

Institution: The University of Nottingham

Unit of Assessment: 3 (Nursing and Allied Health Professions)

a. Context

The unit's aim is to improve human physical and mental health through the introduction of innovations in health care practice and evidence-based policy. It draws on a diversity of research expertise and depth of knowledge among health care practitioners (doctors, nurses, midwives, occupational therapists), psychologists, sociologists and basic scientists. The unit's research spans the Schools of Health Sciences (75%) and Medicine (25%) and is organised into six distinct but overlapping research groups that conduct high-quality research to contribute to the health and wellbeing of both individuals and populations. Our five case studies provide examples of the national and international importance of our research across a range of healthcare settings and contexts and span across five of our six research groups:

Research Group / Theme	Title of impact case study
Mental Health	Recovery in mental health: Generating, translating and evaluating evidence in policy, practice and education. (CS1)
Sue Ryder Care Centre for the Study of Supportive, Palliative and End of Life Care	Improving understanding, implementation and uptake of advance care planning for end of life care. (CS2)
Maternal, Child and Public Health	
Rehabilitation and Ageing	Implementing evidence-based community stroke services. (CS3)
Education and Technology for Health	Implementing user-designed multimedia learning tools in healthcare contexts. (CS4)
Centre for Organizational Health and Development	Preventing psychosocial risks and work-related stress in Europe: Impact on policy and practice. (CS5)

The impact of our research broadly falls into the following categories:

Health and welfare: Work in both the mental health and rehabilitation research groups has led to changes in care practice with the introduction of 'recovery colleges' for mental health patients (CS1) and Early Supported Discharge for stroke patients (CS3). These new practices have improved patient experience and outcomes.

Public policies and services: Our research has directly led to changes in a wide range of national policy guidelines across mental health (CS1), end of life care (CS2), rehabilitation (CS3), and psychosocial risk management (CS5). Beyond the case studies, further examples include:

- Bath-Hextall's work on non-melanoma skin cancer, which informed 2011 NICE Public Health Guidance PH32 for skin cancer prevention (<http://guidance.nice.org.uk/PH32>);
- Work on preventing childhood injuries (Mulaney, Watson) informing the February 2013 NHS Evidence Update relevant to the 2010 NICE Public Health Guidance PH29 summarising strategies to prevent unintentional injuries among children and young people (<https://www.evidence.nhs.uk/evidence-update-29>);
- Work on peritoneal dialysis (Boateng and East) informing the November 2012 NHS Evidence Update that summarised selected new evidence relevant to the 2011 NICE Clinical Guideline CG125 (<https://www.evidence.nhs.uk/evidence-update-25>).
- Work by Collier to develop clinical referral guidance for children with symptoms and signs of brain tumour. This guidance was endorsed by the Royal College of Paediatrics and Child Health (2008), received NICE NHS Evidence accreditation (2011) and is the focus of a public and professional awareness campaign, HeadSmart (www.headsmart.org.uk).

Practitioners and services: Our work has been crucial in influencing healthcare practice and wider industry through professional bodies such as the Royal College of Psychiatry (CS1), the College of Occupational Therapy (CS1), the Royal College of Nursing (CS1), the Royal College of Physicians (CS2) and the UK Engineering Employers' Federation (CS5).

International development: The international importance of our work to improve healthcare practice and public well-being reaches individuals, organisations and institutions across the globe. For example, key materials in CS1 have been translated into Italian, German, French and

Japanese. Stroke care research (CS3) has been crucial to the redevelopment of stroke services in both Perth and Sydney, Australia. Our research on end of life care (CS2) has been cited as an exemplar by the World Health Organisation (WHO) and has informed European guidelines for end of life decision making. The psychosocial risk management framework (CS5) has been adopted by the WHO, has informed the Belgian Ministry of Employment, Labour and Social Dialogue and has been adopted by Statoil ASA resulting in a 20% reduction in work-related stress levels (among the company's 21,000 employees worldwide). Our healthcare learning tools (CS4) are changing medical education and training nationally (London Deanery, City & Hackney PCT) and internationally (Rutgers University, University of Minnesota, University of Sydney), including resource-poor countries such as South Sudan.

Society, culture and creativity: We have brought sensitive issues such as mental distress and end of life care to wide public attention to stimulate debate and improve the quality and effectiveness of healthcare practice in these areas, see CS1 and CS2.

b. Approach to impact

To maximise impact from our research, we have adopted an integrated approach comprised of three main strands:

- Building communities of healthcare professionals
- Establishing and extending interdisciplinary partnerships and pathways to extend reach
- Involving users and stakeholders (PPI) at all stages of the research process to ensure research is user-focused, timely and relevant.

Building communities of healthcare professionals

We have built 'communities of practice' to increase the capacity in the health and social community for accessing, appraising and using research evidence and to encourage greater engagement and exchange between University researchers and health and social care professionals and their organisations. This ensures that the unit's research has direct and lasting benefit to (and can be readily implemented by) staff within partner organisations. Two examples of this approach are:

- Our partnership with the Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for Nottinghamshire, Derbyshire and Lincolnshire (NDL). This has been pivotal in building communities of healthcare professionals through encouraging individuals in stakeholder organisations to become CLAHRC associates; the employment of 23 CLAHRC diffusion fellows (drawn from NHS partners) who work locally and regionally to enable knowledge exchange across its themes; and the hosting conferences and workshops to develop and sustain networks. Evidence collected through this partnership suggests many CLAHRC NDL studies result in accelerated implementation for practice-based research (within 3.5 years compared to a national average of 17 years).
- The Sue Ryder Care Centre's involvement in the five-year (2006-11) national £1.8M 'The Cancer Experiences Collaborative' (CECo), funded by the National Institute for Cancer Research. Employing a similar strategic model to CLAHRC and specifically relating to research in supportive, palliative and end of life care, the Sue Ryder Care Centre (School of Health Sciences) was one of five University partners (alongside Manchester, Lancaster, Southampton and Liverpool) in this capacity-building network for supportive and palliative care.

Establishing and extending interdisciplinary partnerships and pathways

Interdisciplinary partnerships and collaborations with other University departments and through liaison nationally and internationally have enabled us to reach audiences that may not otherwise be our immediate points of reference. Within the University, these partnerships include:

- NIHR-funded Biomedical Research Units (BRUs) in Digestive Diseases and Hearing involving our Mental Health and Education and Technology for Health research groups respectively;
- CLAHRC working with our Mental Health, Sue Ryder Care Centre and Rehabilitation and Ageing research groups;
- The Children's Clinical Research Facility working with our Maternal, Child and Public Health and Mental Health research groups;
- The Centre for Evidence-Based Dermatology working with our Sue Ryder Care Centre;
- The Arthritis Research UK Pain Centre working with the Rehabilitation and Ageing group.

Impact template (REF3a)

Further collaborations have been facilitated using University knowledge exchange funding schemes, including Hermes Fellowships and Innovation Fellowships.

Our unique work in skin cancer, an activity of the Sue Ryder Care Centre research group, has involved leadership of an interdisciplinary group, including collaboration with the British Geological Survey. Two large databases – the British Geological Survey baseline geochemical dataset and the THIN database – were linked to provide a unique and powerful resource that has enabled healthcare and environmental scientists and policy professionals to investigate the effects of the biosphere on human health.

Involving users and stakeholders (PPI) in all stages of the research process

A key element our approach to impact is to encourage research groups across this unit to have active user involvement forums. Working closely with CLAHRC and the Patient and Public Involvement (PPI) lead in the Nottingham University Hospitals Foundation Trust, we have established lay advisory boards across our portfolio of research. Immense importance is given to the involvement of users and stakeholders at all stages of the research process so that our research addresses pertinent questions, adopts methodologies that are appropriate and accessible and has direct and significant impacts on healthcare practice and processes. The facilitated involvement of users led to the development of all of the supportive educational tools by the Technology for Education and Health research group, which are becoming national and international resources. PPI underlies the successful development and evaluation of the recovery model in mental health and of the Early Supported Discharge model for stroke patients.

c. Strategy and plans

Our strategic approach is to build upon the strengths of our three strands stated above, continuing to support our staff to develop relationships with research users.

Building communities of healthcare professionals

The unit will continue to develop its wide practitioner-researcher network by:

- Expanding invitations to our seminar programmes to achieve a balance between practitioner/user-led and academic-led research;
- Improving accessibility and utility of our website for practitioners and users;
- Actively participating in the development of an Academic Health Sciences Network, which will allow improved and quicker translation into practice of health and social care innovations;
- Continuing to mentor NHS staff to increase research capacity and capability with particular focus on delivering impact from research. Early indicators suggest this is proving successful, with 11 out of the 14 Masters in Research Methods 2013 students mentored by unit staff;
- The development, following the model of the CLAHRC, of a unit-wide approach to the publication of bite-sized briefing papers for a variety of user audiences.

Establishing and extending interdisciplinary partnerships and pathways

The unit will continue to promote the development of interdisciplinary partnerships by:

- Continuing to build staff capacity and skills in engagement, influence and impact through workshops with internal and external speakers to develop knowledge and understanding of engagement, influence and impact. Examples of these sessions to date include 'The importance of networking' (2011) and 'What is impact?' (2013);
- Preparing and effecting guidance for enabling and evidencing impact (by the research governance teams in both Schools) to enable staff to understand and evaluate the impact of their research;
- Promoting networking and knowledge exchange, which are embedded into our 'expectations' for research staff at all levels and recognised within both the workload model and the staff performance development and review process;
- Providing networking funding opportunities for research staff;
- Supporting senior staff to undertake leadership training, with a view to high-level engagement in the policy and third sectors.

Involving users and stakeholders

We are currently undertaking a scoping exercise of the mechanisms currently in place across the unit to involve stakeholders and service users in research development, diffusion and uptake. This exercise will be completed early in 2014 and will inform a unit-wide approach.

Impact template (REF3a)

Underpinning our strategy is the development of a full-time position for a business development / knowledge exchange officer. To this end, the School of Health Sciences is working closely with the University's Business Engagement and Innovation Services department.

d. Relationship to case studies**The development of communities of practice**

The importance of our relationship with the local CLAHRC is exemplified by case studies 1 and 3, on recovery in mental health and Early Supported Discharge in stroke. In relation to the NIHR funded Cancer Experiences Collaborative (CECo) Nottingham co-led (with Lancaster) a national programme of work on older people and palliative care. This programme of research led the development of the user involvement approach employed throughout CECo and reflected in CS2. CECo worked in partnership with 26 other UK organisations, including the four largest hospices in England, hospital cancer centres in Manchester, Southampton and Nottingham, Help the Hospices and user representatives. For details of how Nottingham's research has contributed to this wider portfolio, please see CS2.

The development of interdisciplinary partnerships

The involvement of researchers from the education and technology for health research theme with the Hearing BRU has resulted in the development of a national educational tool for all hearing aid users (CS4).

Selected examples of our national collaborations include involvement in the NIHR Stroke Research Network, the Palliative and Supportive Care Clinical Studies Group (National Cancer Research Institute) and the NIHR Mental Health Research Network, all of which have helped to promote the pathway to impact for case studies 1-3.

The research detailed in CS5 provides a clear example of how our international links have helped to develop our research to produce global impact. Specifically, the involvement of Dr Leka with the World Health Organisation has ensured that the framework for risk management is utilised worldwide with significant reductions in levels of workplace stress.

The involvement of users and stakeholders at all stages of the research process

- The Sue Ryder Care Centre collaborated with colleagues across the region (at Sheffield and De Montfort) to convene the Palliative Care Advisory Group (http://transitionstopalliativecare.co.uk/index.php?mact=Uploads,m83bad,getfile,1&m83baduplo ad_id=23&m83badreturnid=59&page=59). The group's aim was to create a more systematic approach to harness the expertise and perspectives of service users about the design, implementation and dissemination of the research. One group of bereaved older carers who belong to the wider advisory group co-wrote two briefing papers as a result of their engagement in research in the Centre, funded by Macmillan Cancer Support under their 'user-led' scheme (<http://www.nottingham.ac.uk/research/groups/srcc/documents/projects/srcc-project-report-caring-older-carers.pdf>; <http://www.nottingham.ac.uk/research/groups/srcc/documents/projects/srcc-project-report-caring-support-needs.pdf>). They are now collaborators in new applied research on the support of carers providing end of life care – a project they helped to design, commissioned by Dimpleby Cancer Care/Macmillan Cancer Support.
- In mental health, Callaghan and colleagues from Manchester trained mental health service users in research methods, and this training has been commissioned by the Mental Health Research Network nationally. Three service users who attended this training became co-applicants in a £1.8M, NIHR-funded Programme Grant in Applied Research application. Further details are provided in CS1.
- Research on stroke care involved the Nottingham Stroke Research Consumer Group, a team of stroke survivors who work proactively to ensure the needs and wishes of stroke survivors are embedded at the heart of research and service development. The group provided advice on research proposals, and individual members sit on research project steering committees. Mr Ossie Newell MBE has worked tirelessly following his stroke to develop this initiative and pioneered 'Atastroke' (www.atastroke.org.uk), a Nottingham group dedicated to supporting stroke survivors and their carers.