K**, Sharples LD. A framework for addressing structural uncertainty in decision models. *Medical Decision Making* 2011;31(4):662-674.

Jacobs R, Barrenho E. The impact of crisis resolution and home treatment teams on psychiatric admission rates in England. *British Journal of Psychiatry* 2011; 199(1): 71-6.

Jones AM, **Rice N, Rosa Dias P**. Long-term effects of school quality on health and lifestyle: Evidence from comprehensive schooling reforms in England. *Journal of Human Capital* 2011;5(3):342-76.

Jones AM, **Rice N, Robone S, Rosa-Dias P**. Inequality and polarisation in health systems' responsiveness: a cross-country analysis. *Journal of Health Economics* 2011;30(4):616-25.

Jones AM, **Rice N, Rosa-Dias P**. Quality of schooling and inequality of opportunity in health. *Empirical Economics* 2011; DOI:10.1007/s00181-011-0471-2.

Joyce VR, Barnett PG, Chow A, Bayoumi AM, **Griffin S**, Sun H, Holodniy M, Brown ST, Kyriakides TC, Cameron DW, Youle M, **Sculpher M**, Anis AH, Owens DK. Effect of treatment interruption and intensification of antiretroviral therapy on health related quality of life in patients with advanced HIV: a randomized, controlled trial. *Medical Decision Making* 2011;DOI:10.1177/0272989X10397615.

Kolasa K, **Manca A**, Schubert S. A review of Health Technology Assessment (HTA) recommendations for drug therapies issued between 2007 and 2009 and their impact on policy making processes in Poland. *Health Policy* 2011;102(2-3):145-151.

Longworth L, **Sculpher M, Bokje L**, Tosh J. Bridging the gap between methods research and the needs of policy makers: A review of the research priorities of the National Institute for Health and Clinical Excellence. *International Journal of Technology Assessment in Health Care* 2011;27(2):180-7.

Manca A, Asseburg C, Bravo-Vergel Y, Seymour MT, Meade A, Stephens R, Parmar M, **Sculpher MJ**. The cost-effectiveness of different chemotherapy strategies for patients with poor prognosis advanced colorectal cancer (MRC FOCUS). *Value in Health* 2011;doi:10.1016/j.jval.2011.07.008.

Mandalà M, Imberti G, Piazzalunga D, Belfiglio M, Di Biagio K, **Robone S**, Labianca R, Marchesi L, Merelli B, Poletti P, Milesi A, Milesi L, Tondini C. Socio-economic status and education grade influence Breslow thickness, disease free and overall survival in clinical stage I-II AJCC skin melanoma: outcome analysis from a single institution experience. *Mayo Clinic Proceedings* 2011;16(2).

Marks L, Cave S, Wallace A, **Mason A**, Hunter DJ, Mason JM, Peckham S. Incentivising preventive services in primary care: perspectives on the use of Local Enhanced Services. *Journal of Public Health* 2011;33(4):556-564.

Martin M, Lensberg B, **Drummond M F**, McGuire A. Relative efficacy – towards a new frontier? *ISPOR Connections* 2011;17(5):8-10.

Martin R, Muûls M, **de Preux L**, Wagner U. Anatomy of a paradox: management practices, organizational structure and energy efficiency. *Journal of Environmental Economics and Management* 2011;DOI. 10.1016/j.jeem.2011.08.003.

Martin S, **Rice N**, Smith PC. Comparing costs and outcomes across programmes of healthcare. *Health Economics* 2011;DOI:10.1002/hec.1716.

Mason A, Goddard M, Myers L, Verzulli R. Navigating uncharted waters? How international experience can inform the funding of mental health care in England. *Journal of Mental Health* 2011;20(3):234-48.

Mauskopf JA, Walter J, Copley-Merriman K, Birt J, Bowman LLB, **Drummond MF**. Differences among formulary submission guidelines: implications for health technology assessment. *International Journal of Technology Assessment in Health Care* 2011;27(3):261-270.

Maynard A, **Street A**, Hunter R. Using 'payment by results' to fund the treatment of dependent drug users-proceed with care! *Addiction* 2011;106(10):1715-1882.

McKenna C, Claxton K. Addressing adoption and research design decisions simultaneously: the role of value of sample information analysis. *Medical Decision Making* 2011;31:853-865.

McKenna C, Maund E, Sarowar M, Fox D, Stevenson M, Pepper C, Woolacott N, **Palmer S**. Dronedarone for the treatment of atrial fibrillation. A NICE Single Technology Appraisal. *Pharmacoeconomics* 2011;doi: 10.2165/11594280-000000000-00000.

Miraldo M, **Siciliani L, Street A**. Price adjustment in the hospital sector. *Journal of Health Economics*;30(1):112-125.

Morris S, **Goudie R**, Sutton M, **Gravelle H**, Elliott R, Hole A, Ma A, Sibbald B, Skatun D. Determinants of general practitioners' wages in England. *Health Economics* 2011;20:147-60.

Norman G, Rice S, **Spackman E**, Stirk L, Danso-Appiah A, Suh D, **Palmer S**, Eastwood A. Trastuzumab for the treatment of HER2 positive metastatic adenocarcinoma of the stomach or gastro-oesophageal junction. *Health Technol Assess*. 2011;15(Suppl.1):33-42.

Olsen KR, Gyrd-Hansen D, Højmark TB, Kristensen T, Vedsted P, **Street A**. Organisational determinants of production and efficiency in General Practice. A population based study. *European Journal of Health Economics* 2011;DOI:10.1007/s10198-011-0368-1.

Paulden M, **Claxton K**. Budget allocation and the revealed social rate of time preference for health. *Health Economics* 2011;doi:10.1002/hec.1730.

Powdthavee N, **van den Berg B**. Putting different price tags on the same health condition: Re-evaluating the well-being valuation approach. *Journal of Health Economics* 2011;30(5):1032-43.

Rice N, Robone S, Smith PC. Analysis of the validity of the vignette approach to correct for heterogeneity in reporting health system responsiveness. *The European Journal of Health Economics* 2011;12(2):141-62.

Robone S, Jones AM, **Rice N**. Contractual conditions, working conditions, health and well-being in the British Household Panel Survey. *The European Journal of Health Economics* 2011;12(5):429-44.

Robone S, Rice N, Smith P. Health systems` responsiveness and its characteristics: a cross-country comparative analysis. *Health Services Research* 2011;46(6):2079-100.

Rodgers M, **Epstein D, Bojke L**, Yang H, Craig D, Fonseca T, Myers L, Bruce I, Chalmers R, Bujkiewicz S, Lai M, Cooper N, Abrams K, Spiegelhalter D, Sutton A, **Sculpher M**, Woolacott N. Etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis: a systematic review and economic evaluation. *Health Technology Assessment* 2011;15(10):1-329.

Rodgers M, **Soares M, Epstein D**, Yang H, Fox D, Eastwood A. Bevacizumab in combination with a taxane for the first-line treatment of HER2-negative metastatic breast cancer. *Health Technology Assessment* 2011;15:Suppl.1.

Rogers A, Vassilev I, Sanders C, Kirk S, Chew-Graham C, Kennedy A, Protheroe J, Bower P, Blickem C, Reeves D, Kapadia D, Brooks H, Fullwood C, **Richardson G**. Social networks, work and network-based resources for the management of long-term conditions: a framework and study protocol for developing self-care support. *Implementation Science* 2011;6:56(May).

Sampat B, **Drummond MF**. Another special relationship? Interactions between health technology policies and health care systems in the United States and the United Kingdom. *Journal of Health Politics, Policy and Law* 2011;36:119-39.

Soares MO, Bojke L, Dumville J, **Iglesias C**, Callum N, **Claxton K**. Methods to elicit experts' beliefs over uncertain quantities: application to a cost effectiveness transition model of negative pressure wound therapy for severe pressure ulceration. *Statistics in Medicine* 2011;30(19):2363-2380.

Sorenson C, Tarricone R, Siebert M, **Drummond MF**. Applying health economics for policy decision making: do devices differ from drugs? *Europace Spotlight Supplement* 2011;13:ii54-ii58.

Peer reviewed

Star SM, **Van den Berg B**. Individual responsibility and health-risk behaviour: A contingent valuation study from the ex ante societal perspective. *Health Policy* 2011;101:300-311.

Sullivan PW, Slezko JF, **Sculpher MJ**. Catalogue of EQ-5D scores for the United Kingdom. *Medical Decision Making* 2011;31(6):800-804.

Tarricone R, **Drummond MF**. Challenges in the clinical and economic evaluation of medical devices: The case of transcatheter aortic valve implantation. *Journal of Medical Marketing* 2011;11(3):221-229.

Tso P, **Culyer AJ**, Brouwers M, Dobrow MJ. Developing a decision aid to guide public sector health policy decisions: A study protocol. *Implementation Science* 2011;6(46).

Walker S, Burch J, **McKenna C**, Wright K, **Griffin S**, Woolacott N. Omalizumab for the treatment of severe persistent allergic asthma in children aged 6-11 years: *Health Technology Assessment* 15: Suppl.1;2011:13-21.

Wasi N, **Van den Berg B**, Buchmueller T. Heterogeneous effects of child disability on maternal labor supply: evidence from the 2000 US census. *Labour Economics* 2011;doi:10.1016/j.labeco.2011.09.008.

Watt M, Mealing S, Eaton J, Piazza N, Moat N, Brasseur P, **Palmer S**, Busca R, **Sculpher M**. Cost-effectiveness of transcatheter aortic valve replacement in patients ineligible for conventional aortic valve replacement. *Heart* 2011;98:370-76.

Watson JM, Kang'ombe AR, **Soares MO**, Chuang LH, Worthy G, Bland JM, **Iglesias C**, Cullum N, Torgerson D, Nelson EA on behalf of the VenUS III Team. Use of weekly, low dose, high frequency ultrasound for hard to heal venous leg ulcers: the VenUS III randomised controlled trial. *BMJ* 2011;342.

Watson JM, Kang'ombe AR, **Soares MO**, Chuang LH, Worthy G, Bland JM, **Iglesias C**, Cullum N, Torgerson D, Nelson EA on behalf of the VenUS III team. A randomised controlled trial of therapeutic ultrasound in the management of venous leg ulcers. *Health Technology Assessment* 2011;15(13):1-176.

Weatherly H, Kirk S, Kyle RG, Callery P. Comparison of costs of acute care by children's community nursing teams. *Archives of Disease in Childhood* 2011;96(Suppl 1):A92.

Book Chapters

Burgess J, **Street A**. Measuring organisational performance. In: Glied S, Smith PC, editors. *The Oxford handbook of health economics*. Oxford: Oxford University Press; 2011.

Griffin S, **Claxton K**. Analysing uncertainty in cost-effectiveness for decision making. In: Glied S, Smith PC, editors. *The Oxford handbook of health economics*. Oxford: Oxford University Press; 2011.

Mason A, **Ward P**, **Street A**. England: the Healthcare Resource Group system. In: Busse R, Geissler A, Quentin W, Wiley M, editors. *Diagnosis related groups in Europe: moving towards transparency, efficiency and quality in hospitals*. Berkshire, England: Open University Press; 2011;p197-220.

Street A, O'Reilly J, **Ward P**, **Mason A**. DRG-based hospital payment and efficiency: theory, evidence, and challenges. In: Busse R, Geissler A, Quentin W, Wiley M, editors. *Diagnosis related groups in Europe: moving towards transparency, efficiency and quality in hospitals*. Berkshire, England: Open University Press; 2011:p93-114.

Walker S, **Sculpher M**, **Drummond MF**. The methods of cost-effectiveness analysis to inform decisions about the use of health care interventions and programmes. In: Glied S, Smith PC, editors. *The Oxford handbook of health economics*. Oxford: Oxford University Press; 2011. p. 733-58

CHE Research Papers

60, Value-based pricing for pharmaceuticals: its role, specification and prospects in a newly devolved NHS – **Karl Claxton, Mark Sculpher** and Stuart Carroll

61, Estimating the costs of specialised care – **Silvio Daidone** and **Andrew Street**

62, An equity checklist: a framework for health technology assessments – **Anthony Culyer** and Yvonne Bombard

63, Avoidable mortality: what it means and how it is measured – **Adriana Castelli** and Olena Nizalova

64, Do hospitals respond to greater autonomy? Evidence from the English NHS – **Rossella Verzulli, Rowena Jacobs** and **Maria Goddard**

65, Does better disease management in primary care reduce hospital costs? – **Mark Dusheiko, Hugh Gravelle**, Stephen Martin, **Nigel Rice** and Peter C Smith

66, Does hospital competition harm equity? Evidence from the English National Health Service – **Richard Cookson**, Mauro Laudicella and Paolo Li Donni

67, Measuring change in health care equity using small area administrative data – evidence from the English NHS 2001-8 – **Richard Cookson**, Mauro Laudicella and Paolo Li Donni

68, Truly inefficient or providing better quality of care? Analysing the relationship between risk-adjusted hospital costs and patients' health outcomes – **Nils Gutacker, Chris Bojke, Silvio Daidone**, Nancy Devlin, David Parkin and **Andrew Street**

69, Uncertainty, evidence and irrecoverable costs: informing approval, pricing and research decisions for health technologies – **Karl Claxton, Stephen Palmer**, Louise Longworth, **Laura Bojke, Susan Griffin, Claire McKenna, Marta Soares, Eldon Spackman** and Jihee Youn

70, NICE's social value judgements about equity in health and health care – Koonal K Shah, **Richard Cookson, Anthony J. Culyer** and Peter Littlejohns

71, Estimating the costs of specialised care: updated analysis using data for 2009/10 – **Silvio Daidone** and **Andrew Street**

72, Keep it simple? Predicting primary health care costs with measures of morbidity and multimorbidity – Samuel L Brilleman, **Hugh Gravelle**, Sandra Hollinghurst, Sarah Purdy, Chris Salisbury and Frank Windmeijer

73, Modelling individual patient hospital expenditure for general practice budgets – **Hugh Gravelle, Mark Dusheiko**, Steve Martin, Pete Smith, **Nigel Rice** and Jennifer Dixon

2011: CHE Facts & Figures

Over 120 publications



Others

Bojke C, Castelli A, Goudie R, Street A, Ward P.

Productivity of the English National Health Service 2003/4-2009/10. CHE report to Department of Health 2011.

Cookson R, Laudicella M. Effects of health reform on health care inequalities – Final Report. NIHR SDO Programme – London.

Culyer AJ. Maximising the odds. *New Statesman* (supplement: Competition in a New Society: National Health) 2011;15 December 6-8.

Culyer AJ. UK report: NHS reforms. *Health Care Cost Monitor* 1-2, The Hastings Centre; February 2011.

Jones AM, Laporte A, **Rice N, Zucchelli E**. A model of the impact of smoking bans on smoking with evidence from bans in England and Scotland. Health Economics and Data Group (HEDG), University of York 2011; working paper 11/05.

Jones AM, **Lomas J, Rice N**. Applying beta-type size distributions to healthcare cost regressions. Health Econometrics and Data Group (HEDG), University of York 2011; working paper 11/31.

Marks L, Cave S, Hunter DJ, Mason JM, Peckham S, Wallace A, **Mason A, Weatherly H**, Melvin K. Public health governance and primary care delivery: a triangulated study. Final report; NIHR SDO Programme, 2011.

Towse A, **Drummond MF**, Sorenson C. Measuring value: pharmacoeconomics theory and practice. Occasional Paper 11/03, London: Office of Health Economics. 2011.

Wagstaff A, **Culyer AJ**. Four decades of health economics through a bibliometric lens. World Bank Policy Research Working Paper Series 2011;5829.

2011: CHE Facts & Figures

120 registered participants at HESG

PRESENTATIONS 2011

Castelli A. Measuring NHS output and productivity in England. *Seminar at the Health Economics Research Unit (HERU) University of Aberdeen*, March 2011.

Castelli A. Measuring NHS outputs, inputs and productivity. *Seminar at the University of Toronto*, July 2011.

Castelli A. Exploring the concept of "avoidable mortality" as a quality indicator for hospital output: the case of circulatory diseases in England. *iHEA 8th World Congress on Health Economics, Toronto*, July 2011.

Castelli A. Measuring NHS outputs, inputs and productivity, *Seminar at the Institut de Recherche et Documentation en Economie de la Santé (IRDES) in Paris*, October 2011.

Chalkley M. Why payment systems matter in healthcare. *Meeting of the Yorkshire British Dental Association*. 1 October 2011.

Chalkley M. Presented the Health Policy Seminar at the *Centre for Health Service Economics & Organisation, Nuffield College, Oxford*, 3 November 2011.

Claxton K. After many a summer dies the swan: the value of innovation at the end of life. *Plenary debate at iHEA 8th World Congress on Health Economics, Toronto*, July 2011.

Claxton K. The cost-effectiveness threshold: what it is, what it's not and how to estimate it? *iHEA 8th World Congress on Health Economics, Toronto*, July 2011.

Claxton K. Value based pricing for the NHS *iHEA 8th World Congress on Health Economics, Toronto*, July 2011.

Claxton K. The complexity of the allocation problem in health care: can current decision rules provide a useful guide? *iHEA 8th World Congress on Health Economics, Toronto*, July 2011.

Claxton K. Perspective and multi-sectoral effects. *Symposium: economic evaluation methods for upstream population health interventions. iHEA 8th World Congress on Health Economics, Toronto* July 2011.

Claxton K, Spackman E, Griffin S, Palmer S, Longworth L, Bojke L, Youn J. Unifying research and reimbursement decisions: a framework and algorithm for policy choice. *HESG 2011*.

Cookson R. Happiness and capability approaches. *NICE Annual Conference, Birmingham*, 10-11 May 2011.

Cookson R. Effects of choice and market reform on socioeconomic inequalities of access to health care. *SDO Network CEO Forum, Nottingham*, June 2011.

Cookson R. Effects of health reform on health care inequality. *HSRN/SDO Annual Conference, Liverpool*, June 2011.

Cookson R. Is there an ethical as opposed to political justification for the NICE end of life premium? *Conference on Health Care Rationing: London School of Economics*, September 2011.

Cookson R, Griffin S. Incorporating concern for health inequality into cost effectiveness analysis. *EU Equity Action project: Department of Health, London*, November, 2011.

Cookson R. Effects of NHS reform on socioeconomic equity in health care. *Guest Lecture, Wolfson Research Institute*, December 2011.

Daidone S, Street A. How much should be paid for specialised treatment? Paper presented at the *Health Economists' Study Group Meeting, York*, 5-7 January 2011.

de Preux L. The role of parenting style in the child health production function. *16th Spring Meeting of Young Economists, University of Groningen*, April 2011.

de Preux L. Anatomy of a paradox: management practices, organizational structure and energy efficiency. *18th Annual Conference of the European Association of Environmental and Resource Economists, University of Rome "Tor Vergata"*, June 2011.

de Preux L. The role of parenting style in the child health production function. *12th National Health Economics Conference, Lisbon*, October 2011.

Despiégel N, Danchenko N, François C, Lensberg B,
Drummond M. The use and performance of productivity scales to evaluate presenteeism in mood disorders. *ISPOR 14th Annual European Congress, Madrid*, 5-8 Nov 2011.

Drummond M. Restricting access to healthcare: is NICE too nasty? *Public Health Economics Group John Hopkins University*, May 2011.

Drummond M. Economic analysis in NICE Clinical Guidelines in the United Kingdom. *International Health Economics Association (iHEA), Toronto*, July 2011.

Drummond M. Twenty years of using economic evaluations for drug reimbursement decisions. What have we achieved. *Conference on Health Care Rationing: London School of Economics*, September 2011.

Drummond M. Twenty years of using economic evaluations for drug reimbursement decisions. What have we achieved? *Keynote speech: 33rd Conference of Health Economists, Melbourne*, September 2011.

Goddard M. Health Economics (and Health Economics at York) *Yorkshire Cancer Research Council of Management meeting, Harrogate*, April, 2011.





Goddard M. Access to care: Are there lessons from medicine? Symposium on "Access – What exactly is the problem? Faculty of General Dental Practice Research, The Royal College of Surgeons of England, London, May 2011.

Goddard M. New developments in purchasing in the English NHS. Liberation or liability? *iHEA 8th World Congress on Health Economics*, Toronto, July 2011.

Gravelle H. Effect of P4P on ambulatory care sensitive conditions. *Melbourne Institute, University of Melbourne*, February 2011.

Gravelle H. Connecting health and economics. *CHE seminar*, York, April 2011.

Gravelle H. GP gender and pay. *Manchester University Economics and Health seminar*, June 2011.

Gravelle H. Multimorbidity and general practice costs. *Health Economists Study Group*, Bangor, July 2011.

Griffin S, Cookson R. Incorporating concern for unfair health inequality into cost effectiveness analysis – preliminary ideas on a methodological framework. *University of York*, 21 September 2011.

Gutacker N, Bojke C, Daidone S, Devlin N, Parkin D, Street A. Measuring variations in hospital cost while accounting for differences in patient-reported health outcomes: a multilevel approach. *Paper presented at the Health Economic Study Group Meeting, Bangor*, 29 June-1 July 2011.

Jacobs R. Medical Co-morbidity, Invited discussant on session at *10th Workshop on Costs and Assessment in Psychiatry: Mental Health Policy and Economics*, Venice, Italy, 25-27 March 2011.

Jacobs R. The impact of crisis resolution and home treatment teams on psychiatric admissions in England. *10th Workshop on Costs and Assessment in Psychiatry – Mental Health Policy and Economics*, Venice, March 2011.

Jacobs R. The economics of mental healthcare provision: understanding Payment by Results (PbR), NHS, Leeds, May 2011.

Jacobs R, Verzulli R, Goddard M. Do hospitals respond to greater autonomy? Evidence on Foundation Trusts, Invited presentation at *Health Policy Seminar Series in Nuffield College, Oxford*, 17 November 2011.

Jacobs R. PROMS, PbR and public policy, Invited presentation at *Outcome measurement in mental health – the essentials*, The Village Hotel, Leeds, (for Andrew Sims Centre), 1 November 2011.

Jacobs R. Payment by Results (PbR) for mental health services, Invited presentation, *The Retreat Hospital*, York, 21 December 2011.

PRESENTATIONS 2011

Jones AM, **Rice N, Robone S.** Parametric and non-parametric methods to adjust self-reported health status for reporting heterogeneity: a comparative analysis. *iHEA Toronto*, July 2011.

Longworth L, Youn J. **Bojke, L. Palmer, S. Griffin, S. Spackman, E. Claxton, K.** When does NICE issue 'approval with evidence' recommendations? A review of 'Only In Research' and 'approval with research' recommendations in NICE guidance. *HESG* 2011.

Mason, A. The latest evidence on topical treatments for chronic plaque psoriasis. *Annual Evidence Based Update (EBU) meeting: UK Dermatology Clinical Trials Network, Loughborough*, May 2011.

Pichon-Riviere A, Augustovsk F, García Martí S, Sullivan SD, Drummond M. Transferability of health technology assessment reports from other jurisdictions and their use in the decision making process in Latin America: a survey of researchers and decision makers. *HTAi Latin American Regional Meeting, Buenos Aires Argentina*, October 2011.

Rice N. Inequality and polarisation in health systems' responsiveness: a cross-country analysis. Jones, AM. Rice, N. Robone, S. Rosa Dias, P. *iHEA Toronto*, July 2011.

Rice N. Smith, PC. Vignettes and health systems responsiveness in cross-country comparative analyses. Rice, N. Robone, S. Smith, PC. Paper read before an Ordinary Meeting of the Royal Statistical Society, *International Statistical Institute Conference, Dublin*, August, 2011.

Rosa-Dias P. Equalising opportunity in health through educational policy. *Conference on Economic Inequality: University of Rome – Sapienza*, May 2011.

Sculpher M, Claxton, K. Cost-effectiveness thresholds for decision making about health care technologies: conceptual and empirical underpinnings. *iHEA 8th World Congress on Health Economics, Toronto*, July 2011.

Sculpher M. Methods for the critical review of cost effectiveness models submitted to reimbursement authorities. *International Society of Pharmacoeconomics and Outcomes Research, Mexico City*, September 2011.

Sculpher M. spoke at a conference entitled "The Asian Symposium on Value for a QALY" held by the *Korean National Evidence-based Healthcare Collaborating Agency* in Seoul, South Korea (25-26 January 2011).

Soares MO, Welton NJ, Peura P, Harrison DA, Shankar Hari M, Rowan KM, Palmer SJ. The value of information of a multicentre randomised controlled trial of intravenous immunoglobulin for sepsis (severe sepsis and septic shock). *ISPOR, 14th annual European congress*. Madrid (November 2011).

Soares MO, Bojke L, Dumville JC, Iglesias C, Cullum N, Claxton K. Using elicitation to quantify experts' beliefs regarding the use of negative pressure wound therapy for severe pressure ulceration. *The 2011 International Nursing Research Conference – Royal College of Nursing of the United Kingdom* (Apr 2011).

Soares MO, McKenna C, Spackman E, Bojke L, Griffin S, Palmer S, Claxton K; Unifying research and reimbursement decisions: examining two case studies. *Economic Evaluation and Health Technology Assessment Seminar Series* (Feb 2011).

Soares MO, Dumville JC, Iglesias C, Bojke L, Cullum N, Claxton K, Methods to assess cost effectiveness and value of further research when data are sparse: negative pressure wound therapy for severe pressure ulcers. *Health Economists' Study Group meeting, York*. (Jan 2011).

Spackman E. The health economics of preventive medicine: Is an ounce of screening worth a pound (1.15 euro)? *EUFEP Krems Austria*, 2011.

Street A. The EuroDRG project: comparing European casemix systems. *Economic and Social Research Institute, Dublin*, 26 January 2011.

Street A. Meeting the Nicholson challenge - An assessment of NHS productivity & efficiency: past, present and future. *School of Health and Related Research, University of Sheffield*, 17 February 2011.

Street A. The future of Payment by Results. *Nuffield Health Summit*, 3 March 2011.

Street A. Comparing and benchmarking hospital performance. *European Health Management Association, Brussels* 16 March 2011.

Street A. Meeting the Nicholson challenge - An assessment of NHS productivity & efficiency: past, present and future. *Health Economics Seminar Series University of Birmingham*, 24 March 2011.

Street A. Private sector provision in a National Health Service: lessons from the English experience. Invited presentation at the *Spanish Health Economics Conference, Palma de Mallorca*, 3-6 May 2011.

Street A. How much should be paid for specialised treatment? *Presentation to Department of Health and Specialist Children's Hospitals, Leeds*, 25 May 2011.

Street A. Hospital funding in Europe. *European Health Management Association in Brussels*, June 2011.

Street A, Measuring NHS productivity. *Royal College of Physicians, London*, 26 July 2011.

Street A. EURO-DRG. *Plenary address at the Patient Classification Systems International Conference, Montreal, Canada*, October 2011.

Street A. The EuroDRG project: comparing European casemix systems. *Patient Classification Systems International Conference, Montreal, Canada, 19-21 October 2011.*

Street A. The ability of DRG systems to explain variations in resource consumption. *EuroDRG conference, Berlin, Germany 17 November 2011.*

Street A, Daidone S. Specialised health care. *Representatives from the Department of Health and specialist Children's Hospitals. Leeds, May 2011.*

Sullivan S.D, Bloudek L, Spackman D.E, Blankenburg M. A Meta-analysis of biomarkers and diagnostic imaging in Alzheimer's disease. *ISPOR Baltimore, 2011.*

van den Berg B. The Dutch system of managed competition. *Global Health Leadership Forum, Barcelona, July 2011.*

Walker S. Value for money and the Quality and Outcomes Framework in primary care in the NHS. *Health Sciences Group Primary Care Seminar, University of Manchester, June 2011.*

Zucchelli E. Do smoking bans have an impact on smoking? A theory and some evidence from bans in England and Scotland. *Department of Economics, University of Brescia, Italy, June 2011.*

Zucchelli E. A model of smoking and smoking bans with evidence from bans in England and Scotland. *Canadian Health Economics Study Group, London, Ontario, Canada, July 2011.*

Zucchelli E. A structural model of lifetime smoking consumption, health and addiction, *iHEA 8th World Congress on Health Economics, Toronto, July 2011.*

Zucchelli E. A dynamic structural model of lifetime smoking, health and addiction. Jones, AM. Rice, N. Zucchelli, E. *iHEA Toronto, July 2011.*

Zucchelli E. A model of smoking and smoking bans with evidence from bans in England and Scotland. *Italian Health Economics Association Conference, Naples, September 2011.*

POSTER PRESENTATIONS

Hinde S, **Spackman E, Claxton K, Sculpher M.** The cost-effectiveness threshold: the results of a novel literature review method. *ISPOR Madrid, Spain 2011.*

WORKSHOPS

Bojke C, Dushieko M, Laudicella M, Santos R, Street A, Verzulli R. Two-day workshop. Analysing patient data using hospital episode statistics, *University of York, 14-15 June 2011.*

Cookson R. was invited to participate in a workshop to develop guidance on priority setting in health, held at the *Brocher Foundation, Geneva, June 2011.*

Jacobs R. The impact of crisis resolution and home treatment teams on psychiatric admissions in England. *iHEA 10th Workshop on Costs and Assessment in Psychiatry – Mental Health Policy and Economics, Venice, March 2011.*

Jacobs R. Laudicella, M. Street, A. Four-day workshop on *An Introduction to Measuring Efficiency in Public Sector Organisations: analytical techniques, York, 8-11 March 2011.*

Rosa Dias P. gave a presentation on Inequality and polarization in health systems at the Workshop on Health Equity at the *University of Louvin-La-Neuve, May 2011.*

Sculpher M. spoke at a workshop on risk sharing arrangements in the reimbursement of pharmaceuticals held by the *Centre for Drug Evaluation in Taipei, Taiwan (27 January 2011).*

Sculpher M, Claxton K, van den Berg B, Griffin S, Spackman E, McKenna C, Soares MO, Walker S. were invited to take part in a series of workshops to update the Guide to the Methods of Technology Appraisal used by the National Institute for Health and Clinical Excellence (NICE).

Spackman E, Griffin S, Fleurence R, Kim E, Model busting: methods and experience in the critical appraisal of cost-effectiveness models submitted to reimbursement agencies. *ISPOR 14th Annual European Congress in Madrid, 8th November 2011. Workshop.*

Spackman E. Fleurence, R. Kim, E. Naci, H. Moving towards value based health care in different constituencies, a presentation on behalf of the ISPOR value based health care special interest group. *ISPOR Madrid 2011. Workshop.*

Street A. Course tutor on Patient Classification Systems. *International Winter School, Dublin 24-28 January 2011.*

Street A. Health policy and politics – role of government and politics in health policy. *Swiss School of Public Health. International doctoral programme in health economics and policy, Lugano, Switzerland, 16-20 May 2011.*

STAFF PROFILES

Research Staff



Maria Goddard

Professor and Director of CHE

Maria is Professor of Health Economics and Director of the Centre. Her current research interests in health policy include the measurement of performance, commissioning, the role of incentives and the regulation and financing of health care systems. Policy experience has been gained through working in the NHS at health authority level and then as an Economic Adviser in the NHS Executive (Department of Health) for three years. At the NHS Executive, she was involved in the economic aspects of purchasing, commissioning, planning and regulation. Department of Health) for three years. At the NHS Executive, she was involved in the economic aspects of purchasing, commissioning, planning and regulation.



Miqdad Asaria

Research Fellow

Miqdad joined the Team for Economic Evaluation and Health Technology Assessment (TEEHTA) in October 2010. He has an academic background in Computer Science and Economics and has previously worked in financial markets, in social policy research and at the Department of Health in the UK.



Chris Bojke

Senior Research Fellow

Chris is a Senior Research Fellow who re-joined CHE in August 2009 to work in the Health Policy team having previously worked in the Primary Care team from 1999-2004. Prior to re-joining CHE, Chris was a senior research consultant and director of Pharmerit Ltd, a private health economics consultancy firm providing NICE reference case standard economic evaluations primarily to the pharmaceutical industry. Recent research interests include the implementation of modern econometric methods on large and complex datasets underpinned by economic theory but with an emphasis on aiding decision making.



Laura Bojke

Senior Research Fellow

Laura graduated in business economics in 1998, went on to complete an MSc in health economics at York and a PhD titled 'Characterizing structural uncertainty within decision analytic models' in 2008, also at York. She joined the economic evaluation team in 1999. Her research interests include the assessment and implications of structural uncertainty within decision analytic models; The use of elicited data within decision analytic models; and the application of methods of evidence synthesis within a decision analytic framework.



Adriana Castelli

Research Fellow

Adriana Castelli is a Research Fellow in the Health Policy Team, which she joined in 2004. She has an MSc and PhD in Economics both awarded by the University of York. Before joining the Health Policy team, Adriana was a Research Fellow (2002) at the Department of Economics, University of York, for the EU project 'Rationing of medical services: an empirical study'. Her research interests include health policy reforms, performance measurement with a particular focus on the development of productivity measures of healthcare goods and services, and analysis of geographical/spatial variation in quality of life and health.



Martin Chalkley

Professor

Martin Chalkley studied economics at the Universities of Southampton and Warwick, from where he obtained his PhD in 1986. From 1985, he was a lecturer at Southampton University and from 1999 was Professor of Economics at the University of Dundee. He is an editor of the *Scottish Journal of Political Economy* and an associate editor of the *Bulletin of Economic Research*.



Karl Claxton

Professor of Economics

Karl Claxton is a Professor in the Department of Economics and Related Studies at the University of York. He is also a Senior Research Fellow in CHE. His research interests encompass the economic evaluation of health care technologies. He has served as a member of the National Institute for Clinical Excellence Appraisal Committee since 1999.



Richard Cookson

Reader

Richard Cookson is a Reader and has research interests in equity in health and health care, the measurement of health and wellbeing, public health, competition, and pay for performance. Most of his research involves applied econometric analysis of large datasets, but he also draws upon methods from cost-effectiveness analysis, behavioural economics and economics and philosophy. Richard is currently serving as a member of the economics sub-group on the World Health Organisation European Region's review of social determinants and the health divide across Europe, led by Sir Michael Marmot.



Silvio Daidone

Research Fellow

Silvio Daidone is a Research Fellow within the Health Policy team. He obtained both a Degree in Economics and an MSc in Economics with a specialization in quantitative methods at Tor Vergata University, Rome, Italy. In 2010 he was

awarded a PhD in Econometrics and Empirical Economics by the same university under the supervision of Prof. Vincenzo Atella.



Michael Drummond

Professor

Mike is Professor of Health Economics and was Director of the Centre from December 1995 to September 2005. His particular field of interest is in the economic evaluation of health care treatments and programmes. He has undertaken evaluations in a wide range of medical fields including care of the elderly, neonatal intensive care, immunisation programmes, services for people with AIDS, eye health care and pharmaceuticals.



Mark Dusheiko

Research Fellow

Mark Dusheiko joined the economics component of NPCRDC at CHE in 1998, initially working on a project with North Yorkshire Health Authority to benchmark GP practice activity prior to the launch of Primary Care Groups (PCGs). Mark

is also involved with projects nested in two of the Primary Care Centre's core themes, namely inequality in primary care provision, and budgets and incentives in PCGs. His main research contribution is in the econometric analysis of health care data sets and surveys.



Rita Faria

Research Fellow

Rita Faria started as a Research Fellow in the Team for Economic Evaluation and Health Technology Assessment (TEEHTA) in October 2010, after completing the MSc in Health Economics at the University of York. Rita holds a Pharmacy degree from

the University of Lisbon (Portugal). Before joining the Centre for Health Economics, Rita had worked as a pharmacist in the UK since 2005.



James Gaughan

Research Fellow

James Gaughan is a research fellow in the Health Policy team. He holds a BSc in Economics and Finance as well as an MSc in Health Economics awarded by the University of York. James' research interests include the causes of cost variation in the provision of health care services and the interactions between social and medical care. He is currently working on the EuroDRG project, funded under the 7th EU Framework Programme. This work considers the role of DRG payment systems across European states.



Hugh Gravelle

Professor of Economics

Hugh Gravelle applies microeconomic analysis to policy problems in health and health care. He has worked on resource allocation formulae, measurement of inequity, responses of health care providers to financial incentives, labour supply of general practitioners, rationing by waiting, productivity measurement, and the relationship between market structure and health care quality.



Susan Griffin

Senior Research Fellow

Susan is a Senior Research Fellow based in the Team for Economic Evaluation and Health Technology Assessment. She joined CHE in 2002 and holds a BSc in Economics, an MSc in Health Economics and a PhD on 'Dealing with uncertainty in the economic evaluation of health care technologies'. In 2008 Susan became a Research Council UK Academic Fellow in Health Economics and Public Health. She also helped to develop a short course on the use of regression analysis for health economic evaluation. Susan currently serves as a member of the National Institute for Health and Clinical Excellence (NICE) Technology Appraisal Committee.



Nils Gutacker

Research Fellow

Nils Gutacker is a Research Fellow in the Health Policy Team. He joined CHE in 2009, after completing a MSc in Health Economics at the University of York. He holds a BSc in Health Care Management from the University of Duisburg-Essen, Germany (2007) and completed parts of his studies at the Universidad Autonoma de Madrid (Spain) and Monash University (Australia). Nils' research focuses on performance measurement of health care providers using patient-level data and the theory of hospital behaviour. In particular, he investigates the use of patient reported outcome measures (PROMs) as a means of measuring the performance of health care providers in improving patient health.

STAFF PROFILES

Research Staff



Sebastian Hinde

Research Fellow

Sebastian Hinde is a Research Fellow in the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). He joined TEEHTA in October 2010 after previously completing a BSc in Economics and an MSc in Health Economics both from the University of York. Sebastian's MSc dissertation was in the cost of physical activity related injuries, supervised at the York Health Economics Consortium.

In 2009 he was enrolled in the Department of Health's internship program.



Rowena Jacobs

Senior Research Fellow

Rowena has been working in the Department of Health funded research programme on health policy since 1999. She has a PhD in Economics from the University of York and a Masters Degree in Economics (cum laude) from the University of Cape Town, South Africa. Rowena was awarded a post-doc fellowship funded by the Department of Health's R&D Programme to examine performance measurement in mental health care services (details <http://www.nccrcd.nhs.uk/pas/>). Her research interests include health policy reforms, incentives and performance measurement with a particular interest in productivity and efficiency measurement.



Andrea Manca

Senior Research Fellow

Andrea is a Senior Research Fellow in the Team for Economic Evaluation and Health Technology Assessment. He is co-editor of the journal *Value in Health* and senior associate editor of *Pharmacoeconomics Italian Research Articles*. Andrea's research interests focus on the application of statistical methods for the analysis of cost-effectiveness and health outcomes data, as well as the use of evidence synthesis techniques for healthcare decision making.



Anne Mason

Research Fellow

Anne has worked at the Centre for Health Economics as a research fellow since 1998, joining the Health Policy Team in 2006. Her principal interest is the role of economic incentives in influencing provider behaviour. She is the ethics lead for CHE and deputy team leader of the Health Policy team.



Claire McKenna

Research Fellow

Claire McKenna joined CHE in 2006 as a Research Fellow in the Team for Economic Evaluation and Health Technology Assessment. She holds a MSci in Mathematics (2001), a PhD in Theoretical Physics (2004), a MPhil in Medical Statistics (2005), all from Queen's University Belfast, and a MSc in Health Economics (2006) from the University of York. Claire's research interests are centred on the economic evaluation of health care technologies. She has specific interests in the use of constrained optimisation methods in economic evaluation, the application of statistical and decision-analytic methods for cost-effectiveness analysis, the use of evidence synthesis techniques and value of information analysis to inform policy decisions in health care



Aurora Ortiz-Nunez

Research Fellow

Aurora Ortiz-Nunez joined CHE in October 2011 as a Research Fellow in the Health, Econometrics and Data Group (HEDG). She was previously working as a Research Associate at the Economics Department at the University of Sheffield. She holds a PhD in Economics from the University of Sheffield and a MSc degree in Public Economics from the University of York. Aurora's interests include applied microeconomics, individuals' risk preferences and health related behaviours, health inequalities, education and labour economics.



Stephen Palmer

Professor

Stephen Palmer is a Professor and Deputy Director of TEEHTA. He has worked in economic evaluation for over 15 years in areas including pharmaceuticals, cardiology, cancer, mental health, diagnostic and screening programmes and policy. He has extensive experience of health economic evaluation, regulatory and reimbursement processes. His principal areas of expertise relate to the methodology and application of decision-analytic modelling and Bayesian approaches to Health Technology Assessment.



Paul Revill

Research Fellow

Paul Revill joined CHE in May 2011 as a Research Fellow in the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). He has previously worked at the Centre for Global Health, Trinity College Dublin, and the Ministry of

Health in Malawi. Paul's research interests revolve around the application of economic evaluation in low income countries, particularly in sub-Saharan Africa. He works on the ARROW and Lab-Lite research projects which evaluate different approaches to HIV treatment delivery for adults and children in Africa. This is a collaboration with the Medical Research Council (MRC) Clinical Trials Unit and partner institutions in Malawi (Dignitas International), Zimbabwe (University of Zimbabwe) and Uganda (MRC UVRI, and the Joint Clinical Research Centre).



Nigel Rice

Professor

Nigel Rice is Professor of Health Economics and Director of the Health, Econometrics and Data Group (HEDG). His research interests focus on the application of quantitative techniques to the analysis of micro-data to inform

health and health care policy through robust empirical evidence.



Gerry Richardson

Senior Research Fellow

Gerry Richardson is a Senior Research Fellow in the Team for Economic Evaluation and Health Technology Assessment. He has a first degree in Economics from the University of Hull and he has a MSc in health economics (1992) from the University of York. Gerry completed his PhD, also from the University of York, in 2007.

His PhD was funded by an award from the Department of Health's R&D Programme and involved an applied and methodological programme of work around the cost-effectiveness of self management interventions. Gerry's research interests include the cost-effectiveness of self-management interventions and establishing the transferability of results of these cost-effectiveness analyses, as well as assessing patients' trade-offs between health and non-health outcomes.



Silvana Robone

Research Fellow

Silvana is a Research Fellow in the Health, Econometrics and Data Group (HEDG). She has a Degree in Economics, a MSc in Economics and a MSc in Economics and Management of Public Utilities all awarded by Bocconi University, Milan, Italy. In 2008 she was awarded a PhD in Economics by the University of York and the University of Bologna. Silvana's research is funded by a grant under the ESRC Large Grant Scheme (RES-060-25-0045). Her theme of research focuses on the performance of health systems and on the responsiveness of health systems to legitimate expectations of patients.



Pedro Rosa Dias

Research Fellow

Pedro is a Research Fellow in the Health Econometrics and Data Group. He holds an MSc in Economics from the London School of Economics, an MSc in Health Economics and a PhD in Economics from the University of York. His research interests centre on the economics of human development, with a special focus on economic inequality and complementary policy interventions in the educational and health care sectors.



Irene Sanchez

Research Fellow

Irene Sanchez joined CHE in October 2011 as a Research Fellow in the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). Irene holds an MA in Economic Theory and Econometrics from the Toulouse School of Economics and an MSc in Economics from the Barcelona Graduate School of Economics. Irene's main interest is applied microeconomics focussing on the impact of peer effects on health economic outcomes, informal care, and health inequality.



Rita Santos

Research Fellow

Rita is a Research Fellow. She has a BSc in Economics from the Faculty of Economics of the University of Coimbra and a MSc in Applied Economics from the same institution. Her research interests are centered on equity in primary care, incentives for quality in primary care, budgets for general practices, geographical distribution of GPs and the application of micro and spatial econometrics to health economics.

STAFF PROFILES

Research Staff



Mark Sculpher

Professor

Mark Sculpher is Professor of Health Economics and is Director of the Programme on Economic Evaluation and Health Technology Assessment. He has been based at York University since 1997. Mark has worked on economic

evaluations of a range of technologies including heart disease and various cancers. He has also contributed to methods in the field, in particular relating to decision analytic modelling and handling uncertainty. Mark was a member of the National Institute for Health and Clinical Excellence (NICE) Technology Appraisal Committee between 2004 and 2008, the NICE Public Health Interventions Advisory Committee between 2006 and 2009 and currently sits on the NICE Diagnostics Advisory Committee.



Marta Soares

Research fellow

Marta Soares joined the Team for Economic Evaluation and Health Technology Assessment (TEEHTA) in 2009. She holds an MSc in Biostatistics awarded by the University of Lisbon in 2008. Between 2007 and 2009, Marta

worked in the Department of Health Sciences (University of York) and previously in a health economics and health outcomes private consultancy company in Portugal (2003-2007). Marta's research interests are related to the development and application of statistical, econometric and decision analysis methods in all components of health technology assessment and value of further research analysis.



Eldon Spackman

Research fellow

Eldon is a Research Fellow based in the Team for Economic Evaluation and Health Technology Assessment. He joined CHE in 2010 and holds a BA (2002) and MA (2006) in Economics from the University of Calgary and a PhD (2009) from

the Pharmaceutical Outcomes and Policy Program at the University of Washington. His research interests include the use of decision-analytic models and the characterization and effect of uncertainty. He has worked in diverse disease areas including: asthma, metabolic syndrome, hepatitis B, epilepsy, psoriasis, rheumatoid arthritis, osteoporosis and ulcerative colitis, with a recent focus in Alzheimer disease.



Andrew Street

Professor

Andrew Street is a Professor of Health Economics and Director of the Health Policy team and Director of the Economics of Social and Health Care Research Unit (ESHCRU), a joint collaboration with the Personal Social

Services Research Unit (PSSRU) at the London School of Economics and the University of Kent. Andrew's research covers measurement of health system productivity, evaluation of activity based funding mechanisms, analysis of organisational efficiency, and critical appraisal of health policy. He is currently working on the 'EuroDRG' project, which is funded under the 7th EU Framework programme.



Bernard van den Berg

Reader

Bernard van den Berg holds a MSc in Social and Institutional Economics from Utrecht University and a PhD in Health Economics from Erasmus University Rotterdam. He has previously been at the VU University Amsterdam, the University of Technology

Sydney and the Universitat Pompeu Fabra Barcelona (visiting position). His recent research includes valuation methods, financial incentives in long-term care/social care, informal care, managed competition and purchasing care.



Rossella Verzulli

Research fellow

Rossella Verzulli is a Research Fellow within the Health Policy team. She holds a degree in Economics and Social Sciences (2005) from Bocconi University (Italy) and a PhD in Economics (2010) from the University of Milan (Italy). Her wider research interests include microeconomics and microeconomic theory applied for the evaluation of health policy.



Simon Walker

Research Fellow

Simon joined the Team for Economic Evaluation and Health Technology Assessment (TEEHTA) in October 2006 after completing the MSc in Health Economics at York. He had previously graduated from Clare College, Cambridge in 2004 with a BA in Economics. Simon's research interests are focused on methods for the economic evaluation of health care. He has particular interests in the economics underlying economic evaluation and in the use of economic evaluation to value for performance schemes.

PhD Students



Padraic Ward

Research Fellow

Padraic Ward is a Research Fellow in the Health Policy Team. Padraic joined the team in October 2008 after completing his MSc in Health Economics at York. He previously graduated with a Bachelor of Business Studies degree specialising in

Economics & Finance from the University of Limerick (2004) and an MSc in Economics (Policy Planning & Evaluation) at the National University of Ireland Galway (2005). His research interests include the areas of hospital financing, efficiency and productivity measurement and all areas of health care policy more generally.



Helen Weatherly

Senior Research Fellow

Helen Weatherly is a member of the Team for Economic Evaluation and Health Technology Assessment. She is also the Deputy Director of the Health Economics for Health Care Professionals Postgraduate Certificate and Diploma

Programmes by Distance Learning. Helen joined CHE at the end of 1997. Initially she held a three-year Fellowship sponsored by Pfizer, spending time on placement at Pfizer New York. Following this, she undertook a stream of economic evaluations of social care programmes under the Department of Health's Costs and Effectiveness of Services for Children in Need initiative <http://www.york.ac.uk/res/cescin/about.htm>. Helen has undertaken additional work for various organisations including the WHO.



Eugenio Zucchelli

Research Fellow

Eugenio is a Research Fellow in the Health, Econometrics and Data Group (HEDG). He was previously a visiting scholar at Monash University, Melbourne. He holds a PhD in Economics and an MSc in Public Economics both awarded by the

University of York. He also holds an MSc in Cooperation and International Economic Integration (Pavia, Italy) and a Laurea degree in Economics (Modena, Italy). His research interests encompass applied microeconomics, health economics and labour economics.

His current research include ex-ante and ex-post policy evaluation methods, impact evaluation of public health interventions, microsimulation applied to health economics and the analysis of the effects of health on labour supply.



Estela Capelas Barbosa

PhD Student

Estela has a BA in Business Administration from the Getulio Vargas Foundation in Sao Paulo, Brazil (2006), and an MA in Economics from the Pontificate Catholic University in Sao Paulo, Brazil (2009), funded by a scholarship from the Brazilian Ministry of Education. She has research experience in economics, with emphasis on social welfare and health economics, having worked for the Human Development Research Group and the joint programme of the Brazilian Ministry of Health and Hospital Samaritano on Acute Myocardial Infarction and Breast Cancer. She is currently working on inequalities in the Brazilian National Health System, supervised by Dr Richard Cookson, and has been awarded a Teaching Scholarship by the University of York.



Laure de Preux

PhD Student

Laure is a PhD student and is affiliated to the Primary Care Research Team. She obtained a Master in Management from the University of Lausanne, Switzerland (2005) and a MSc in Economics, cum laude, from the University of Pompeu

Fabra, Barcelona, Spain (2006). In the summer 2006, she ran a project at the WHO in Geneva on generalized cost-effectiveness analysis. She studied uncertainty in cost-effectiveness, reviewing and analysing the MCLeague tool with the use of Monte Carlo methods. She is working under the supervision of Professor Hugh Gravelle. Laure's research topics are the problems of ex-ante moral hazard related to prevention measures and the determinants of health.



Kathryn De Vecchi

PhD Student

Kathryn is a PhD student at CHE and is affiliated to the Health Policy Team. She is supervised by Dr. Rowena Jacobs, and holds a CHE Studentship for the study of the economics of mental health. Her focus is on the treatment of comorbid

depression in the chronically ill. Kathryn has spent the last nine years working as an economist – in consultancy, government and central banking. Her interest in health economics (and long term conditions in particular) stemmed from consultancy work undertaken for the Department of Health. She has an MSc in Economics from the London School of Economics (2005), and an MA in Economics and Politics from the University of Edinburgh (2002).

STAFF PROFILES

PhD Students



Ijeoma Edoka

PhD Student

Ijeoma is a PhD student at CHE and is affiliated to the Health Econometrics and Data group (HEDG), working on inequality of opportunity in health and on the impact of public health policies on health inequality. She is under

the supervision of Professor Andrew Jones and Professor Nigel Rice. Her initial education was in pharmacy, having obtained a Bachelor of Pharmacy degree from the University of Nigeria, Nsukka (UNN), Nigeria, and an MSc degree in Pharmacology from the University of Oxford. After completing the MSc degree in Health economics from City University, London, she was awarded an ESRC scholarship and joined HEDG in January 2010.



Manuel Espinoza

PhD Student

Manuel Espinoza is a PhD student associated with the Team for Economic Evaluation and Health Technology Assessment (TEEHTA), working under the supervision of Dr. Andrea Manca and Professor Mark Sculpher on

methodological issues relating to the generalisability of cost-effectiveness data from country to country. Manuel joined CHE in 2009 after finishing a MSc in Health Economics at the University of York. He holds a MD degree and a MSc in Epidemiology, both from Pontificia Universidad Católica de Chile, and a MSc in Biostatistics from Universidad de Chile.



Iftekher Hossain

PhD Student

Iftekher is a PhD student at CHE and is affiliated to the Health, Econometrics and Data Group (HEDG). Iftekher joined the Department of Economics, University of Dhaka, Bangladesh after completing the MSc in Health Economics

at the University of York in 2007. He also holds MSS (Masters of Social Science) degree in Economics from the University of Dhaka and MSc in Health Economics from the same University. In October 2008, he was awarded a PhD scholarship by the Department of Economics and Related Studies, University of York, to explore the impacts of socio economic status, inequality of opportunity and government programs on the inequality of maternal and child health in Bangladesh. He is under the supervision of Prof. Andrew Jones and Prof. Nigel Rice.



Daniel Howdon

PhD Student

Daniel is a PhD student at CHE and is affiliated to the Health, Econometrics and Data Group, focusing on inequality of opportunity in health and the impacts of lifestyles and circumstances on individuals' health. He is supervised by

Andrew Jones and Nigel Rice. He holds a BA in Economics and Politics from Durham University and an MSc in Health Economics from the University of York.



James Lomas

PhD Student

James is a PhD student affiliated with the Health, Econometrics and Data Group, supervised by Andrew Jones and Nigel Rice. His current research interests include regression methods for healthcare costs and duration analysis. He holds a BA in Economics from the University of Cambridge and an MSc in Health Economics from the University of York, and has worked at the OECD and the Department of Health (UK) on summer placements.



Ronan Mahon

PhD Student

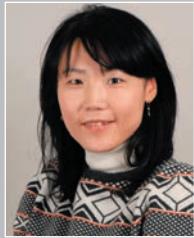
Ronan is a PhD student at CHE and is supervised by Dr. Andrea Manca and his research focuses on assessing and further developing methods for long-term extrapolation of cost-effectiveness estimates to inform resource allocation decisions in healthcare. He holds a BSc in Financial Mathematics and Economics from the University of Ireland, Galway and an MSc in Operational Research from the University of Edinburgh.



Thomas Patton

PhD Student

Thomas is a PhD student at CHE and is supervised by Dr. Andrea Manca and his research focuses on methodological issues in the analysis of health-related quality of life data. Before joining the Centre for Health Economics, Thomas spent two years working at the York Health Economics Consortium. He holds a degree in Economics from Newcastle University (2008) and an Msc in Health Economics from the University of York (2009), and has worked at the National Institute for Health and Clinical Excellence (NICE) on a summer placement.



Yeunsook Rho

PhD Student

Yeunsook is interested in health policy in general but now is focusing on her doctoral research topic which is "equity in health care utilization in South Korea." She received a Master's Degree in Social Work from Washington University in St. Louis, Missouri, and worked at a US social service agency as a program director for three years. After returning to Korea she worked at the Health Insurance Review & Assessment Services (HIRA) as a senior researcher. HIRA is an independent public agency that is responsible for reviewing medical treatment costs and assessing the appropriateness of medical treatment in relation to the national health insurance program. Yeunsook's social work background and the experience at HIRA have made her more aware of equity issues in health policy and motivated her to do further study at the University of York in 2009.



Pedro Saramago Goncalves

PhD Student

Pedro Saramago is a PhD student at CHE associated with the Team for Economic Evaluation and Health Technology Assessment (TEEHTA). Pedro completed the MSc in Health Economics at the University of York in 2008. He holds a degree in Applied Mathematics – Probabilities and Statistics (2003) and a post graduation in Biostatistics (2007), both from the University of Lisbon. As a biostatistician and a health economist, Pedro worked for the Portuguese National Association of Pharmacies (2004) and for a health economics consultancy (2005-2007). In August 2009, he was awarded a Portuguese scholarship to explore the methodological issues relating to the analysis of individual and aggregate level data for cost-effectiveness analysis. Pedro is under the supervision of Dr. Andrea Manca and Dr. Alex Sutton (University of Leicester). His research interests are centered on the economic evaluation of healthcare technologies.



Laetitia Schmitt

PhD Student

Laetitia is a PhD student affiliated to the Economic Evaluation and Health Technology Assessment (TEEHTA) team, under the supervision of Richard Cookson. Her research focuses on the effects of pollution on health and, in particular, on the analysis of the cost effectiveness and distributional analysis of policies aiming at tackling pollution. Before joining CHE in October 2011, Laetitia graduated from Grenoble Ecole de Management (Graduate Business School) in France and majored in finance after a year of academic exchange at Warwick Business School. She then worked for two years in the asset management industry in London, after which she decided to re-orient her career towards environmental and health economics, for which she had developed a strong interest. She completed her MSc in Environmental Economics at the University of York in 2011.



Ranjeeta Thomas

PhD Student

Ranjeeta is a PhD candidate at CHE and is affiliated to the Health, Econometrics and Data Group (HEDG). She has an MSc in Health Economics from the University of York and a Master of Social Science (Economics) degree from the National University of Singapore. Ranjeeta is under the supervision of Prof. Andrew Jones and Prof. Nigel Rice and focuses on ex-ante and ex-post impact evaluation of health and health related development programs. Her main interest is program evaluation covering both methodological aspects and its role in aid effectiveness.



Victor Zarate

PhD Student

Victor Zarate is a PhD student at CHE associated to the Health Policy Team. He has a MD degree awarded by the Universidad de Chile, a MSc in Health Informatics from City University and a MSc in Health Management from Imperial College London. He has recently finished a 3 years medical specialization program in Public Health and also a MSc in Epidemiology, both from the Universidad Católica de Chile. In December 2006 he was awarded the "Alan Williams Fellowship" to study the state of health status measurement in Latin America and the Hispanic valuation of the EQ-5D health states in the U.S.

STAFF PROFILES

Administrative and Support Staff



Kerry Atkinson

Secretary

Kerry Atkinson is a secretary providing administrative support for the York Expert Workshops, HEDG, and the Centre.



Vanessa King

Secretary

Vanessa (Ness) King is secretary to the Director of the Centre, Professor Maria Goddard and assists the Centre Manager, Trish Smith, with some of CHE's administrative responsibilities. Vanessa also coordinates the York Expert Workshops in the Socio Economic Evaluation of Medicines.

Vanessa has worked at the University of York since July 1985.



Linda Baillie

Receptionist/Secretary

Linda is the Centre Receptionist and Secretary to Professor Mark Sculpher and the TEEHTA team. Linda has recently become the Course Administrator for the Advanced Modelling Methods Course and the Stata and Regression Methods for Health Economic Evaluation Courses.



Gillian Robinson

Secretary

Gillian is secretary to professors Andrew Street, Michael Drummond and Hugh Gravelle, and the Health Policy team. In addition, Gillian organises the Measuring Efficiency Workshop, the Analysing Patient Data Workshop and manages the

CHE library. Gillian has worked at the University of York since 2001, in SATSU and for the past few years in CHE.



Gill Forder

Publications Administrator

Gill joined CHE in March 2000 and provides administrative support in the publications office. This includes formatting research papers and the design and publication of both internal and external newsletters and other research outputs. Gill is also responsible for maintaining and updating the CHE website.



Frances Sharp

Publications Manager

Frances has been in CHE since 1985 and is responsible for advising on and overseeing the publication of CHE's research in the most effective way. She is also the Editorial Assistant for *Health Economics*, now in its 21st year.



John Galloway

Computer Support Officer

John is the Computer Support Officer for CHE and CRD. John worked for many years in the University of York Computing Service before joining the Centre in May 1995.



Trish Smith

Centre Manager

Trish has been CHE's Manager since 2003. She is responsible for management and co-ordination of a wide range of administrative services and functions across the Centre. This includes supporting the Director and Executive Committee, personnel work, recruitment and induction, advising staff on policies and procedures, workshops and events, accommodation and facilities, health and safety, and managing a team of staff to ensure research activities are supported efficiently and effectively.



Liz Ingham

Finance and Research Support Officer

Liz is CHE's finance and research support officer, assisting with the day to day finances for the Centre. She also deals with the finances for all TEEHTA (Team for Economic Evaluation and Health Technology Assessment) research projects/grants. After completing a Higher Diploma in Administrative and Secretarial Studies at York College, Liz started working at CHE in 2001. Liz completed the Technician Level AAT (Association of Accounting Technicians) qualification in June 2010 and became a full member of the AAT in Sept 2010.



Vanessa Wood

Finance and Research Support Co-ordinator

Vanessa is CHE's Finance and Research Support Co-ordinator preparing and monitoring budgets, forecasts, and financial reports for the Centre; reviewing and improving all financial systems and controls as necessary; and is a point of contact with the University's finance office and external sponsors.

HONORARY FELLOWS AND VISITORS

Professors, fellows and visitors

HONORARY PROFESSORS

- **Roy Carr-Hill**
1 September 2011 – 31 August 2014

- **Nancy Devlin**
Office of Health Economics, London
August 2009 – August 2012

- **Paul Kind**
February 2011 – 31 January 2014

- **Peter C Smith**
Imperial College, London
January 2011 – January 2014

HONORARY VISITING FELLOWS

- **David Epstein**
February 2011 – 31 January 2014

- **Neil Hawkins**
June 2009 – June 2012

- **Christopher Henshall**
August 2008 – July 2013

- **Jon Sussex**
Office of Health Economics, London
July 2011 – June 2014

VISITORS TO CHE DURING 2011

- **Belen Corbacho**
Universidad Pablo de Olavide, Seville
September 2010 – December 2011

- **Emeline Rococo**
University of Paris-Dauphine
December 2010 – March 2011

- **Toni Ashton**
University of Auckland
March 2011 – May 2011

- **Anirban Basu**
University of Washington
23-27 May 2011

- **Jose Luis Pinto Prades**
Universidad Pablo de Olavide, Seville
July 2011 – September 2011

- **Tony Scott**
University of Melbourne, Australia
12-15 September 2011

- **France Portrait**
VU University in Amsterdam
10-14 October 2011

- **Liina Tynkennen**
Finland
24-26 October 2011

- **Rodrigo Rodriguez**
Pontificia Universidad Catolica de Chile
26 October – 20 November 2011

- **Marie-Jeanne Aarts**
Maastricht University
1-23 December 2011

HONORARY FELLOWS AND VISITORS

Professors, fellows and visitors

ALAN WILLIAMS FELLOWS

The Alan Williams Fellowships scheme was first launched in 2006 as a tribute to Professor Alan Williams and to enable health economists from anywhere in the world to spend time at the Centre for Health Economics in York, UK.

Mid-career researchers wishing to visit CHE are invited to apply and the fellowship award of £5,000 is intended as a contribution towards living and travel expenses associated with the visit.

Cinzia di Novi, a Research Fellow from the University del Piemonte Orientale, Italy, visited CHE from 1 November 2011 – April 2012 and worked on a research project during the visit, hosted by Rowena Jacobs, focussing on flexible working conditions, fixed-term contracts and their influence on employee psychological well-being.

PAST FELLOWS:

- **Rena Conti**
May-June 2009

- **Anirban Basu**
April-June 2008

- **Ismo Linnosmaa**
Feb-July 2008

- **Matteo Galizzi**
2007 & 2008

- **Giuliana de Luca**
August-December 2007

- **Aleksandra Torbica**
June-September 2007

- **Victor Zarate**
January-April 2007

PUBLICATIONS RESULTING FROM THE FELLOWSHIPS:

Basu A. Economics of individualization in comparative effectiveness research and a basis for a patient-centered health care. *Journal of Health Economics* 2011;30(3):549-559.

Torbica A, Fattore G. Understanding the impact of economic evidence on clinical decision making: a discrete choice experiment in cardiology. *Social Science & Medicine* 2010;70(10):1536-43.

Zarate V, Kind P, Chuang L.H. Hispanic Valuation of the EQ-5D Health States: A Social Value Set for Latin Americans. *Value in Health* 2008;11(7):1170-1177.

2011: CHE Facts & Figures

10 visitors



THE UNIVERSITY *of* York

Centre for Health Economics
University of York
YO10 5DD

Tel: +44 (0)1904 321401

Fax: +44 (0)1904 321402

Email: che-web@york.ac.uk

Web: www.york.ac.uk/che