



Delivery of Care programme: An overview

HSRU has two programmes of research, Health Care Assessment and Delivery of Care, through which it delivers high quality research relevant to the provision of health care. The last few years have seen substantial changes and development in the Delivery of Care programme. Research in this programme focuses upon three themes: health care policy and organisation, health care professionals and health care users. Substantial external funding has been secured to support all three research areas and key achievements are highlighted below.

Four initiatives relating to health care policy and organisation have been funded 'Involving the public in service development criteria and methods for evaluating Health Boards activities' (£60,000); 'Understanding the dynamics of organisational culture change: creating safe places for patients and staff' (£303,000); 'The Impact of changing workforce patterns in UK paediatric intensive care services on staff practice and patient outcomes' (£248,674); and 'Performance assessment and wicked issues: the case of health inequalities' (£225,881). The first two are described later in the newsletter.

The breadth and depth of work on health professional behaviour change has increased

substantially in the last twelve months through collaboration with the University's Health Psychology group. The generality of theoretical models, which have been shown to be good predictors of health behaviour, is being explored by testing their ability to predict the behaviour of health professionals. Current projects focus on diverse health care professionals including primary care doctors and dentists, pharmacy staff, mental health professionals, and occupational therapists. Methodological insights into the design of studies to evaluate complex interventions is another important area of research.

Research questions in respect of health care users range from micro issues to do with understanding patients' perceptions of care through to structural questions about how services can be designed to reflect public preferences or promote patient involvement in their care. Completed projects include doctoral research theses on parental internet communication in relation to MMR, and on patient experiences of participating in a clinical trial – both are described in this newsletter.

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Staff profile - Jill Francis



Jill Francis completed her PhD at the University of Melbourne and was a lecturer in psychology and quantitative research methods at La Trobe University (Australia), before moving to the UK in 2002. She worked at the Centre for Health Services Research in Newcastle, where she joined the Clinical Effectiveness group in 2003. It then took just a small skip further north for her to join the HSRU in October 2004, where

she is a Senior Research Fellow in the Health Psychology group. Pursuing the themes of theory, measurement and interventions in professional behaviour change, she collaborates with groups in Aberdeen, Newcastle, Ottawa and Melbourne.

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Communication about the MMR vaccine: An analysis of newspaper coverage and an Internet discussion forum

The possibility of a link between the MMR vaccine and autism in children has been the subject of intense media attention since it was first raised in 1998. Current scientific evidence does not support a causal link between MMR and autism, and the Department of Health continues to promote MMR vaccination. However, uptake has dropped in many parts of the UK and many parents remain concerned about the safety of the vaccine.

The aim of this study was to explore how issues relating to MMR were reported in UK newspapers and discussed among parents on an Internet discussion forum over a three-year period. The study involved quantitative and qualitative analyses of 692 newspaper articles and 617 Internet messages.

Findings from this study help to explain some limitations of the way the government has dealt with public concerns over MMR. Through media coverage, parents have been exposed to differing 'expert' views and information about research suggesting there is a possible link between MMR and health problems. However, government agencies and spokespersons have not discussed this 'possible link' research in any detail (if at all). The study findings have broader relevance than just for MMR, and offer insights into how to improve government health advice in general. They suggest that if the government is strongly promoting a particular health protective measure, any arguments against the measure may need to be tackled head on and explicitly discussed and challenged.

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PRocess modelling in ImpleMEntation research (PR1ME)

Biomedical and health services research produces findings that would improve patient care but these are not routinely implemented in practice. Although implementation interventions can increase translation of knowledge into practice, systematic reviews have not identified which intervention is most likely to be most effective (or cost effective). As clinical practice is a form of human behaviour, theories of human behaviour may provide a basis for developing a scientific rationale for choosing interventions.

The MRC funded PR1ME project was a collaboration between researchers in Aberdeen, Newcastle, Dundee and Ottawa. It aimed to: amplify and populate behavioural theories with evidence from studies of health professionals; use this as a basis for developing predictive questionnaires using replicable methods; identify which theoretical constructs predict practice; thereby identify target constructs for interventions.

Postal questionnaires about five behaviours (referral for lumbar spine X-ray; prescribing antibiotics for upper respiratory tract infection; use of oral radiographs; application of fissure sealants; restoration of caries in children), were

conducted to measure six theoretical approaches (Theory of Planned Behaviour; Social Cognitive Theory; Illness Representations; Operant Conditioning; Implementation Intention; Precaution Adoption Process). 2200 GPs and 1656 dentists were surveyed. Outcome measures were: data on performance collected from routine sources; practitioners' self-reported intentions; and their response to clinical scenarios. Different constructs were predictive for different behaviours. Theories were more successful in predicting what practitioners intend to do and decide in clinical scenarios, than predicting actual clinical activity.

PR1ME advanced behavioural theory by developing methods for operationalising theories and identifying overlap between theoretical constructs. There are few studies that: a) use theories to predict behaviour rather than self-report and b) use multiple theories. The PR1ME dataset is a major resource in developing this field and corresponds to the first stage of the MRC Complex Interventions Framework.

For more information contact Marie Johnston
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Factors affecting patient participation in a randomised controlled trial: A qualitative investigation

Trialists often find it difficult to recruit and retain participants in randomised controlled trials, but relatively little is known about patients' perspectives on recruitment. In this project, qualitative methods were used to explore patients' experiences of trial recruitment and participation. Qualitative methods (non-participant observation of trial recruitment consultations and in-depth interviews) were used with patients invited to participate in a UK multi-centre trial comparing surgery or continued medication for gastro-oesophageal reflux disease. Purposive sampling was used to include patients with a range of characteristics from two recruitment centres.

A number of factors were found to influence patients' decisions to attend the recruitment consultation and participate in the trial. Although most expressed a desire to

help others, the concept of benefiting personally from participating in the trial emerged as an important finding. Some people saw trial participation as an opportunity to see a specialist, to find out more about their disease, and perhaps to receive better care. Despite agreeing to be randomised it was apparent that some patients harboured a preference for one or the other of the treatments. This has potential implications for the interpretation of trial findings based on patients' assessments of their condition. Greater understanding of the range of factors patients consider when deciding whether or not to participate in a trial could usefully inform the design of recruitment communications and facilitate interpretation of trial findings.

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Major study of NHS culture, its staff and patient safety

Professor Lorna McKee is leading research on a major £300,000 study to better understand the workings of the NHS in relation to staff well being and patient safety, in collaboration with colleagues at the Universities of Dundee and Aston and at the Bromorgannwg Trust, Wales. The study has been funded for three years by the NHS Service Delivery and Organisation R&D Programme.

This programme of research will build on the expertise of a multi-disciplinary team of leading researchers to focus analysis of organisational change, culture, climate and performance on two salient domains for UK healthcare – patient safety and staff well-being. This is justified by their high public and policy relevance, with high levels of adverse events, growing rates of hospital infection, and established links between mortality and employee management and between styles of leadership, professional cultures, staff morale, team climate and performance.

This multidisciplinary, multi-method research aims to explore links between organisational culture change and domains of patient safety and staff well-being; domains often researched in isolation. Qualitative and quantitative perspectives are mixed to investigate complex interactions and organisational factors influencing high and low performance in these domains.

The project aims are:

- To extend the evidence base on organisational culture and performance, using the Healthcare Commission NHS Staff Survey database to document variation over time, extend data and measurement, and develop depth cases.



From left to right: *Back row - Martyn Jones, Jeremy Dawson, Derek Johnston, Alexandra Gordon, Adrian Grant, Stephen Yule. Front row - Sharon McCann, Lorna McKee, Christine Miles, Rhona Flin.*

- To research key measurement issues: identifying high and low performance in domains of patient safety and staff well-being, tracking impacts of policy change and linking culture to care across settings and professional groups.
- To identify policy and environmental change and internal context issues, studying how change-receptive and change-intransigence contexts link to culture and performance in, for example leadership and management practices.
- To pilot and assess interventions to improve patient safety and staff well-being.

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The ERUPT Study (Evidence from Research Used in Preventive Treatment)

In dentistry, preventive fissure sealants (PFS) to treat children at high caries risk remain under-utilised, despite strong evidence of efficacy. Improved prevention could help reduce oral health inequalities, as there is a strong and persistent caries-deprivation link. The ERUPT (Evidence from Research Used in Preventive Treatment) study aimed to evaluate the impact of two strategies aimed at enhancing implementation of evidence-based caries preventive treatment for children.



The study was a cluster randomised 2x2 factorial trial in dental practices in Scotland: a 'fee' group were offered a fee for each PFS; an 'education' group were invited to a workshop on evidence based practice; the 'both' group were offered a fee plus a workshop; and the control group were offered neither. Impact of interventions was judged by the proportion of 12-14 year olds receiving PFS on recently erupted second permanent molars (7s), based on a sample 25 children seen by each general dental practitioner (GDP).

Recruitment, retention and uptake of interventions were good: 53% (149/284) of GDPs were recruited in 2003; 89% (133) returned data on 2,833 children in 2005. Fifty five of 73

GDPs (73%) attended a workshop, and 48 (63%) of 76 claimed for PFS. Taking account of baseline differences, 10% more children of fee group GDPs received a PFS by the end of the study. One third of children seen by GDPs offered a fee had 7s treated with

PFS. Economic analysis showed that the fee intervention was the most cost effective, and that replication of the results Scotland-wide would cost around £0.9m. We did not find any statistically significant differences in PFS treatment relating to the education intervention, or that either intervention improved the targeting of PFS to those at high risk.

The study indicates that if PFS attracted a fee for item of service, significant numbers of Scottish children would benefit. While the educational intervention did not encourage more PFS placement, many GDPs perceived benefits in using evidence more generally. Changing the fee structure to promote preventive care is likely to change clinical behaviour significantly, and impact on future restorative treatment patterns for children (and related costs).

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Involving the public in NHS service planning: Criteria and methods for evaluating NHS boards' activity

It is statutory for NHS Boards to 'directly' involve patients and the public at all levels of their work: this includes ongoing health service planning as well as major service redesign. The Scottish Health Council, a new central body established in April 2005, carries out the assessment of public involvement. This project has been funded by the Scottish Executive to inform the development of criteria and methods for evaluating public involvement efforts by NHS Boards.

There is little dispute about the importance of involving the public in health service planning and change: it allows citizens to exercise their political rights and influence policy decisions that affect them and their communities. However, there are different levels of understanding of what public involvement means, the purpose it serves, and how it is implemented. Moreover, policy-makers have limited resources and must decide who are the most appropriate people to involve, when and how to involve them, and ultimately how much to invest in efforts to secure public involvement as opposed to other activities and services.

This study comprised a review of the literature for different criteria and methods in assessing public involvement activities; a series of stakeholder interviews; and a detailed study of a specific public involvement initiative. The project team is in the process of carrying out a rigorous conceptual and methodological appraisal of the possible criteria and methods identified from the literature, and summarising their findings from stakeholder interviews.

The findings to date emphasise the need to recognise the diverse nature of public involvement, which may require assessment to be employed flexibly at each individual NHS Board level. What may be more important, however, is the need to demonstrate cultural change that indicates willingness by organisations to engage with patients and the public in an 'intelligent' fashion. Central to this discussion then may be tackling issues surrounding power sharing, trust and responsibility, as well as 'effective' negotiation.

For more information contact Silvia Anton
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Recent Unit publications

Azuara-Blanco A, Burr J. The rising cost of glaucoma drugs. *Br J Ophthalmol* 2005;90:130-131.

Boldero J, Francis J. Emotional responses to self-evaluation: the influences of situation and self-system characteristics. In: Clark A, editor. *Psychology of moods*. Hauppauge NY: Nova Science; 2005. p.63-84.

Entwistle VA, Williams B, Skea Z, MacLennan GS, Bhattacharya S. Which surgical decisions should patients participate in and how? Reflections on woman's recollections of discussions about variants of hysterectomy. *Soc Sci Med* 2006;62:499-509.

Glazener CM, Herbison GP, MacArthur C, Lancashire RJ, McGee M, Grant A, Wilson PD. New postnatal urinary incontinence: obstetric and other risk factors in primiparae. *Br J Obstet Gynaecol* 2006;113:208-217.

Keating JF, Grant AM, Masson M, Scott NW, Forbes J. Displaced intracapsular hip fractures in fit older people: A randomised comparison of reduction and fixation, bipolar hemiarthroplasty and total hip arthroplasty. *Health Technol Assess* 2005;9(41).

MacArthur C, Glazener CM, Lancashire RJ, Herbison P, Wilson D, Grant AM. Faecal incontinence and mode of first and subsequent delivery: a 6 year longitudinal study. *Br J Obstet Gynaecol* 2005;112:1075-1082.

Milne AC, Avenell A, Potter J. Meta-analysis: protein and energy supplementation in older people. *Ann Intern Med* 2006;144:37-48.

Nabi G, Yong SM, Ong E, McPherson G, Grant AM, N'Dow J. Is orthotopic bladder replacement the new gold standard? Evidence from a systematic review. *J Urol* 2005;174:21-28.

Staff news

We welcome Alexandra Greene to the Unit as she joins the Delivery of Care programme as a Senior Research Fellow. We also welcome Claire Cochran and Shirley Jia who have been appointed as MAPS Trial Manger and a systematic reviewer respectively.

We offer our best wishes to Kirsty Gordon in her new post. Congratulations to Pauline Garden, Graeme MacLennan, Sharon McCann, Kirsty McCormack and Clare Robertson who have taken up new positions within the Unit.