Health Services Research Unit

Newsletter Autumn 2012

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SuDDICU study reports findings

Hospital acquired infections are a major cause of morbidity and mortality and critically ill patients in Intensive Care Units (ICUs) are particularly susceptible. Selective decontamination of the digestive tract (SDD) may reduce infections and improve mortality but has not been widely adopted nationally or internationally. SDD involves applying non-absorbable antibiotics to the mouth and stomach and a short course of antibiotics into the vein. The project objectives were to identify: reasons for low SDD uptake; barriers to SDD implementation; and feasibility and acceptability of further SDD research.

We used a multi-method, four-stage approach:

1. Case studies of two ICUs where SDD is delivered, including observations of SDD delivery, interviews with staff and analysis of ICU documents.
2. A three-round Delphi study with four key professional stakeholder groups (ICU physicians, clinical microbiologists, hospital pharmacists and ICU nurse managers/clinical leads) based on a theoretical framework of behaviour change.
3. A nationwide online survey of ICU physicians and clinical microbiologists with ICU responsibilities.
4. Semi-structured telephone interviews with international clinical trialists to identify challenges for further research.

The two case studies identified complex clinical and behavioural components of SDD, involving multiple staff. However, provision of SDD was simple from the perspective of individuals and delivery was regarded as straightforward. The Delphi study identified diverse views, specific barriers to SDD implementation, and uncertainty about the SDD evidence base. The national survey identified uncertainty about SDD's effect on: antimicrobial resistance, infection rates, mortality and cost-effectiveness. Most participants indicated that they would participate in further SDD research. The trialist interviews focused largely on the substantial challenges of further effectiveness trials.

In conclusion, there was considerable continuing uncertainty about possible benefits and harms of SDD. Further large-scale SDD effectiveness trials are likely to be required to address these uncertainties. Participants were generally willing to participate in future research, but support was not unanimous.

The results of the study will be published in full as part of the NIHR Health Technology Assessment Series.

For further information, contact Eilidh Duncan, email e.duncan@abdn.ac.uk, telephone 01224 438093.

Improving the Quality of Dentistry: IQuaD

Improving the Quality of Dentistry

Periodontal disease is the most common oral disease affecting adults. Effective self-care (tooth brushing and interdental aids) for plaque control and removal of risk factors such as calculus, by periodontal instrumentation (PI), commonly known as a "scale and polish", are considered necessary to prevent and treat periodontal disease. Despite evidence of an association between sustained good oral hygiene and a low incidence of periodontal disease, there is a lack of reliable evidence to inform clinicians of the relative effectiveness of different types of Oral Hygiene Advice (OHA).

This multi-centre trial funded by the National Institute for Health Research Health Technology Assessment Programme is a collaborative study led jointly by HSRU and the Dental Health Services Research Unit, University of Dundee. The study will compare the effectiveness and cost-effectiveness of personalised OHA or PI at different time intervals (6 monthly, 12 monthly or no PI) or their combination to routine OHA, for improving periodontal health in dentate adults attending general dental practices across Scotland and the North East of England.

Participating dental practices will be cluster randomised to provide routine care (current practice) or theory-based personalised (to the needs of the patient) OHA. A total of 1860 eligible patients will be randomised to 6 monthly, 12 monthly or no PI (310 to each group within each cluster of routine or personalised OHA randomised practices). Clinical outcomes will be measured at baseline and at 3 years' follow-up by trained outcome-assessors. Participants will also be followed-up by postal questionnaires sent annually.

Recruitment to the study began in March 2012.

For further information, contact Anne Duncan, email anne.duncan@abdn.ac.uk, telephone 01224 438134.

WISE OWLS

An investigation of Ways to Intervene and Support Engagement of Older adults Weight Loss Study (WISE OWLS)

There is a significant body of work looking at weight loss in adults below the age of 65 years but there has been very little research into planned weight loss in older adults. In particular, this group differs from younger adults due to the accumulation of functional impairments and comorbid diseases. In addition, their knowledge, life goals, attitudes to diet and physical activity may all be different to those of younger people and it cannot be assumed that weight loss programmes that work in younger adults will work in older adults. Therefore it is important to develop an evidence-based diet and physical activity intervention which is targeted to improve clinical- and patient-orientated health outcomes for obese older adults.

The study aims to answer the following research questions:

1. How do older adults who have experienced weight problems describe the barriers and facilitators to changing lifestyle factors (diet and physical activity) aimed at achieving and or maintaining weight loss? How do these descriptions reflect the barriers and facilitators reported in the literature?
2. What information, help or support do older adults with obesity: a) currently receive and b) need concerning change in diet, eating behaviours and/or participation in physical activity? From whom, how, how often and where?
3. What are older adults' views about participating in a RCT for weight management through dietary and/or physical activity changes?

We will extend our existing literature review of obesity interventions in older adults and will include evidence on barriers and facilitators for behaviour changes pertinent to weight loss in older people. This will be followed by a series of in-depth one-to-one interviews to seek older adults' experiences and perspectives. We will also explore participants' views around obesity and older age and whether they view weight change as necessary or possible at this stage of life.

After the first interviews, the research team will discuss the emerging analysis and combine this with the findings of the evidence from the literature review to construct vignettes describing putative interventions and assessments which seem most likely to be acceptable, feasible and effective. The vignettes form the basis of the second interview.

At the end of this study we will have designed an intervention package for piloting in older obese adults. The study started in October 2012.

For further information, please contact Kirsty Kiezebrink, email k.kiezebrink@abdn.ac.uk, telephone 01224 438163.

Staff profile: Moira Cruickshank

Moira Cruickshank joined the Unit in 2007 as a PhD student. Moira completed her BSc Psychology (2006) and MRes Psychology (2007) at the University as a mature student, following a career in the Metropolitan Police Service. She then gained PhD funding from UCAN, a local charity which aims to support people with urological cancer and their families and raise awareness of urological cancers. Her PhD research used two theories of behaviour to explore the cognitive underpinnings and emotional outcomes of treatment decision-making in men diagnosed with prostate cancer and also explored coping in people diagnosed with urological cancer. Moira completed her PhD in 2011. She is currently employed as a Research Fellow on the technology assessment review team and has recently been involved in a systematic review comparing the accuracy of various technologies in diagnosing prostate cancer. Her research interests include systematic review methodology and theories of health-related behaviour.

Upcoming conference

HSRU is co-hosting the international conference -

Improving Quality in Health Care: Translating Evidence into Practice

This one day conference will be held on

7th November 2012

at

John McIntyre Conference Centre, Edinburgh

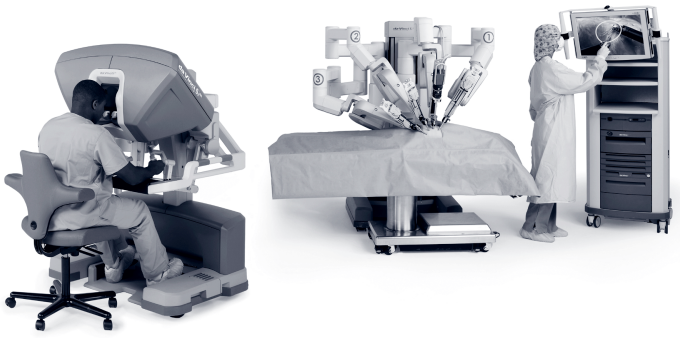
and focuses on approaches to the translation of evidence into practice. The conference includes parallel sessions hosted by developers, implementers and evaluators of clinical guidelines. These sessions are a great opportunity for delegates to listen to leaders in their field present, focus on and discuss: knowledge synthesis, knowledge translation and knowledge translation research. This conference will be relevant to researchers, practitioners and decision-makers engaged in the development and translation of evidence based knowledge.

For further information & registration visit
http://www.sdpbrn.org.uk/index.aspx?o=3113

Confirmed speakers include Mr Michael Matheson MSP, Professor Jeremy Grimshaw, Professor Michel Wensing and Professor Martin Eccles.

Robotic surgery for the removal of the prostate in men with localised prostate cancer

In the UK, approximately 35,000 new cases of prostate cancer are reported each year. Men diagnosed with prostate cancer have different treatment options, dependent upon severity of disease. One option is complete removal of the prostate (radical prostatectomy), which approximately 5,000 men in the UK undergo each year. A keyhole surgical technique of radical prostatectomy either by standard laparoscopy or with the aid of robotic technology does appear to offer advantages in terms of reduced blood loss and quicker return to activity over the traditional open approach. Advocates of the robotic system claim greater precision in dissection and more rapid gaining of surgeon competence compared with the laparoscopic approach, but the robotic system is costly. Our study sought to determine the relative clinical effectiveness and cost-effectiveness of robotic prostatectomy compared to laparoscopic prostatectomy in the treatment of localised prostate cancer within the UK NHS with the aim of helping to inform decisions regarding the commissioning and use of robotic and laparoscopic surgery for men with localised prostate cancer.



Da Vinci® surgical robot system showing from left to right; surgeon at remote console, 3-armed (labelled 1-3) telemanipulator for docking to patient, and assistant adjusting room monitor. ©2011 Intuitive Surgical, Inc. Reproduced with permission from ©2010 Intuitive Surgical, Inc

We conducted a systematic review of men with localised prostate cancer undergoing robotic or laparoscopic prostatectomy compared against the other procedure or against open prostatectomy published after January 1995. Data were included from 19,064 patients across one RCT and 57 non-randomised comparative studies. Outcomes were generally better for robotic than laparoscopic surgery for major adverse events such as blood transfusion and organ injury rates, and for rate of failure to remove the cancer (positive margin). The predicted probability of a positive margin was 17.6% following robotic prostatectomy compared with 23.6% for the standard laparoscopic approach. There was no evidence of differences in cancer-related, patient-driven or dysfunction outcomes. The main driver in the economic evaluation was the predicted difference in positive margin rate.

The results of the economic evaluation suggested that if the true difference in positive margins is equivalent to the rate observed in the meta-analysis, robotic radical prostatectomy was on average associated with an incremental cost per QALY that is less than threshold values typically adopted by the NHS (£30,000) and becomes further reduced when the surgical capacity is high (at least 100-150 procedures per year). These results are subject to a considerable amount of uncertainty, however, due to limited quantity and quality of the data. Further research on long-term cancer-related outcomes and dysfunction is required.

For further information, contact Clare Robertson, email c.robertson@abdn.ac.uk, telephone 01224 438086.

Tackling Male Obesity:

the ROMEO (Review Of MEn and Obesity) study

Obesity increases the risk of many serious illnesses, such as coronary heart disease, diabetes and osteoarthritis. Consequently, weight-related problems could cost the NHS £6.4 billion per year by 2015.

In the UK, many more men than women are overweight or obese and this gender difference is projected to continue. Male obesity is particularly problematic in that men are less likely than women to realise they have a weight problem and are also less likely to come forward for help with weight loss. Thus, at present little is known about the most effective ways to engage obese men with services in order to manage weight loss successfully.

The National Institute for Health Research (NIHR) Health Technology Assessment (HTA) programme has funded the ROMEO (Review Of MEn and Obesity) study, which is led by HSRU. The study aims to systematically review evidence-based management strategies for treating obesity in men, and how to engage men in these obesity services. The overarching objective is to integrate the quantitative and qualitative evidence base for the management and engagement of men with obesity in weight loss services.

The study will conduct five concurrent quantitative and qualitative systematic reviews using pragmatic mixed methods evidence synthesis to examine 'what works' for men in terms of weight management, but also for which men, and under what circumstances. Of particular interest to the study are the types of interventions that help men lose weight in the long term, keep that weight off and decrease their risk of serious diseases, such as diabetes. Furthermore, given that research indicates that some men feel inhibited about consulting their GP or primary care services in general, the study will also consider evidence about where and how weight loss services should be delivered to make them more attractive to men.

The ROMEO study will identify the existing evidence with which to develop guidance for the NHS on the subject of men and obesity management. The individual reviews and integrated report will also provide guidance on whether further research is needed to develop better methods for engaging and retaining men in obesity interventions.

The study is currently ongoing and is due to finish in January 2013.

For further information, contact Daryll Archibald, email dga7@abdn.ac.uk, telephone 01224 438088.

BIBS: Benefits of Incentives for Breastfeeding and Smoking cessation in pregnancy. A platform study for a trial

The aim of the BIBS study is to try and find out which incentives (financial or non-financial), if any, are most likely to help women to stop smoking in pregnancy (and not restart) and to breastfeed their babies until 6 months, to benefit the health of both mothers and babies. The study is funded by the NIHR HTA programme and is led by HSRU, with collaborators in the Health Economics Research Unit and the Universities of Stirling, Central Lancashire, Glasgow and Newcastle. Mother and baby groups in Aberdeen and Blackpool are working with the researchers to ensure families contribute to all stages of this study.

The first stage of the study is to identify and systematically review research studies and reports about the different types of incentives that have been used to explore whether they work, how much incentive is needed, the timing and how best to deliver it. A classification and summary of different types and combinations of incentive will be produced, which will include details on how they work and how they fit with all the other pros and cons or motivating factors for breastfeeding and smoking. This will produce a short-list of the most promising incentives.

The next stage is to explore how acceptable this short-list is and decide which incentive is the most likely to work in a future research trial. To do this, we will interview women, their partners, health professionals and experts in breastfeeding and smoking. We will seek views on different examples of incentives, how they could be improved and factors that might prevent them working or make them more likely to work. We will choose one or two incentives and will send a web survey by email to doctors, midwives, health visitors; government departments and research funding bodies; members of research ethics committees and the general public who would probably pay for incentives through taxation. Finally, we will use a type of economic questionnaire called a Discrete Choice Experiment (DCE) that asks women (or others) about the likelihood of the incentive working for them to help finalise the design of a future trial.

For further information, please contact Heather Morgan, email h.morgan@abdn.ac.uk, telephone 01224 438187.

Recent publications

(1) Avenell A, MacLennan GS, Jenkinson DJ, McPherson GC, McDonald A, Pant PR, Grant AM, Campbell MK, Anderson FH, Cooper C, Francis RM, Gillespie WJ, Robinson CM, Torgerson DJ, Wallace WA, RECORD Trial Group. Long-Term Follow-Up for Mortality and Cancer in a Randomized Placebo-Controlled Trial of Vitamin D3 and/or Calcium (RECORD Trial). *J Clin Endocrinol Metab* 2012;97(2):614-22.

(2) Buckley B, Lapitan MC, Glazener C, MAPS Trial Group. The effect of urinary incontinence on health utility and health related quality of life in men following prostate surgery. *Neurourol Urodyn* 2012;31(4):465-9.

(3) Burr JM, Botello AP, Takwongi Y, Hernandez R, Vazquez-Montes M, Elders A, Asoaka R, Banister K, van der Schoot J, Fraser C, King A, Lemij H, Sanders R, Vernon S, Tuulonen A, Kotecha A, Glasziou P, Garway-Heath D, Crabb D, Vale L, Azuara-Blanco A, Perera R, Ryan M, Deeks J, Cook J. Surveillance for ocular hypertension: an evidence synthesis and economic evaluation. *Health Technol Assess* 2012;16:29.

(4) Cook JA, Bruckner T, MacLennan GS, Seiler CM. Clustering in surgical trials - database of intracluster correlations. *Trials [serial on the Internet]* 2012;13:2.

(5) Entwistle VA, Firnigl D, Kinghorn P, Francis JJ, Ryan M. Which experiences of healthcare delivery matter to service users and why? An interpretive synthesis and conceptual map. *J Health Serv Res Policy* 2012;17(2):70-8.

(6) Fielding S, Fayers PM, Ramsay CR. Analysing randomised controlled trials with missing data: choice of approach affects conclusions. *Contemp Clin Trials* 2012;33(3):461-9.

(7) Hoddinott P, Craig L, MacLennan G, Boyers D, Vale L, FEST project team. The FEeding Support Team (FEST) randomised, controlled feasibility trial of proactive and reactive telephone support for breastfeeding women living in disadvantaged areas. *BMJ Open* 2012;2:e000652.

(8) Kolehmainen N, Francis J, McKee L, Duncan EAS. Beliefs about responsibilities, the aims of therapy, and the structure of the therapy process: a qualitative study of caseload management issues in child health occupational therapy. *Child Care Health Dev* 2012;38(1):108-16.

(9) Prior M, Burr J, Ramsay C, Jenkinson D, Campbell S, Francis J. Evidence base for an intervention to maximise uptake of glaucoma testing: a theory-based cross-sectional survey. *BMJ Open* 2012;2:e000710.

(10) Sharma P, Boyers D, Boachie C, Stewart F, Miedzybrodzka Z, Simpson W, McNamee P, Mowatt G. Elucigene FH20 and LIPOchip for the diagnosis of familial hypercholesterolaemia: a systematic review and economic evaluation. *Health Technol Assess* 2012;16(17).

Staff News

We welcome four new Trial Managers: Hanne Bruhn (eTHoS study), Sarah Cameron (SUSPEND trial maternity cover), Gillian Murray-Dickson (PROSPECT trial maternity cover) and Lynda Constable (VUE trial). We also welcome Shalmini Jayakody (Systematic Reviewer), Ted Bassinga (Statistician) and Joanne Coyle (Research Fellow).

Soji Adeyemi, Joy Eldridge, John Ford, Jenni Hislop, Jill Francis and Pat Hoddinott have recently left the Unit and we wish them well.

UNIVERSITY OF ABERDEEN

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CHIEF SCIENTIST OFFICE

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