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R&D TODAY

THE FELLOWSHIPS ISSUE

RESEARCH IN HSC TRUSTS

SUCCESS IN ATTRACTING FUNDING TO NORTHERN IRELAND

NOTICEABLE ACHIEVEMENTS

Issue 12 WINTER 2009

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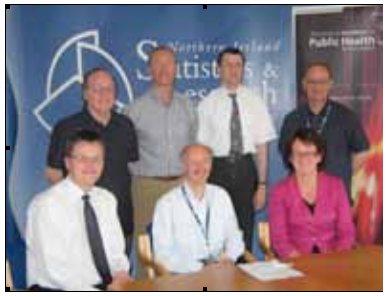

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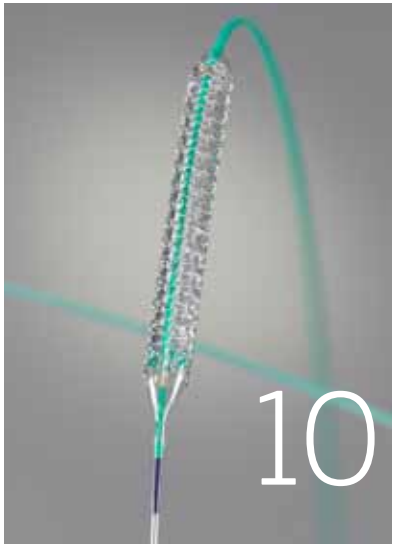

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FOREWORD

Professor Bernie Hannigan
Director of R&D and Chief Scientific Advisor

Welcome to issue 12 of our newsletter - R&D Today.

How much time have you spent thinking about the impact of research on the lives of people? Recently I saw a slogan that is used for fundraising by a great US cancer centre – Memorial Sloan-Kettering. The slogan goes 'Imagine a world without cancer'. Let's apply this thought to any, or all, human illnesses. OK, we can imagine that. But how do we achieve it? There is only one answer: Research. To relieve the burden of illness, people with appropriate expertise, knowledge, experience and dedication must be provided with the best possible resources for research. And research no longer is the domain solely of brilliant people who have gained prolonged education, training and experience. Although it is important that our research leads fit this profile, a modern research agenda also needs others experienced in a wide array of professional health or social care settings as well as those who know a lot about illnesses because they are, or have been, patients, clients or carers.

Each of us who wishes for a healthier world has a responsibility to make sure that research happens.

This issue of our Newsletter shows that good quality research is now underway in all of our HSC Trusts. We also explain some of the ways in which our local research capacity is being enhanced through Fellowships for research training, helping researchers to win research funding and providing access to other educational activities.

Professor Bernie Hannigan
Director of R&D and Chief Scientific Advisor

SUPPORTING RESEARCH & DEVELOPMENT

A FLAVOUR OF RESEARCH UNDERWAY IN HSC TRUSTS

BELFAST HSC TRUST

PROFESSOR IAN YOUNG, DIRECTOR

Research is a key activity within the Belfast Health and Social Care Trust, and is supported by staff in the Trust Research Office, which is based on the Royal Victoria Hospital site. The Trust has close relationships with Queen's University Belfast and the University of Ulster, and in addition hosts key elements of research infrastructure which support clinical research across Northern Ireland. These include the Clinical Research Support Centre (CRSC) and the coordinating centre for the Northern Ireland Clinical Research Network (NICRN).

The Trust is committed to hosting and supporting a wide spectrum of research, including basic laboratory science, small scale experimental medicine studies, clinical trials and qualitative research aimed at improving the patient experience and care processes within the Trust. Research is organised on a multidisciplinary basis, and is overseen by a Trust Research Committee and four Service Group Research committees.

In total, over 2,000 research projects are registered on the Trust research database. This includes approximately 200 clinical trials of investigational medicinal products. Within the last two years, the Trust has hosted inspections by the MHRA and Human Tissue Authority, both of which have produced very positive reports about the way in which research is carried out within the Trust.

Among the clinical trials hosted by the Trust are a number of UK multicentre trials for which the Trust is the sponsor and where the chief investigator is based within the Trust. These include the IVAN Trial, investigating the effects of vascular endothelial growth factor inhibitors in patients with age related macular degeneration. The IVAN trial was detailed in the Spring 2009 issue of R&D and its results will have an important impact on the management of this condition throughout the world. The Diabetes and Preeclampsia Prevention Trial (DAPIT) was a study of antioxidant supplementation in Type 1 diabetic pregnancy which was based in the Belfast Trust and included centres throughout Northern Ireland, Scotland and the North and Midlands of England. The study was completed several months ago and will report early next year. In addition, the Trust is supporting other multicentre trials in Cancer, Community Dentistry and on Rheumatoid Arthritis in children.

At the other end of the spectrum of complexity, a number of important studies are examining aspects of the patient experience within the Trust. Often, these include an important educational element and lead to a research qualification for one or more of the involved staff. Staff throughout the Trust are encouraged to consider the possibility of a research driven solution to problems which they face in clinical practice. Typical of this was a recent study which sought new approaches to estimating the energy requirements of brain injured patients, which resulted from the observation by a dietician that established equations for estimating energy requirements often resulted in a over- or under-estimation in this group of patients. It is hoped that this type of multidisciplinary research aimed at addressing needs identified within the Trust will become an increasingly prominent contributor to the overall portfolio of research activity in the future.

NORTHERN HSC TRUST

DR DES ROONEY, DIRECTOR

The Northern HSC Trust approved a total of eight projects for funding from the first HSC R&D Discretionary Fund in 2008. The overall aim was to provide support for small short term Trust specific research studies with a particular emphasis on producing direct clinical impact.

One of the successful applications was for the Evaluation of Ulcer Residence Properties of Blank PVA- Borax Hydrogel submitted by Dr Mark Jenkins, Consultant in Emergency at Antrim Area Hospital. The project will attempt to determine if an innovative, semi-solid dosage form has the required physical properties to allow it to reside in and be removed cleanly from neuropathic diabetic foot ulcers.

Gel systems for drug release such as poly vinyl alcohol (PVA), cross-linked with sodium tetraborate to produce a semi-solid, could demonstrate unique and varied visco-elastic properties under conditions of differing rates of shear. When left in the wound for approximately ten minutes the viscous liquid flows slowly over the wound bed. This putty is non adhesive and can be removed intact from the wound bed without any further tissue trauma. This innovative application has not yet been described in the literature.

The principal aim of this study is to verify that the formulations tested display the appropriate physical characteristics within an ulcer. It is important that they can be applied easily to the ulcer site, flow sufficiently to fill the ulcer cavity and be removed easily in one piece.

The Discretionary Fund has assisted the development of this clinical research and the purchase of further equipment. The use of the equipment has allowed for an increase in productivity within the laboratory in generating and producing these gels allowing for more efficient use of the post-doctoral researcher.

The new equipment was sourced in New Zealand and is used for wound management by producing scans and measurements to track healing. Two research nurses will be trained prior to its use for the clinical study. Full ethics approval has been obtained and the study should be underway by November. This study will increase knowledge on the use of gels for drug delivery, specifically when gels are used to treat diabetic foot ulcers.

SUPPORTING RESEARCH & DEVELOPMENT
A FLAVOUR OF RESEARCH UNDERWAY IN HSC TRUSTS

SOUTH-EASTERN HSC TRUST

DR DAVID HILL, DIRECTOR

The South Eastern Trust continues to develop and move forward with health and social care research. This year has seen a significant improvement in the structures within the Trust, with a dedicated team now in place, ensuring that all governance requirements are met, as well as encouraging new and innovative research. To this end, the Trust has funded a number of studies and projects through the R&D Director's Discretionary Research Fund.

These projects cover a wide variety of disciplines and methodologies, for example: A clinical trial of a potential new drug; the use of education in mouth-care in palliative care patients and the identification of a possible biochemical marker in fracture patients. In offering these awards there was very evident enthusiasm, coupled with expertise and drive among the various professionals, to innovate and advance the evidence base that underpins modern health and social care delivery. Unfortunately, not all projects could be funded in this round but the interest for next year's award is already high.

Overall, the Trust Research Office processes about 80 projects per year, both single centre and multi-centre, covering a wide range of disciplines and topics, including diabetes, social work, nursing, orthopaedics, oncology and stroke.
Another important component of the South Eastern Trust's work is regional and to this end the Trust research office works closely with partner and stakeholder organisations such as HSC R&D, Northern Ireland Clinical Research Network (NICRN), Northern Ireland Cancer Clinical Trials Network, Marie Curie Cancer Care, the local universities, industry and the other four Trusts. This has created a number of work streams that seek to smooth and expedite research permissions, using bespoke national systems, such as the Integrated Research Application System (IRAS) and whilst these remain, to some extent a work in progress, we appear to be nearing some of our goals.

SUPPORTING RESEARCH & DEVELOPMENT
A FLAVOUR OF RESEARCH UNDERWAY IN HSC TRUSTS

SOUTHERN HSC TRUST

DR PETER SHARPE, DIRECTOR

The appointment of a cardiovascular research fellow, Dr James Shand, at Craigavon Area Hospital heralds the start of an innovative research study seeking to advance the diagnosis of heart attacks in Northern Ireland.

The rapid diagnosis and risk stratification of acute coronary syndromes study (RADAR-ACS) has brought together the clinical expertise at Craigavon Area Hospital with one of the province's foremost biotechnology companies, Randox Laboratories of Crumlin. Using groundbreaking technology, designed and engineered in Northern Ireland, the RADAR-ACS study aims to determine if new biomarkers for the diagnosis of myocardial infarction are better than those currently available. It is anticipated that the results will have a significant impact on the diagnosis and management of patients with heart disease. Dr James Shand, lead investigator for the trial explained "we aim to recruit 650 patients to this important trial of novel biomarkers for myocardial infarction. We hope that this will lead to improved diagnosis of patients with chest pain, leading to quicker delivery of life saving therapy and also allow better utilisation of healthcare resources, something that in the current financial climate is going to become even more crucial".

Dr Shand has joined the successful cardiac research team at Craigavon Area Hospital, with the RADAR-ACS trial adding to an extensive research portfolio including several international multicentre studies. Consultant cardiologist Dr David McEneaney commented that "over the last few years we have developed a strong cardiology research unit at Craigavon Area Hospital, something that has taken a lot of hard work from all involved. The RADAR-ACS study marks a new chapter for us in basic and clinical research. We are delighted to be embarking on a programme of research involving an innovative technology conceived and developed by a Northern Ireland company with an international reputation. We anticipate the results will lead to a significant improvement in diagnosing and managing patients with suspected heart attacks".

Dr Peter Sharpe, Associate Medical Director, Research & Development in the Southern Trust advises that an application to the Director's Discretionary Fund 2008/09 led to an award of additional funding to this project.

The RADAR-ACS team from SHSCT and Randox Ltd

SUPPORTING RESEARCH & DEVELOPMENT
A FLAVOUR OF RESEARCH UNDERWAY IN HSC TRUSTS

WESTERN HSC TRUST

DR MAURICE O'KANE, DIRECTOR

Research activity in the Western HSC Trust continues to increase with 70-80 new research studies projected for 2009. These cover a broad range of areas including cardiology clinical trials, diabetes, mental health, nursing, chronic disease management and social care. Many are multicentre studies involving other sites in N Ireland, nationally or internationally. Professor Vivien Coates, Professor of Nursing Research, is appointed jointly between the Trust and the University of Ulster and leads on nursing research.

Much of the research within the Trust centres on the Clinical Translational Research and Innovation Centre [C-TRIC] at the Altnagelvin Hospital site. This facility was profiled in Issue 11 of R&D Today, Spring 2009. Now nearing the end of its first year of operation, some 8 biobusiness companies have taken space in C-TRIC to work with Trust clinical staff on a range of projects including infection control and respiratory health. The Trust Research Office, which oversees research governance and assesses all new proposals, is also based in C-TRIC in close proximity to researchers. Also, HSC Innovations has a weekly presence. The presence of C-TRIC provides a major opportunity to expand academic and commercial research and we actively seek to increase external research funding.

In 2008-2009 the Western Trust increased its involvement with Clinical Research Networks (NICRN) with network-adopted studies progressing in Diabetes, Stroke and Childrens' Medicine. NICRN nurses are now in post in Diabetes, Stroke and Critical Care, additional nurse posts are planned for Cardiology and Paediatrics as is the appointment of a Clinical Physiologist. The Trust has participated in cancer clinical trials for a number of years and recently appointed an additional Cancer Clinical Trials Network research nurse to increase capacity. Over the coming year the Western Trust aims to extend interaction with NICRN and to increase recruitment to network adopted studies.

Nine projects were funded through the R&D Director's Discretionary Research Fund in year 1 and a further 10 projects in year 2. Our aim was to seed fund research to generate pilot data that would strengthen external funding applications. To-date one of the year 1 projects has obtained external grant funding for further work on heart disease in women. In year 2 any recipient of Discretionary Fund money must undertake to apply for external funding of over £100k. Examples of the types of research supported included: bowel cancer genetics, bioengineering tools to assess joint function, remote monitoring of respiratory patients.

SUPPORTING RESEARCH & DEVELOPMENT

HSC INNOVATIONS - INNOVATION WORKSHOPS FOR HEALTH & SOCIAL CARE AND INDUSTRY

In October 2007, HSC Innovations, BioBusiness NI and HSC R&D signed a memorandum of understanding to work together in a number of areas, including the promotion of opportunities for clinician – business interactions. The aim ultimately is to collaborate in product innovation. A series of workshops is one way to help achieve this aim. So far, two workshops have been held, one focussing on respiratory medicine and the second on cardiology.

Innovation in Respiratory Care

The first workshop, held at Armstrong Medical, Coleraine on 6th July 2009, was chaired by Albert Sherrard OBE of BioBusiness NI and Dr David Brownlee of HSC Innovations. HSC specialists working in respiratory medicine met with local businesses focussing on this area, with the aim of developing partnerships to deliver solutions to specific clinical needs. Twenty participants heard three industry presentations: John Armstrong of Armstrong Medical, Dr Peter Donnelly of Axellis Medical Technologies and Dr Le Roy Dowey of Clearway Medical. Three clinical presentations, by Derek Fairley and Dr John Moore of the Belfast HSC Trust and Dr Paul Loan from Northern HSC Trust focussed on various current issues and challenges faced by respiratory practitioners. The workshop also provided an opportunity to market to businesses technologies being developed within the HSC. Participants enjoyed a tour of the design, manufacturing and packaging facilities within Armstrong Medical, a local supplier of innovative respiratory disposable products for anaesthesia and critical care applications. Armstrong Medical is a recent winner of the Queen's Award for Enterprise. Axellis are developing products for monitoring heart and lung sounds. Clearway Medical has a number of products in development for asthma care.

As a result of initial discussions at the workshop, a confidentiality agreement was prepared between Axellis Medical Technologies and Northern HSC Trust to enable more detailed discussions of a collaborative project. It is hoped that other collaborative R&D programmes will emerge from new relationships formed at this event.

Speakers at the Respiratory Workshop:
Dr Le Roy Dowey (Clearway), Dr John Moore (Belfast HSC Trust), Dr Derek Fairley (Belfast HSC Trust), John Armstrong (Armstrong Medical), Dr Paul Loan (Northern HSC Trust), Dr Peter Donnelly (Axellis)

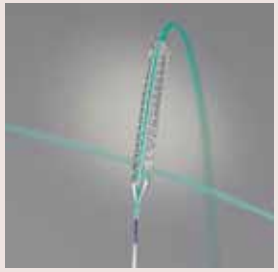
SUPPORTING RESEARCH & DEVELOPMENT
HSC INNOVATIONS - INNOVATION WORKSHOPS FOR HEALTH & SOCIAL CARE AND INDUSTRY

Innovation in Cardiology

Twenty six representatives of HSC organisations and local businesses discussed the scope to form partnerships to address unmet clinical needs in cardiology. The event was hosted by Craigavon Area Hospital, Southern HSC Trust, on 15th October 2009 and was chaired by Dr David Brownlee of HSC Innovations and Dr Peter Donnelly of BioBusiness NI.

Dr David McEneaney, a consultant cardiologist in the Trust, provided an overview of clinical practice in cardiology, new developments and current challenges faced by specialists. This was followed by a live clinical case via video-link to the hospital's catheterisation laboratory. Dr Ian Menown, a consultant cardiologist, demonstrated the insertion of a drug-eluting stent into a patient with partially blocked arteries. Both presenters highlighted unmet technological needs within their speciality.

Industry-focused presentations were given by Dr John Lamont of Randox (an international clinical diagnostics company developing tests for a range of conditions including cardiovascular diseases) and Dr Rebecca Di Maio of HeartSine (a world-leader in defibrillation therapy). Dr Declan Bogan (BioBusiness NI) highlighted product innovations in medical devices and connected health, including cardiac diagnostics and monitoring. The event provided a forum for much discussion about the need for new product development within this important field of medicine.



Do you have an idea for a new healthcare product? If so, or if you would like more information about this workshop series please contact a member of the HSC Innovations team on:

tel: 028 9060 5794
e-mail: innovations@crsc.n-i.nhs.uk
web: www.crsc.n-i.nhs.uk/innovations
(intranet http://crscweb/innovations)

Speakers at the Cardiology Workshop:
Dr David Brownlee (HSC Innovations), Dr Rebecca Di Maio (Heartsine), Dr John Lamont (Randox), Dr Ian Menown (Southern HSC Trust), Dr David McEneaney (Southern HSC Trust), Dr Peter Donnelly (BioBusinessNI)

SUPPORTING RESEARCH & DEVELOPMENT
ESSENTIAL DATA RESOURCES:
THE NORTHERN IRELAND LONGITUDINAL STUDY (NILS)

Two related data resources have been available in Northern Ireland since December 2006. Firstly, the Northern Ireland Longitudinal Study (NILS) links a 28% sample (approximately 500,000 people) of the Northern Ireland population, selected from medical card registration data provided by the Health and Social Care Business Services Organisation (BSO), to the 2001 Census and subsequent vital events such as deaths, births and migration. This linkage is done on an ongoing basis.

In addition, the Northern Ireland Mortality Study (NIMS) incorporates similar information for the whole of the enumerated population but is linked to subsequent deaths only. The Northern Ireland Statistics and Research Agency (NISRA), which administers the NILS, is considering the feasibility of linking the data to the 2011 Census. Such a linkage would raise the possibility of analyses of demographic and socio-economic transitions and trends for those included in both cohorts.

Initial engagement with the datasets by both academia and government led to significant conference presentations and published peer reviewed papers. To consolidate this initial success, funding was secured from the Economic and Social Research Council (ESRC) to establish the NILS Research Support Unit (RSU) in April 2009. While formally based in the Centre for Public Health (QUB), the RSU works from the NILS "secure setting" at NISRA (McAuley House, Belfast) in order to maintain the security of NILS data. The remit of the NILS RSU is to provide a wide-ranging support service to researchers from both government and academic sectors who wish to use the data for research: from initial definition of the problem, through the formal application to use the data, facilitating access to the 'secure setting' and analysis of the data, to training in using available software.

HSC R&D has been the key funder of the NILS since its inception. This is part of HSC R&D's strategic goal of building an infrastructure that can support, enable and facilitate research.

For more details about both the data resources and the service offered by the NILS-RSU either contact the support unit (nils-rsu@qub.ac.uk) or visit the web-site (www.qub.ac.uk/nils).

At the launch of NILS RSU, from left:
Dr David Marshall (NISRA), Michael Rosato (QUB), Dr Dermot O'Reilly (QUB), Prof Dave Martin (ESRC, University of Southampton), Dr David Donnelly (NISRA), Prof Bernie Hannigan (HSC R&D), Dr Dave Hall (ESRC)

NOTICEABLE ACHIEVEMENTS

Commissioned Research: Suicide Prevention

Research Leads	Project Titles
Professor Brendan Bunting	Geodemographic factors associated with deliberate self harm and death by suicide: a within and between neighbourhoods analysis
Dr Gerard Leavey	Suicide in Northern Ireland: a comparison of service use and needs in urban and rural settings

2009 GPARTS Awards

Successful Applicants	Project Titles
Dr Roisin Spence	Multiple mini interviews for the selection of medical students at Queen's University Belfast
Dr Philip Cooke	The impact of experimental learning in health behaviour change on medical students' intentions towards engaging in and promoting physical activity

2009 Cochrane Fellowships

Successful Applicants	Review Titles
Dr Anne Campbell	Cognitive behavioural therapy for substance misuse and abuse in young offenders
Ms Maeve Murray	Protocolized versus non-protocolized weaning for reducing the duration of mechanical ventilation in crtically ill paediatric patients
Dr Carole Parsons	Withdrawal versus continuation of cholinesterase inhibitors and/ or memantine in patients with dementia
Dr Joanne Reid	Thalidomide for cancer cachexia
Miss Olinda Santin	Psychosocial interventions to improve the quality of life and emotional wellbeing of cancer caregivers
Ms Seaneen Sloan	Parent-training intervention in school-aged children with autistic spectrum disorders

Commissioned Research: Pharmacy Prescribing

Research Lead	Project Title
Professor Carmel Hughes	Pharmacy Prescribing in Northern Ireland - a quantitative and qualitative assessment

NCI Summer Curriculum in Cancer Prevention 2009

Principles and Practice of Cancer Prevention and Control - Successful Applicants
Dr Finian Bannon
Ms Ruth Boyd
Ms Jackie Kelly
Dr Paula McCloskey
Ms Ethna McFerran
Mr Michael O'Rorke
Ms Janice Ringland
Ms Claire Wilson

Institute of Child Care Research

Project Titles
Guilty as charged? Social Work Assessments and Care Proceedings
Drifting at home? Children returned home on Care Orders
Accident or design? Exploring regional variation in placement outcomes for young children in care
Mobile phones and contact arrangements for children in care.
Understanding 'wellbeing' in the lives of adolescents with disabilities: an exploratory study.

NOTICEABLE ACHIEVEMENTS

FOCUS ON FELLOWSHIPS

HSC R&D Programme manager Dr Janice Bailie

Research funders have a responsibility of ensuring an adequate number of researchers with good research skills. In our universities, good academic research environments provide access to resources, skills and mentoring so that people working towards research degrees are well trained. Throughout its existence, HSC R&D has provided Fellowships for employees of health and social care services to train to PhD level. We are also starting to work towards the support of more senior, independent researchers.

The process of gaining HSC R&D Fellowship support requires co-ordinated planning and work among experienced researcher(s), a university, aspiring Fellow and his or her employing HSC body. HSC R&D helps to make the lead-up to Fellowship application as smooth possible as well as supporting and monitoring performance once the award is made. The Fellowship scheme is supported by HSC R&D Programme manager Dr Janice Bailie. The short articles that follow were all provided by successful Fellows and illustrate different stages in the Fellowship pathway.

The HSC Doctoral Fellowship pathway begins about a year before an application is submitted. The competition for 2010 Fellowships is now closed. For Fellowships starting in Autumn 2011, the call for applications will issue in June. Now is the perfect time to start your planning. Full details appear on: http://www.centralservicesagency.com/display/rdo_fellowship_scheme

The Learning Sets make you think, so that hopefully when putting in your application and going for interview, you have covered everything.

Preparing: The Learning Sets and Fellowship Application

I first heard about the HSC R&D Doctoral Fellowship award and the Learning Sets at the Allied Health Professional research conference (September 2006). This is where my thoughts all started. At the time I was working in the adult cystic fibrosis unit in the Belfast Trust as a research physiotherapist. I started to discuss the prospect of applying for the Fellowship with my line manager Dr Judy Bradley and the director of the cystic fibrosis unit, Prof Stuart Elborn. Together the three of us thrashed out a lot of ideas for potential research projects. There was one idea that I latched onto: 'An agreed definition of an exacerbation in adults with cystic fibrosis'.

I then applied to be part of the HSC R&D Learning Sets and was accepted. The Learning Sets took place during working hours, so I had to apply to the physiotherapy manager for course leave. Luckily she recognised what a good opportunity this was for me and she granted me course leave.

The learning sets I participated in took place over six sessions. There were four facilitators in total and four participants. All four facilitators attended the first and last session. At the rest of the sessions there were two facilitators leading the group. At the first meeting we introduced ourselves and came up with some ground rules as a group, things like confidentiality and always coming to the sessions prepared. We also agreed what we felt was important to cover in all six sessions. We decided it would be of most benefit to us if we focussed each session on a section of the fellowship application form. So in preparation for each session we would have to source information, meet with supervisors, complete the relevant section of the application form and come to the next session with a few slides prepared to feed back to the group.

At the start of each session a timeframe was established for each person to make sure they had time to present and also that there was enough time for discussion. It was in the discussion where ideas and methods were really teased out and every avenue was explored. It was amazing the amount of times I was asked, 'Why are you doing that?' or 'How are you going to achieve that?' and I didn't really have an answer. This is where the Learning Sets make you think, so that hopefully when putting in your application and going for interview, you have covered everything.

The Learning Sets also help you to consider other aspects such as identifying training needs, where you are going to get the training from and also financial and ethical aspects of your project. And because you are completing sections of your application form for each session, it keeps you on target with getting your application completed on time.

So I submitted my application form, attended an interview and was successful. I started my Doctoral Fellowship in October 2008 and am now in the second year of my PhD.

Fiona Kerr

Doing: Being a Doctoral Fellow

In addition to work relating directly to my study, I have had a number of training and development opportunities.

Experience 1 - A year in Cardiology

I have now completed the first year of the HSC R&D Doctoral Fellowship Scheme. I am a Cardiology trainee and my award is supporting me to undertake a clinical trial as part of a PhD programme through QUB. The objective of the study is to assess the impact of multiple micronutrients (vitamins and minerals) on patients with stable heart failure.

Much of my first year has been spent completing preparatory work. I have learnt that a great deal of work must be completed before a research project of any kind can start. The study had to be approved by the Office for Research Ethics Committee Northern Ireland (ORECNI), the Belfast HSC Trust and Queen's University. In addition, standard operating procedures (SOPs) and protocols for all aspects of the study had to be prepared. This preliminary work was at times very challenging. Difficulties that I encountered

included identifying a supplier of the study medications within an acceptable budget. At times, it felt that the study would never start. Fortunately, I have received excellent support from my supervisors and research colleagues. My supervisors are very approachable and have provided valuable advice and reassurance. I am pleased to report that the initial work has now been completed and recruitment into the study has started. It is very satisfying to see the project up and running and it makes the previous effort worthwhile. At present, my main goal is to identify and enrol as many patients as possible (with a target of 112 patients over the next year). I really appreciate the commitment of members of the public, some of whom are travelling long distances to take part in the study.

I have been assigned to the Centre for Public Health (Nutrition and Metabolism group) at Queen's. As such I am working in a vibrant research environment with a number of other supportive researchers. We have frequent educational meetings and I attended the Nutrition Society (Irish Section) meeting held in Belfast in June 2009. As a HSC R&D Doctoral Fellow I have also been assigned to the Diabetes, Endocrinology & Nutrition Recognised Research Group. Meetings take place regularly, at which members are invited to present information from their research. At these events I am able to

My Fellowship and its associated training helped to nurture and develop my research skill base, which has allowed me to achieve funding for further projects

interact with researchers from across Northern Ireland working in a similar area. I also attend structured training via the Postgraduate Skills Training Programme at QUB. In this programme I am able to select training sessions suitable to my needs. For example, I have attended a number of seminars on medical statistics. Through Queen's I have also had an opportunity to become involved in undergraduate teaching. Last semester, for a few hours every fortnight, I provided introductory clinical skills teaching to second year medical students. I found this very rewarding and hope to continue my involvement this year.

I am looking forward to the remainder of my Fellowship and though I will have further challenges, I am confident that I have the necessary support available so I can deal with them I am excited at the prospect of obtaining interesting results, which may be of benefit to patients with heart failure, and aim to present my work at international meetings and publish papers in high quality, peer reviewed journals.

Nick McKeag

Experience 2 MRSA Infection Control

After 22 years as a registered nurse, six of which were spent as an infection prevention and control nurse specialist, I never imagined that I would be completing my thesis for a PhD. The opportunity to undertake a research Fellowship funded by HSC R&D had not even been considered as a future prospect when I began student nurse training many years ago.

In February 2005, my colleagues in infection control and I were approached by a microbiologist in the Northern HSC Trust where I was employed about a study to determine Methicillin-resistant Staphylococcus aureus (MRSA) prevalence amongst residents and staff in nursing homes. The study would also involve a cluster randomised controlled trial to examine the effect on MRSA prevalence of an intervention with an infection control education, training and audit programme. This would be a 3-year secondment opportunity under the HSC R&D Fellowship scheme if the application was successful.

MRSA is recognised as a major nosocomial pathogen that has caused problems in hospitals and other healthcare institutions worldwide with the UK having one of the highest rates of MRSA in Europe. Concerns have been expressed that residents in nursing homes are an important reservoir of MRSA with the potential for further spread back into the hospital setting on admission of colonized residents. Naturally, I was eager not to miss the chance of undertaking this unique research as no other studies to measure MRSA prevalence among residents and staff of nursing homes had been performed in Northern Ireland and expressed my interest in being considered for this Fellowship.

In October 2005, after a successful application and interview process I became a fulltime Research Fellow with the School of Pharmacy, QUB. Ethical approval was granted and recruitment of nursing homes, residents and staff began in December 2005. This was a challenging process and a lot of time was spent travelling around nursing homes, talking to staff, elderly residents and relatives to gain consent for participation in the trial. Balancing these long hours with the demands of family life was to become an ongoing challenge for me over the three year secondment. Additionally, to avoid researcher bias during the main trial, another infection control nurse delivered the intervention programme to the nursing homes and I had to return to the Trust for short periods of time to cover her absence. This was difficult as I was still trying to project manage a large trial during these periods as well as juggling the demands of a full time infection control nurse post and family commitments.

Persevering with these pressures proved worthwhile as results of the prevalence study

identified a significant reservoir of MRSA amongst residents and staff of nursing homes. This confirmed that MRSA as a problem in this setting. The combined prevalence rate of MRSA in the resident population was 23.3% and 7.5% in staff. Analyses of resident and staff isolates showed genetic similarities that may be attributed to transfer of MRSA within the nursing home environment from either resident to resident, or staff to resident transfer.

Findings generated by the cluster randomised controlled trial showed that the intervention of an infection control education, training and audit programme implemented in this study was not sufficient to affect MRSA prevalence but could significantly raise infection control audit scores in the majority of nursing homes. The results of the prevalence study were successfully accepted for publication in the Journal of American

Geriatrics Society in April 2009 and we hope that results of the randomised controlled trial will be accepted for publication in the near future.

On reflection, The support of HSC R&D and my supervisors at Queens was second to none and undoubtedly made the whole experience gratifying. Following submission of my thesis and successful outcome from viva, I am left with what I can only describe as a great sense of achievement and pride. I would thoroughly recommend this experience to anyone.

Ideally, I would love to build upon the results of this study and undertake more research on how MRSA decolonisation of patients, combined with increased infection control education and training, would affect MRSA prevalence in nursing homes.

Naomi Baldwin

Lifelong Benefit: Integrating research into a clinical academic career

Experience 1: Research in Cancer Care Nursing

I secured my doctoral Fellowship in 2003 after working for several months with my supervisors who were extremely influential and supportive throughout the design and conduct of my PhD. My study

My Fellowship and its associated training were influential in securing this post and have already led to successful research collaboration

examined the experience of cachexia for patients with advanced cancer and their significant others. This Fellowship allowed me to access expert research training directly related to my subject area. These were not only excellent training opportunities but also contributed to the development of the methodology and analysis procedures. These ultimately enabled the success of the study, the findings for which received the Nurse of the Year Research Award in 2006. Additionally, the training developed my writing skills so that results from the study could be published. Publications from this study included papers in The International Journal of Nursing Studies, The European Journal of Cancer Care, International Journal of Palliative Nursing, Cancer World and Oncology Nursing Forum.

After completing my Fellowship I worked as a research facilitator between the Cancer Centre and The Nursing and Midwifery Research Unit at QUB. During this work, my Fellowship and its associated training helped to nurture and develop my research skill base, which has allowed me to achieve funding for further projects. Examples of these include: 'A retrospective activity analysis of a novel nurse led chemotherapy telephone Helpline service' (then WHSSB); and 'An exploration of health care professionals' experience and perception of need of advanced cancer patients with cachexia and their families' (QUB).

I have recently taken up the appointment of Lecturer in Cancer Nursing within the same research unit.

It enables doctors with an interest in research to combine clinical training with research training.

My Fellowship and its associated training were influential in securing this post and have already led to successful research collaboration with colleagues in QUB. One such project is: 'A multi-methods approach examining the impact of childhood cancerous brain neoplasms on family functioning, with Mark Linden; and achievement of a Cochrane Fellowship for a systematic review of Thalidomide for the treatment of cancer cachexia (HSC R&D). Carrying out this project will establish a research link with colleagues in the Centre for Public Health, QUB. Additionally, my international collaboration within the field of cancer care has commenced and a research proposal is under development with colleagues from the University of Toronto.

Joanne Reid

Experience 2: Academic Clinical Lecturer in Medicine

Prior to embarking on full-time research, most clinicians negotiating Specialist Registrar training and service provision don't intend to make a career of research. My HSC R&D Doctoral Fellowship not only provided me with the funding and support to undertake a research project, but also stimulated a curiosity and yearning to improve screening and diagnosis of lung cancer. Since completing my PhD, I have been appointed as an Academic Clinical Lecturer which has enabled me to combine clinical training with ongoing research. I have been able to continue the research story that I started in my PhD and am preparing for future research projects. Moreover, at QUB, the combination of close supervision from my mentor and regular tutorials from academics, teaches us how to become effective researchers. This post is funded by the Northern Ireland Medical and Dental Training Agency and came about because of the Walport Report* which described a need to improve the journey of clinical academic training in medicine. Of course, none of this would have been possible without HSC R&D's initial support, which stimulated my interest in research in the first place, combined with ongoing support and encouragement after completion of PhD.

Nick Magee

*The Walport Report, 'Modernising Medical Careers' (2005) http://www.nihrtcc.nhs.uk/intetacatrain/index_html/copy_of_Medically_and_Dentally-qualified_Academic_Staff_Report.pdf
For Nurses, Midwives and Allied Health Professionals, the Finch Report (2006) 'Developing the best Research Professionals' seeks to create similar opportunities. Local implementation is being led by HSC R&D in partnership with policy-makers, universities, employers and the professional communities. http://www.ukcrc.org/PDF/Nurses_report_August_07_Web.pdflts
For the many groups that comprise the emerging Healthcare Scientist professional grouping, the Modernising Scientific Careers project is nearing its implementation stage. Led in Northern Ireland by Professor Bernie Hannigan, Director of HSC R&D, there will, of course, be opportunities for research.

NOTICEABLE ACHIEVEMENTS

STROKE CLINICIAN SCIENTIST FELLOWSHIP

Improving Stroke Services through Research - Stroke Clinician Scientist Award

The Stroke Association Northern Ireland, in partnership with HSC R&D launched the Stroke Clinician Scientist Award on October 21st 2009. The £300,000 Stroke Clinician Scientist Award, the first of its kind in Northern Ireland, has been awarded to Dr David Wilson MD MRCP (UK) and will aim to generate more information about stroke, stroke medicine and to improve current services and treatment for people who have survived stroke.

Dr Wilson will be based at Queens University Belfast and will lead a 3-year study on tests to detect the risk of dementia in patients who have experienced a transient ischaemic attack (TIA) or 'mini stroke'. Patients who have experienced a TIA are at high risk of subsequently developing a stroke and multiple TIAs may lead to dementia. The study is designed to evaluate memory function after TIA and identify risk factors for subsequent strokes or memory problems. The study will evaluate several experimental blood tests of patients with a TIA to improve the diagnosis of TIA and to identify patients who are at risk of developing subsequent memory problems and strokes.

This would allow for earlier intervention and institution of preventative treatment.

Tom Richardson, Director of The Stroke Association NI, commented: "There are over 30,200 registered stroke survivors in Northern Ireland, many living with a disability caused by stroke. Cognition and dementia are devastating consequences for around 30% of people who have had a stroke. With approximately 250,000 people in the UK living with dementia because of a stroke and an estimated one million people expected to develop dementia in the next ten years, the Stroke Clinician Scientist Award is crucial in trying to reduce the number of stroke survivors being effect by this condition.
We are delighted to be working with HSC R&D on this project and we look forward to the results of this trial."

Dr David Wilson, recipient of the Stroke Clinician Scientist Award added: "I am looking forward to starting this research project and hope that it can lead to improvements in the care of patients affected by stroke. This research is the first of its kind in Northern Ireland and I hope it will lead to further developments into stroke research in the future."

Professor Bernie Hannigan, Director, Health Social Care Research & Development commented: HSC R&D is delighted to be working in partnership with The Stroke Association Northern Ireland in supporting this important award. In tandem with the NI Stroke Strategy, Dr Wilson's research will help with prevention of stroke and contribute to better outcomes for stroke survivors."

Pictured at the Lunch Event in the Long Gallery, Stormont are Tom Richardson, Director of the Stroke Association, Northern Ireland, Dr David Gibson, Dr Keiran Deeny MLA, Event Sponsor and Professor Bernie Hannigan, Director of HSC R&D

SUCCESS IN ATTRACTING FUNDING TO NORTHERN IRELAND

NATIONAL PREVENTION RESEARCH INITIATIVE

PARC STUDY: PHYSICAL ACTIVITY AND THE REJUVENATION OF CONNSWATER

Increasing the levels of physical activity has great potential for improving the health of our communities. The trend towards more sedentary lifestyles originates in changes to the environment in which we live and has a significant impact on health and wellbeing.

The Connswater Community Greenway recently won a Big Lottery Living Landmarks Award to undertake a major environmental improvement project in East Belfast, connecting 379 acres of public open space, building 43 bridges and 19Km of cycle and walkways. Around 40,000 people living adjacent to the Greenway will have improved opportunities for leisure, exercise, recreation and support for a healthier lifestyle.

Working with local community and statutory groups including four government departments, researchers from Queen's University Belfast have planned an evaluation of the effects of these changes on physical activity, health and wellbeing in individuals living near to the Greenway. The PARC study is a 5 year project which has been funded by the National Prevention Research Initiative. This is a national initiative made up of the four

UK health departments (including HSC R&D) research councils and major medical charities, working together to encourage and support research into chronic disease prevention. Its core aim is to develop and implement successful, cost-effective interventions that reduce people's risk of developing major diseases by influencing their health behaviours.

The aim of the PARC study is to assess (i) the impact of a range of community-based interventions to promote physical activity; (ii) the role of the local built environment, and of individual, community and organizational networks in terms of sustaining change and (iii) the cost-effectiveness of these approaches in changing physical activity levels.

To do this, there are a number of investigations planned. Firstly, we hope to consult with local community groups to determine what they consider are the best ways to promote activity within East Belfast. Feedback from this will be used to tailor interventions to meet the needs of local communities. The interventions that will be facilitated will include:

- Neighbourhood walking schemes
- Primary care-based exercise referral schemes
- Coordinated worksite promotion of physical activity (such as transportation, signage, stair use "competitions", provision of facilities such as showers and secure bike parking, and counselling and advice)
- Promotion of pedometer use through local employers, sports retailers, leisure facilities and health agencies
- Schools based initiatives (for example safe "walk to school" clubs)
- Local "champions", such as sports celebrities, to promote events in Greenway
- A variety of community-based social marketing initiatives using local newspapers and radio, churches and sports clubs, and internet or mobile phone-based awareness-raising.

The main focus of the research will be a face to face survey with 950 individuals living in the Greenway area on two occasions. This survey will be conducted in 2009 and 2013, to coincide with the beginning and end of the Greenway construction. The survey will ask about (i) attitudes to and levels of physical activity; (ii) perceptions of the characteristics of the environment associated with active travel and physical activity; (iii) individual social networks and their influence on behaviour; (iv) awareness of the social marketing interventions in the study area; (v) personal information including housing, employment, education, smoking and drinking and general health status.

This will be conducted at each participant's home by a professional interviewer.

The survey will be followed up with face to face interviews in a selection of 50 households from the Greenway area. They will be interviewed every year for five years to examine how people's perceptions of their locality changes.

An innovative "loyalty" scheme will also be introduced. This involves wearers of "wrist bands" containing a microchip, earning "points" according to how far they walk by swiping the wristband across sensors placed in strategic locations not only in the Greenway but also in local shopping Malls and in the stairwells of local buildings. Accumulated points are automatically archived on the person's own webpage of the CredX website (www.CredX.net), sent via a regular text message to their mobile phone, and can be redeemed at a variety of agreed retail outlets. The personal webpage will also contain motivational support for becoming more active and information about local facilities and events. Finally, information will be gathered about how many people use the facilities using observational methods, conducted by local trained community workers.

As well as informing policy on future redevelopment projects, we anticipate that the study will have direct benefits in the local area. The project will facilitate interventions to promote activity in the area and the results from the analysis will assist groups developing future health improvement initiatives and complex interventions..

SUCCESS IN ATTRACTING FUNDING TO NORTHERN IRELAND

CR-UK CANCER CENTRE

Belfast has joined the chain of Cancer Research UK Centres across the UK. These cancer centres draw together world class research and medical expertise to provide the best possible results for cancer patients. As one of the first centres, the Belfast Cancer Research UK Centre will help set the pace for national and international progress in cancers of the bowel and oesophagus and in breast cancer. Collaboration is a key to the success of the Centre which will focus on identifying new targets for cancer drugs, understanding how genes can help predict which treatment will be most effective and developing specific new treatments that have fewer side effects. Cancer Research UK already supports research in Northern Ireland but is looking to increase its contribution up to £2.5M a year to help develop the Centre.

The Centre aims to be a world leader in developing treatments tailored to individual cancer patients based on understanding the biology of the disease and how that varies among patients. It brings together the researchers and support from Queen's University Belfast, HSC R&D, Cancer Research UK and the Belfast Health and Social Care Trust.

Pictured at the launch is Harpal Kumar, Chief Executive of Cancer Research UK.

SUCCESS IN ATTRACTING FUNDING TO NORTHERN IRELAND

LIFELONG HEALTH & WELLBEING

COGWORKS - THE HEALTH AND WELLBEING HUB

School of Planning, Architecture & Civil Engineering, Queen's University Belfast.

COGWORKS is an international network of researchers funded under the Lifelong Health and Wellbeing (LLHW) programme and brings together five leading universities from Northern Ireland, Scotland and England. There are also strategic partnerships with universities and research centres worldwide. LLHW is a major cross-council initiative supporting multi-disciplinary research addressing factors across the life course that influences healthy ageing and wellbeing in later life. Phase 2 of LLHW is funded by the Research Councils in partnership with the four UK Health Departments.

COGWORKS will focus on four research themes which will be investigated through focus groups and literature review:

- maximising capacity to benefit across the life span;
- the impact of caring and disability on cognitive and related areas of mental health;
- the influence of the built environment on cognitive decline and wellbeing; and
- the provision of new cognitive technologies that support and monitor middle aged and older adults.

The Cognitive Health and Wellbeing Hub is an eclectic international and multidisciplinary research Network, whose goal is the identification of ubiquitous interventions that promote healthy cognitive ageing and independence in later life. The aim of the COGWORKS Network is to reflect the multi-factorial nature of the determinants of health, in the development of a strategy that will maximise research capacity to identify new strategies that are effective in the promotion of cognitive health and wellbeing.

By highlighting the economic and social gains of healthy cognitive ageing and exploiting embedded technologies, the emergent research strategy will be highly relevant to policy and practice.

For further information or to join the Network please contact Dr Karim:
Hadjri K.Hadjri@qub.ac.uk

SUPPORTING HSC RESEARCHERS
US-IRELAND RESEARCH PARTNERSHIPS AWARDS

A significant study on susceptibility to diabetes-associated nephropathy is one of the tri-partite US-Ireland-Northern Ireland R&D partnerships that were announced at a recent event hosted by the US Ambassador to Ireland in Dublin.

The event saw Minister for Employment and Learning Sir Reg Empey gather with Southern Minster for Labour Affairs Dara Calleary and Ambassador Dan Rooney to announce the partnerships on behalf of the US-Ireland R&D Partnership.

Sir Reg welcomed the announcement, saying: "The US-Ireland R&D Partnership is a ground-breaking agreement that will help to stimulate higher levels of innovation in Northern Ireland and accelerate both economic development and leading edge medical research.

By collaborating, we are pooling our respective research expertise and leveraging additional investment to support projects that will benefit each of our jurisdictions and make a significant contribution to the wellbeing of all our people."

The Partnership was established to develop innovations leading to economic development and improvements in health promotion and disease prevention by bringing together expertise from academic institutes in the US, Ireland and Northern Ireland. It is led by a steering group of senior representatives from each jurisdiction, with InterTradeIreland providing the secretariat for the group on the island of Ireland. Funding is provided by each jurisdiction separately with HSC R&D and the Medical Research Council together contributing almost £1M to the Diabetes study.

Entitled 'Genome-wide association studies of diabetic nephropathy', the project is led locally by Professor Peter Maxwell of Belfast HSC Trust and QUB. Collaborating institutions are UCD and Massachusetts General Hospital. The other three awards focus on nanotechnology and sensors, including their medical applications.

US Ambassador Dan Rooney welcomed these partnerships, saying: "These successful projects have come through a US review process that is the international gold standard for research excellence. "This clearly demonstrates the high quality of advanced research across the island of Ireland and adds greatly to its reputation as a centre of innovation that can compete on an international stage."

Sir Reg Empey and Professor Peter Maxwell

DEVELOPING HEALTH ECONOMICS CAPACITY

All Ireland – NCI - Cancer Consortium Health Economics Workshop

On 22 – 23 April 2009, the Health Research Board, Dublin, in conjunction with the US National Cancer Institute and HSC R&D held a Health Economics Workshop at Pearse St Library in Dublin.

The aim of the workshop was to bring the small health economics community in Ireland closer together with input from US collaborators. The workshop's comprehensive programme covered the effective use of data sources and the analysis of economic and social trends related to cancer. Sessions on cancer screening and global health policies were also included.

Notable attendees at the workshop were the initial awardees of HRB-NCI Health Economics Fellowships. The event both contributed to their knowledge of the field and allowed them to interact with their mentors for the NCI-based element of their PhD training.
The keynote speaker, Professor John Hutton, University of York, described the contribution of health economics and health policy research to improving healthcare for the population.
He presented the hierarchy of decisions often faced within the healthcare context including: the overall size of the health sector, allocation between service programmes e.g. primary care and hospital care, geographical allocation of resources, allocation between specialities, selection of service delivery models and the selection of technologies such as drugs, devices and procedures. In addition, he explained how health economics could help provide new information to assist in this type of complex decision making. He related specific examples from the UK and beyond of where the application of health economic approaches had provided a framework which encouraged transparency and the systematic use of evidence. He convincingly portrayed how such approaches increase the chance of maximizing health gain despite inevitably and increasingly constrained resources.

The audience was then introduced to many of the data sources currently available for use in health economic analyses in the US and Ireland. It became apparent that the different service delivery models also played a role in the type of research questions which could be posed and strengths and weaknesses of each approach were identified and discussed. The talks then progressed to explore the various cost dimensions of cancer to the population and the individual in all three jurisdictions, followed by a session on economic and policy modelling.

Day two opened with a series of presentations on cervical cancer screening improvements in the Netherlands and Ireland. The presenters concluded that modelling and cost-effectiveness are important methodologies and suggested that vaccination will have an important impact on approaches to cervical screening. Following on from this, the complexity of determining the impact of tobacco control policies was examined, prediction models were presented and lively group discussions ensued. The final formal sessions were diverse and wide-ranging and included measurement of the value of preventative services using clinically preventable burden and cost effectiveness, the adoption of innovation by hospitals and physicians and the effect of employer-provided health insurance on entrepreneurship.

In the closing session attendees participated in round-table discussions to establish health economic and health policy research priorities and identify areas for potential collaboration among the public health communities in Ireland and the US. All-in-all, the event attracted an excellent range of experts in health economics and cancer policy. The workshop was an important opportunity to discuss the current status of health economics policy and practice on the island of Ireland and in the US.

NCI/HRB/HSC R&D HEALTH ECONOMICS FELLOWSHIP

Ireland - Northern Ireland National Cancer Institute Cancer Consortium

Public Health Agency
Research & Development

The Ireland—Northern Ireland—National Cancer Institute Cancer Consortium, established in 1999, aims to provide world-class cancer care to people on the island of Ireland. The scope of the Consortium includes the development of joint programmes to enhance the environment for cancer control and educational exchange programmes for cancer control personnel on the island of Ireland. As part of the 2010 Consortium activities, the Health & Social Care R&D function of the Public Health Agency, (HSC R&D), invites applications for a Health Economics Fellowship award.

What are the objectives of this Fellowship?
This Fellowship programme aims to encourage successful applicants to pursue a career in health economics in Northern Ireland. The duration of the Fellowship will be four years leading to a PhD degree in health economics. The Fellowship includes ten months of coursework in health economics, cancer prevention and health policy, based mainly in Northern Ireland and the Republic of Ireland, followed by two years of mentored research at the National Cancer Institute (NCI) in Washington DC and a final year of mentored research at a Northern Ireland university.

Who should apply?
Applications are invited from graduates with a primary degree in a relevant discipline, e.g. epidemiology, (bio)statistics or economics. Applicants with degrees in medicine, pharmacy, health services research, social sciences or other sciences will also be considered. Specific training or experience in (health) economics is beneficial but not required. Applicants must be eligible for a J1 visa to work in the US.

When is the start date?
The Fellowship will begin in June 2010.

What does the Fellowship include?
HSC R&D will provide an annual studentship of £25,000 for four years, plus student fees, costs associated with travel and the cost of health insurance for the duration of the Fellow's stay in the US. Funds are provided to enable the Fellow to attend one appropriate scientific meeting per year of research.

What is the DEADLINE for applications?
Friday 15 January 2010 at 5 pm

Where can I get more information about the scheme?
Further information and detailed guidance notes on how to apply are available on the Health Research Board website at:
www.hrb.ie/research-strategy-funding/grants-and-fellowships/
For further information, you can also contact:
Dr Michael Neely
HSC R&D
t +44 (0)28 9055 3608
e michael.neely@hscni.net

HSC INNOVATIONS - TECHNOLOGY DEVELOPMENT FUND

The Technology Development Fund provides up to £25,000 for projects which develop technology innovations to a point at which they can be attractive to a commercial partner.

The next deadline for applications is 2nd March 2010. Application forms and more information about the Technology Development Fund are available from the HSC Innovations team in the Clinical Research Support Centre, by emailing: **innovations@crsc.n-i.nhs.uk or telephoning 028 9063 5794.**

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In Northern Ireland Health & Social Care is delivered on an integrated basis by a range of organisations that comprise the Health & Social Care (HSC)

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