

Health and Social Care Institute NEWS

Issue Two 2010



Health and Social Care Institute:

- conducts applied research with real clinical and social impact
- synthesises and evaluates evidence
- translates evidence into policy and practice

Welcome from Professor Janet Shucksmith Assistant Dean (Research)



The Health and Social Care Institute (HSCI) was established in 2008 to provide a focus for research on health and social care topics across Teesside University.

Part of the Institute's function is to build research capacity – we are delighted to see how quickly the group of full-time postgraduate research students has grown and how well individuals are developing in terms of skills and confidence.

In this issue we introduce you to some more of our students. HSCI provides supervision and support for a large number of part-time PhD students too, and many of those studying in this way come from different parts of the service sectors that deal with health and social care issues. We welcome approaches

from anyone who would like to study a topic at this level and in this depth. The University also offers a DProf study route, which includes taught courses as well as a thesis.

HSCI staff can point to considerable recent success in developing successful grant proposals. Some are featured in this issue.

These are turbulent times in the health and social care sector, but the Institute is confident that the type of work it does is particularly appropriate given its applied nature, and adds strongly to the evidence base that will inform future commissioning choices. Please contact us for further information about any of the projects examined in the newsletter.

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Improving the lives of older people with chronic pain

HSCI's Professor Denis Martin is involved in a new study aiming to develop novel methods of helping older people with chronic pain to manage their condition. The four-year study, which launched in June, is a collaboration between Teesside University, Glasgow Caledonian University, and the University of Aberdeen as the lead.

The study, Engaging with Older People in Developing and Designing Interventions for the Management of Chronic Pain (EOPIC), has arisen from a £1.2m grant from the Lifelong Health and Wellbeing initiative. This initiative, managed by the Medical Research Council, is a joint venture between the UK's research councils and health departments to explore health and ageing. For more information about Lifelong Health and Wellbeing: www.mrc.ac.uk/llhw.

The research will produce systematic reviews of evidence on the clinical and cost-effectiveness of self-management methods for older people with chronic pain. In-depth interviews with older people and innovative ways of observing their day-to-day lives will give new insights into how pain affects their lives and what they are doing to manage it. These ideas will be used to develop prototypes of materials or products that will aim to improve their lives.



Boxing clever in the North-East

A team including HSCI's Professor Alan Batterham and Dr Liane Azevedo (pictured) has secured £200,000 to develop an exercise game capable of promoting high-intensity exercise and evaluate its health benefits in an exercise intervention. The team also spans Teesside University's Social Futures Institute (Dr Iain Spears, Principal Investigator and Dr Paul Crawshaw, Assistant Dean) and Digital Futures Institute (Dr Wen Tang), and a colleague from Newcastle University (Dr Katie Lock). The project is in partnership with the Buff's Social Club and Tees Public Health Directorate.



Much modern technology is designed to help us be less active. This puts us at risk of life-threatening diseases and is detrimental to quality of life. In the North East, where this project will be based, only one in three men meet the minimum levels of exercise recommended.

The new gaming experience will be evaluated in social clubs in deprived areas of the North East.



Recently, a new generation of computer games – exergaming – offers the potential to help us to exercise more. However, the current consoles and games have been criticised for not promoting higher levels of exercise. This is due partly to human nature and partly to the limitations of the current technology. Most users begin their exergaming experience vigorously, using large whole body movements but, as they gradually realise the limitations of the technology, they resort to playing the games using small body movements (for example, simple wrist flicks). These movements are far less demanding and consequently, the tremendous potential of exergaming in promoting exercise is not being realised.

This project, funded by the Engineering and Physical Sciences Research Council, and also sponsored by Fuse (the regional research collaboration on public health), will involve the development and evaluation of a new exergaming experience specifically designed to reward whole body movements and to encourage the user to exercise at a high intensity. The system will be based on movement technology measurement that the research team has created, and a boxing game which elicits energy levels similar to playing real football, and four times higher than when using the Nintendo Wii.

Developments to the system will include an accurate method of calculating the energy expended, and this will enable the game to reward and encourage the user to expend more. It is intended that the exercise will be delivered over very short periods, a concept known as high-intensity, low-volume interval training, and a form of exercise commonly used by elite athletes. Recently it has been found that this exercise yields maximal health benefits for minimal effort and is particularly good for promoting fitness in an untrained population.

The new gaming experience will be evaluated in social clubs in deprived areas of the North East. Members will take a 12-week, high-intensity, low-volume exergaming programme. Their physical activity, energy expenditure and other health measures will be closely monitored. If found to be successful in reducing health risk factors, the exergame will be extended across a range of sectors, including schools, pubs and exercise prescription programmes. It is hoped that this will help reverse the negative impact of modern technology, and instead harness it to get us moving again.

Fluoride in school milk: getting the balance right

Dental caries (tooth decay) is still a major public health problem, and one which affects the majority of schoolchildren in industrialised countries. It can cause pain and distress and ultimately, if untreated, tooth loss. Chronic dental pain can have adverse effects on children's learning and school performance; and poor oral health may affect a child's self esteem.



Fluoride helps prevent dental caries, especially in young children, but excessive intake can cause mottled teeth.

Fluoride helps prevent dental caries, especially in young children, but excessive intake can cause mottled teeth. As a primary preventive and a public health measure for caries control, fluoride has for many years been added to water supply, salt or milk, but this has always been controversial. Fluoridating water has the advantage of reaching the entire population, including socially-deprived groups with the highest level of caries. But in the UK, only 10% of the population receive fluoridated water. Fluoridating school milk is a relatively inexpensive alternative – school milk fluoridation schemes were introduced in the UK in 1993. But there are concerns that these schemes might not deliver the optimal dose of fluoride: protecting against dental caries while minimising the risk of side-effects.

The Fluoride Milk Study was commissioned by the research group of the National Milk Fluoridation Network and funded by The Borrow Foundation. The research group, mainly comprising consultants in dental public health and led by Dr Anne Maguire from the School of Dental Sciences at Newcastle University, includes HSCI's Dr Vida Zohoori, pictured, an international expert in fluoride analysis. The group is working in collaboration with County Durham Primary Care Trust.

The study aims to establish the total fluoride exposure of children in the school fluoridated milk schemes in the UK. The findings will provide robust evidence for consultants in dental public health and other health professionals as to whether a change in the amount of fluoride added to school milk should be considered.



Maternal obesity: new perspectives on a growing problem

More than one in six pregnant women is now classed as obese in the UK. This puts both the mother-to-be and child at risk. To identify ways of helping maternity services to tackle this serious issue, Dr Nicola Heslehurst, pictured, a researcher in HSCI, has been leading a team of other experts from Durham and Newcastle Universities and the North East Public Health Observatory, with funding by Public Health North East. Her recent findings, compared with those of her previous research, show that maternity services have made good headway in some areas (for example, health and safety) but less in others.



As Nicola explained, 'Theatres and delivery suites are now better equipped and clinical guidelines are in place throughout the region. But there are still gaps in terms of services to support the women and a lack of joined-up thinking among professionals. There are no weight gain guidelines in place, largely due to a lack of national guidance on this issue. Mothers are being told they are putting their babies at risk and then left to deal with it on their own – there is an absence of support services available to help the women. This is an area that needs further development.'

Midwives expressed a need for training in how to talk to obese women about the clinical risks they run without causing undue distress. Nicola believes that they and other healthcare professionals could learn from successful smoking cessation campaigns. Currently the emotional aspects and the obesity itself are not being dealt with. With obesity being viewed negatively in society and by the media, there is a need for obesity messages to be more positive.

Nicola's expertise is much sought-after nationally, as well as regionally. Recently, she was part of the implementation strategy group for the new National Institute for Health and Clinical Excellence public health guidelines on weight management before, during and after pregnancy. She also sits on the group that developed the joint Centre for Maternal and Child Enquiries and Royal College of Obstetricians and Gynaecologists guidelines on obesity in pregnancy.

Compassionate Communities Project

The Compassionate Communities project has been developed from the North East's 25-year public health strategy *Better Health, Fairer Health* (2008). The strategy specified ten themes, each now supported by a regional advisory group. One of the groups, *A Good Death*, advocates public health approaches to the end of life. 'It is neither cost-effective nor desirable to see death as the province of clinical medicine.' In the North East, the group's aim was to:

'Establish a charter for end of life care, with a statement of the rights and entitlements that should be honoured both for the individual preparing for death, and for their carers and families [relating] not only to medical and nursing care, but to the behaviours of all agencies and sectors who deal with these issues.' (*Better Health, Fairer Health*, 2008, 16)



Collaborating with patients and their carers, the group has produced a charter called *Compassion at the End of Life*, which has been the focus of extensive local consultation.

Locally, the project has started at HSCI, and there is now a real opportunity to make a difference.

The Compassionate Communities project will implement the charter for Compassion at End of Life; stress the need to restore a sense of normality to death; build community and public health capacity for end of life care; and aim to create a compassionate community approach to end of life.

HSCI's new dedicated Compassionate Communities Unit makes the North East the first area in the country to start implementing these approaches. It also creates an opportunity to establish the North East as an innovative test bed for charter ideas. Key actions for the project include:

- raising awareness in schools
- identifying examples of good practice in the Tees Valley, and sharing and publicising these
- identifying training needs (in professional and community settings) in aspects of public health at end of life, then developing and delivering that training
- developing networks for patient and carer support involving community/third-sector groups and mainstream service providers in selected localities within the Tees Valley
- developing Teesside employers' policies on leave for carers and the bereaved.

Much of this will be achieved through community development workers attached to the project, who will take the charter to existing community groups and settings.

For more information or to discuss the project:

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Meet two of our PhD students

we illustrate their diverse backgrounds

Yvonne Khoo J-Lyn

A musician by profession, Yvonne completed her BSc in her home country of Malaysia, majoring in Molecular Biology and Sociology-Anthropology. In 2006 she was awarded an Erasmus Mundus scholarship to undertake a Joint European Master in Water and Coastal Management at the University of Cadiz, Spain and University of Algarve, Portugal, which she completed in 2008.

Yvonne, who has a long-standing commitment to voluntary work, has always been motivated by helping others, and the topic of her PhD reflects this. She is investigating the effects of virtual-reality augmented rehabilitation in older people with chronic musculoskeletal pain.



Yvonne in Hamburg, Germany, where she recently presented a paper on her work.

Leanne Mohan

Leanne, pictured with Henry, has been at Teesside University since 2002, graduating with BSc (Hons) Forensic Psychology in 2005 and MSc Social Research Methods in 2006. She worked as a research assistant in the School of Health & Social Care on projects including an evaluation of the Leeds Junior Youth Inclusion Project and an appraisal of educational provision on spirituality in end of life care.



Leanne has two sons, and returned from full-time mum duties to be awarded a full-time Economic and Social Research Council PhD scholarship through Fuse – the Centre for Translational Research in Public Health. She is researching the preventive mental health agenda in UK secondary schools – in particular, implementation of social and emotional aspects of learning (SEAL) as a vehicle for improving the mental health of all young people in school. This is a controversial addition to the curriculum, both within academic literature and with the teachers who are expected to deliver it. Leanne's approach will involve carrying out two in-depth case studies of local schools to explore how SEAL is understood, used and adapted in the classroom environment.

A selection of recent staff publications

Public Health

Aicken, C., Roberts, H., Arai, L. (2010) Mapping service activity: the example of childhood obesity schemes in England. *BMC Public Health*, 10, 1, 310.

Shucksmith, J., Jones, S., Summerbell, C. (2010) The role of parental involvement in school-based mental health interventions at primary (elementary) school level. *Advances in School Mental Health Promotion*, 3, 1, 18-29.

Villa, A.E., Anabalón, M.C., Zohoori, F.V., Maguire, A., Franco, A.M., Rugg-Gunn, A. (2010) Relationships between fluoride intake, urinary fluoride excretion and fluoride retention in children and adults: An analysis of available data. *Caries Research*, 44, 1, 60-68.

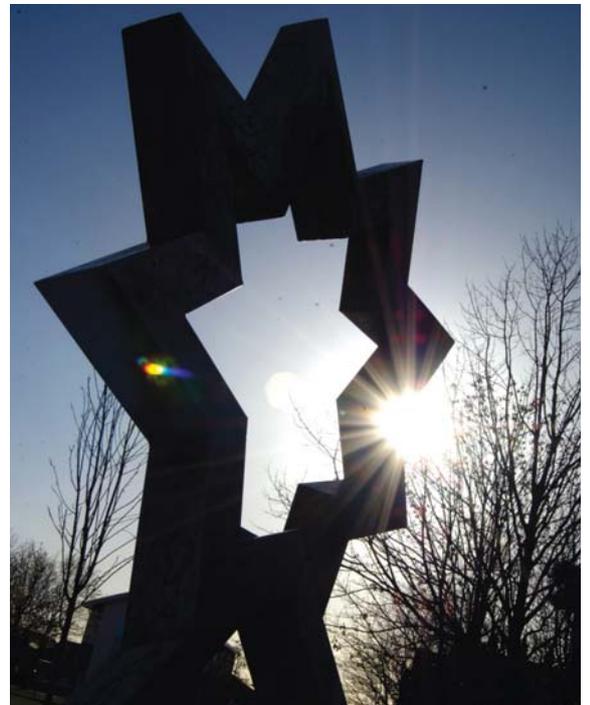
Rehabilitation

Avenell, A., Handoll, H.H.G. (2010) Nutritional supplementation for hip fracture aftercare in older people. *Cochrane Database of Systematic Reviews*, 1.

Chester, R., Smith, T.O., Hooper, L., Dixon, J. (2010) The impact of subacromial impingement syndrome on muscle activity patterns of the shoulder complex: A systematic review of electromyographic studies. *BMC Musculoskeletal Disorders*, 11, 45.

Hanchard, N., Goodchild, L., Thompson, J., O'Brien, T., Davison, D., Richardson, C. (In press) A questionnaire survey of UK physiotherapists on the diagnosis and management of contracted (frozen) shoulder. *Physiotherapy*.

Handoll, H.H.G. (2010) Prevention of falls and fall related injuries in older people in nursing homes and hospitals. *Injury Prevention*, 16, 2, 137-8.



This publication is available in alternative formats on request. Please contact the Enquiry Service on +44 (0) 1642 342942 or email enquiries@tees.ac.uk.

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