



Council of Deans  
of Health

■ **Care Transformed:**

The impact of nursing,  
midwifery and allied health  
professional research

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CARE  
TRANSFORMED  
RESEARCH  
health  
nursing  
education  
midwifery  
allied health  
learning



*For the first time, the 2014 Research Excellence Framework has included a measure of the impact of research, with UK universities submitting case studies across the disciplines. In the case of academic research undertaken by nurses, midwives and AHPs, these case studies give us a unique window on how outcomes for people experiencing health and social care are being transformed by their work.*

*This is research that results in older people falling less; fewer pressure ulcers after surgery; people with disabilities having access to community based rehabilitation; safe access to medication for millions of people from specially trained nurses, midwives and physiotherapists; and better rehabilitation for stroke survivors. If biomedical research is one building block of people's experience of care, then this research: applied, patient-centred, solving problems in practice, is equally significant.*

*As we celebrate the world-leading research that nurses, midwives and AHPs are undertaking in our universities, we need to recognise that there is much more that research can do to improve outcomes for people using health and social care services over the next decade.*

*We need commitments from the major research funders to applied health research that will see it flourish in the coming decade. We need to accept the challenge to keep pushing to develop capacity in our universities to carry out ground-breaking research. And we need to make sure that the connection between research, education and evidence-based practice is understood across the health and higher education sectors. As these case studies demonstrate, unlocking the research talents of nurses, midwives and AHPs is nothing less than a commitment to transformed care itself.*



*Professor Dame Jessica Corner  
Chair, Council of Deans of Health*

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### Cancer Care

Cancer survival rates have doubled in the last 40 years, with half of people diagnosed with cancer now surviving their disease for at least ten years.

There are currently two million cancer survivors in the UK. This is predicted to become six million by 2050, by which time more than 50 per cent of the UK population are expected to have experienced a cancer diagnosis.

### Medicines Management

The prescription of medicines is the most common intervention that patients receive for the management of medical conditions.

The UK is a world leader in progressive policy and practice for non-medical prescribing, underpinned by research which has shifted prescription from a doctor-only model to one that now allows a range of healthcare professionals to train to be able to prescribe a wide range of medicines.

## Improving Cancer Care and Support

The loss in UK productivity from cancer survivors being unable to undertake work is estimated at £5.49 billion and even modest improvements in survivors' return to work has considerable economic impact as well as on individuals' lives.

The University of Manchester was the first to publish the UK's rate of return to work for cancer survivors and explore factors that make returning to work difficult. This has contributed to the development of national vocational rehabilitation and employer support, affecting 700,000 survivors across the UK. The evidence was also instrumental in supporting the Macmillan Cancer Support/Citizens Advice Bureau specialist cancer benefits advice service, which is estimated to have helped over 39,000 people.

Research by the University of Manchester has also shown that older women in the UK are substantially less likely to receive standard treatment for operable breast cancer than younger women, impacting on 10,060 older breast cancer sufferers in England each year. Cited by the Cancer Reform Strategy in setting up the National Cancer Equality Initiative, this research has also led to a proposal for age to be used as a key measure of treatment equality.

Malnutrition in pre-operative colorectal cancer patients is a substantial problem. Researchers in the same group have improved the use of a Malnutrition Universal Nutritional Screening Tool (MUST) in tackling malnutrition amongst inpatients. This malnutrition screening alone is improving care for nearly 100,000 patients annually in Greater Manchester.

Family support is of vital importance for patients with cancer. With evidence on the adverse impact of caring on families, researchers developed, tested and implemented the Carer Support Needs Assessment Tool (CSNAT). This has been implemented in nine palliative care home care services in the UK and one in Australia. The UK services alone support 4100–4600 carers a year and another 40 UK home care services are currently implementing the tool.

## Transforming Care for Cancer Survivors

Using ground-breaking research methods to work with people affected by cancer across the UK, including training cancer service users as co-researchers, the Macmillan Survivorship Research Group at the University of Southampton found that the wide-ranging impact of cancer on everyday life and the need for support to self-manage were survivors' highest priorities, even over and above research into new treatments.

The group led analysis of national survey data comparing cancer survivors' health outcomes with healthy individuals and those with long-term conditions. This showed for the first time

that UK cancer survivors have similar health profiles and service needs as those living with other long term conditions. Collaborating with the University of Leeds, the researchers also led the 2012 national survey of all colorectal cancer patients in England—the first comprehensive survey of cancer survivors' health outcomes in the world.

The research has been central to the creation of the Department of Health's National Cancer Survivorship Initiative (NCSI), with new models of cancer aftercare being implemented across the UK that will directly benefit more than a million people.

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*"Over 19,000 nurses and 2,000 pharmacists now independently prescribe medicines directly to patients across the most comprehensive range of medicines in the world."*

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## Medicines Management: Non-medical Prescribing & Reducing Errors

Research at the University of Southampton has driven major changes in non-medical prescribing (NMP) legislation. As a result, over 19,000 nurses and 2,000 pharmacists now independently prescribe medicines directly to patients across the most comprehensive range of medicines in the world. This amounts to four million prescriptions per year in England.

NMP has had a major impact on the quality and efficiency of healthcare, particularly in enabling patients to access prescribed medicines faster. Study results have also contributed to a recent extension of independent prescribing powers to physiotherapists and podiatrists and have widely influenced international NMP policy development.

Research by the University of Bradford into medication error management has directly led to change to mitigate potential harm across the 49 children's hospice services in the UK.

Implementation of a research-informed medicines management toolkit co-produced by the University and Children's Hospices UK (now Together for Short Lives) resulted in hospices identifying key vulnerabilities and using guidance from the toolkit to make significant service improvements.

The impact of this research has resulted in stronger systems for error reporting, including the analysis of contributory factors. As a result, staff are now identifying more errors and near misses, reducing risk to children.

## Improving Recovery in Mental Health

University of Nottingham research in the field of recovery (the process through which people find ways of living meaningful lives with or without the symptoms of their condition) has had a major influence on changes in mental health policy. It has led to a new model of service provision both in the UK (including through NICE guidance and the NHS's outcomes framework) and internationally (including in Western Europe, Scandinavia, Canada, Australia and Asia).

The work has contributed to a reduction in

the use of mainstream services and has enhanced the quality of life enjoyed by people with mental health problems.

The research has also been central to the Department of Health's Implementing Recovery through Organisational Change programme, which has pioneered the use of Recovery Colleges and peer support workers (PSW) in mental health care in the UK. The University created the UK's first accredited PSW training programme which has trained more than 550 people.

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## Promoting Mental Health in the Workplace

Research by The University of Nottingham has played a leading role in developing national, international and industry guidance on practical approaches to tackling the problem of psychosocial risks in the workplace.

The European Commission, the World Health Organisation, the Health and Safety Executive, major global corporations and small and medium-sized businesses have supported and adopted the frameworks and recommendations resulting from this work.

In the UK alone the guidance is estimated to have contributed to a saving of almost £2bn over 10 years by helping to improve employees' health and so reducing the costs associated with work-related illness.

A recent evaluation by the Health and Safety Executive (HSE) showed that between 2001/2002 and 2010/2011 the number of self-reported new cases of work-related illness fell by 43,000 and the total number of cases by 69,000, an overall reduction of 8.5%.

The economic benefits of the fall in cases of work-related illness have been considerable with the HSE estimating that on average the overall cost (to the individual, the NHS and the economy) of a case of work-related ill health is £16,000. Estimates of an approximate cost saving of £1.1 billion (for prevalence) and £686 million (for incidence) between 2001/2002 and 2010/2011 were described by the HSE's Economic and Social Analysis Unit as 'conservative'.



## Better Care for Survivors of Psychological Trauma

Researchers at Edinburgh Napier University have pioneered the treatment of Post-Traumatic Stress Disorder (PTSD), a debilitating condition that affects many thousands of adults and children in the UK. Trials have shown the effectiveness of recommended treatments for PTSD and of a new intervention, Emotional Freedom Techniques (EFT), influencing NICE guidance. The researchers have also carried out work on trauma survivors' own perspectives on treatment and recovery, leading to individual, group and self-help interventions that support recovery and training for health and social care professionals across Scotland.

## Reducing Work-Related Stress

Research conducted over the last 15 years at the University of Bedfordshire has made a significant contribution to enhancing knowledge of what underpins work-related wellbeing and ways in which resilience can be enhanced, particularly for social workers and employees in the higher education (HE) sector. In HE this research has informed professional bodies and Parliament in the development of workload management models and approaches to change management. In social work, the research is being used by national bodies to illustrate how emotional reactions to practice can impact on wellbeing and service provision, with many thousands of social workers accessing online resources designed by the researchers.

### Mental Health

Almost a quarter of the population will experience a mental health problem in the course of a year.

In addition to the impact on individuals and their families, this has significant economic implications. In 2009-10 the estimated economic and social cost of mental health problems in England was £105 billion. Additional estimates put the cost of mental illness for Northern Ireland at around £3 billion, Wales £7 billion and Scotland £9 billion. NHS spending on mental health services alone came to around £10 billion in 2008-09.

It is estimated that absence from work due to mental ill health costs around £8 billion per year (70 million working days missed each year, or an average of 2.8 days per year per UK employee).

Lost productivity (including presenteeism, where mental health issues lessen work performance) costs £15 billion and replacing staff who leave their posts because of mental illness costs employers £2 billion.

## Stroke Rehabilitation

Strokes affect 150,000 people every year in the UK. 3 in 4 people now survive a stroke; as a result there are 1.1 million stroke survivors living in the UK. Recovery and rehabilitation after a stroke is crucial; but although stroke is the third largest cause of death in the UK, and one of the major causes of adult disability, only 0.5% of research funding is spent on stroke research.

## Speech, Language & Communication

Speech, language/communication problems and swallowing disorders affect 90 per cent of the 1.5m people in the UK with a learning disability, 700,000 people with dementia and 50,000 people who have a stroke annually.

Speech and Language Therapy is a cost effective way to improve quality of life, providing an estimated net benefit of £765m through increased lifetime earnings, reduced illnesses and savings associated with improved quality of life.

## Reshaping Stroke Rehabilitation

Prior to 2006, no post-stroke self-management programmes existed in the UK. Developed by researchers at Kingston University, Bridges is the first individualised stroke specific self-management programme. The programme has been shown to improve quality of life and self-efficacy during stroke rehabilitation. Training has been delivered to 1,200 health and social care practitioners, promoting integration of self-management methods into practice.

Early Supported Discharge (ESD) may reduce years of life lost to stroke by 1400, and represents a saving of £15,100 per 100,000 stroke survivors, providing better and more cost-effective outcomes than hospital based rehabilitations for stroke survivors with moderate disabilities. Research carried out by The University of Nottingham's Division of Rehabilitation and Ageing has built the evidence base for ESD through qualitative and implementation studies, used to shape better working practices between acute and community stroke services, facilitate communication across teams and support evidence based practice.

Research into the use of Functional Electrical Stimulation (FES) at the University of Southampton has led to the development and routine implementation of this innovative technology in over 70 countries, supporting 85,000 people to regain upper limb mobility and improve gait following a stroke. The research has also practically addressed the need to provide home-based rehabilitation; FES provides cost-effective rehabilitation through reducing reliance on more expensive one-to-one therapy.

The University of Central Lancashire has led the first study to show a positive impact of a talk-based psychological intervention following a stroke; developing a person-centred, directive talking therapy, based on Motivational Interviewing. This research is included in Cochrane systematic reviews exploring psychological support post-stroke and has been used to inform the National Clinical Guideline for Stroke on managing psychological problems.

## Assessing and Enhancing Communication

Collaboration between education and disability services and researchers at Manchester Metropolitan University has led to the development and implementation of evidence-based guidelines and interventions for adults with complex learning disabilities who have communication difficulties. This has led to the development of the only communication assessment with well-researched psychometric properties as well as curriculum guidelines for children with severe learning difficulties.

Delayed language development affects up to 20% of children at school entry, rising to 40% in the most socially disadvantaged populations. Many of these children struggle with reading, writing and other academic subjects. Research at Newcastle University has explored links between speech, language

and social disadvantage, influencing policy and raising practitioners' awareness of 60 evidence-based interventions available for children with speech and communication needs.

Aphasia is a communication disorder following a brain injury that can affect the understanding and production of spoken and written language which affects 250,000 people in the UK. The Comprehensive Aphasia Test has been developed by researchers at Newcastle University and other Speech and Language Therapists to facilitate rapid and reliable diagnosis; supporting targeted therapy with set goals and allowing a clear profile of a person's aphasia to be built up. 1600 copies of the test have already been sold across the UK and internationally.

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## Organ Donation

Minority ethnic communities are at greater risk of developing organ failure for a number reasons, ranging from genetic predisposition and increased prevalence of underlying conditions and poorer access to, and uptake of services.

Research at the University of Bedfordshire focusing on organ donation among BME communities and faith groups has been instrumental in changing policy in this field. This has included a recommendation from the Government's Organ Donation Taskforce that

organ donation should be made more visible among BME communities and subsequent NICE Guidelines that specifically refer to the need to address faith and cultural issues for families and relevant training for staff in relation to organ donation.

The research has resulted in new training for all specialist nurses employed by NHS Blood and Transplant (NHSBT); since this training and the national campaigns there has been an increase in organ donor registrations from BME communities.

## Falls Prevention

Falls have a huge impact on older people's lives; a third of people over 65 fall every year, costing the NHS and social care up to £5.6 million each day.

Research by the University of Manchester has contributed to reducing the burden of falls worldwide. The University demonstrated that falls are better predictors of fracture than bone density and then developed an effective intervention, the Falls Efficacy Scale International (FES-I), that reduces falls among older people by 30%.

By 2012 54% of NHS Trusts were using training programmes based on the research,

which showed that older people are more likely to be motivated by falls prevention services that emphasise the positive benefits of maintaining and improving independence than by an emphasis on reducing risk.

The research has impacted on policy making in the UK and worldwide. This has included changes to AgeUK and DH national policy on falls prevention, directly influencing the WHO 2007 Global Report on Falls, contributing to a national TV campaign on falls prevention in The Netherlands and implementation in a falls prevention curriculum in Canada. FES-I has been translated into 30 languages.

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## Mapping Dementia Development

The University of Bradford's Dementia Research Group has developed the Person-Centred Care (PCC) model and Dementia Care Mapping (DCM) to support the best possible care for people with dementia. In England, PCC and DCM are now integral to NICE guidelines and DCM is endorsed by the National Audit Office; regulators used a framework derived from DCM to audit care. Since 2008, 3616 practitioners have been trained in DCM in the UK, with training also given to 10,000 staff in 300 Bupa care homes

## Keeping Warm in Later Life

Every year, 20,000 more people aged over 65 die in winter months than in other months. Interdisciplinary research at Sheffield Hallam University has provided a unique understanding of the complex environment and multiple factors influencing older people keeping warm and well in the winter. The Keeping Warm in Later Life Project has improved understanding of health behaviour and inequalities in groups vulnerable to cold related illness and death at national and local level, informing the DH Cold Weather Plan, fuel poverty policy and local preparedness for winter.

*Care Transformed: the impact of nursing, midwifery and allied health professional research*



## Preventing Pressure Ulcers

Pressure ulcers occur in patients with reduced mobility when the skin is damaged by sustained pressure on areas of the body that are not used to it, for example the lower back or heels.

Using large representative populations and analytical methods to separate out the true effect, researchers at the University of Leeds identified independent risk factors associated with pressure ulcer development. Its research has made a significant contribution to the evidence base for choosing the most cost-effective mattress to prevent pressure ulcers, showing that patients have a better tolerance of alternating pressure (AP) mattress replacements rather than overlays and that there is an 80% probability that this is more cost-effective. Researchers also found a 47% reduction in the incidence of post-operative pressure ulcers through use of a polymer pad operating table overlay.

This evidence is now included in the most wide-reaching guidelines on pressure ulcer prevention used globally, including the European Pressure Ulcer Advisory Panel Guidance, which has been translated into 17 languages and is used across Europe, Asia and South America.

## Care of the Elderly

10 million people in the UK are over 65 years old, making up two thirds of people admitted to hospital and accounting for the majority of health expenditure.

With this number likely to double by 2050 ; the ageing population in the UK is one of the major challenges facing the NHS.

As people are living longer, their care needs are also becoming increasingly complex; 40% of those over 65 have a limiting longstanding illness, whilst 69% of people over 85 have a disability or long term illness .

## Pressure Ulcers

Almost half a million people in the UK are affected by pressure ulcers every year. Pressure ulcers can result in damage that reaches fat, muscle and bone and are reportable clinical incidents within the NHS. As well as the impact on patients' lives, it is estimated that they cost the NHS £1.4-£2.1 billion annually.

## Self-Management

15 million people in England have one or more long term conditions. People with long term conditions are the most frequent users of health services and account for 70% of NHS spending. Around 70-80% of people with long-term conditions can be supported to manage their own conditions.

Self-management programmes have been shown to improve health outcomes, increase confidence and reduce anxiety; person-centred care could also reduce costs by £452 per patient per year.

## A Healthy Start

The foundations of good health are laid at the start of life. Babies that are breastfed have less chance of getting infections or becoming obese and developing type two diabetes. There are however significant issues for child health in the UK: more than one in five children in the UK are overweight or obese by the age of three, putting them at higher risk of type two diabetes and heart disease, and shortening life expectancy.

## Supporting Self-Management

Research at the University of East Anglia has played a significant role in supporting the implementation of Community Based Rehabilitation (CBR) in developing countries, through major contributions to the world report on disability and WHO guidelines and the development of developing global networks of practitioners and researchers. The CBR research has had an impact on a global scale, supporting equalisation of opportunity, poverty reduction and social inclusion of people with disabilities in low and middle income countries; and promoting an approach that recognises that disability is influenced by social factors and the wider context in which a person with disability lives. The research advocates community orientated responses which recognise the multi-dimensional nature of disability, enabling increased independence and enhanced mobility.

There are 100,700 people in the UK with multiple sclerosis (MS) and each year 5,000 people are newly diagnosed with the condition. Research at Brunel University London has demonstrated the importance of self-care strategies used by people with MS to enhance community living and has led to the implementation of tailored self-management interventions, significantly improving quality of life and ability to live independently in the community. Their research was the only Randomised Controlled Trial (RCT) used to inform the National Collaborating Centre for Chronic Conditions' guidelines for MS and directly underpins the recommendation related to encouraging self-management and autonomy.

On the basis of evidence from the US and pioneering research at Coventry University, the Chief Medical Officer concluded in 2001 that the NHS should provide support for self-management through programmes such as the Expert Patient Programme. The University's researchers have now developed self-management programmes such as the Help to Overcome Problems Effectively (HOPE) Programme, with uptake by local, national and international providers. The programmes impact positively on patient reported outcome measures such as pain, fatigue and depression, are cost-effective and produce a social return on investment.

## A Healthy Start

Around 800 children are born each year in England with congenital bilateral hearing loss, with significant consequences for language development and social-emotional wellbeing. Interdisciplinary research carried out at the University of Manchester since 1997 made the case for implementation of universal newborn hearing screening in England; now the NHS standard of care. Since 2006, five million babies have been screened and 9,500 identified with permanent bilateral hearing loss. Follow on research has informed early intervention developments around the world, improving outcomes for deaf children and their families through improved assessment, management and support of very young infants.

The APPLES study led by researchers at Leeds Beckett University was one of the first studies to highlight the increasing prevalence of childhood obesity within the UK in the late 1990s. Further studies have shown that the early years are a critical period to address obesity risk factors. As a result, a community based childhood obesity treatment programme has been developed which has been used by commissioners of weight management services; the data emerging from this is making a major contribution to understanding the effectiveness of community-based interventions. Research carried out by this team continues to inform NICE guidance, WHO reports and policy making.

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Intervention rates in childbirth such as caesarean and operative births are associated with physical and psychological morbidity as well as increased costs - each 1% increase in C-section rates costs the NHS £5 million.

Research led by the University of Central Lancashire provided the catalyst for the UK's Normal Birth Campaign, which aims to achieve normal births for 60% of women in the UK, and led to a change in the UK definition of normal childbirth.

Their work has raised awareness of the benefit of positive, relational based solutions for maternity care, including self-hypnosis for labour pain and has influenced professional training for national and international practitioners.

Breastfeeding improves quality of life both for women, through the reduction of incidence of breast cancer, and for children through reducing acute and chronic diseases.

Research by Bournemouth University into the obstacles and facilitators for breastfeeding has influenced policy and guidelines in both the UK and Australia and informed research-based training modules for midwives and other professionals. Online resources developed as a result of this work are used by around 1,500 breastfeeding mothers around the world every month. The promotion of, and support for, breastfeeding contributes to improvements in individual wellbeing and reductions in both health inequalities and health care costs.

## Further Information

University of Manchester – Cancer Care

<http://www.nursing.manchester.ac.uk/research/researchgroups/cancersupportive/>

University of Southampton – Cancer, Non-medical Prescribing and FES

<https://www.southampton.ac.uk/healthsciences/research/impact.page?>

University of Bradford – Reducing Medication Errors

<http://www.bradford.ac.uk/research/our-research-impact/people-society/medicines-children.php>

The University of Nottingham – PRIMA-EF Guidance on the European Framework for Psychosocial Risk Management

[http://www.who.int/occupational\\_health/publications/PRIMA-EF%20Guidance\\_9.pdf](http://www.who.int/occupational_health/publications/PRIMA-EF%20Guidance_9.pdf)

Kingston University – Bridges Programme

<http://www.bridges-stroke.org.uk/>

The University of Nottingham – Stroke Rehabilitation

<http://www.nottingham.ac.uk/research/groups/strokerehabilitation/index.aspx>

University of Newcastle – Aphasia Resources

<http://research.ncl.ac.uk/aphasia/resourcestherapy.html>

University of Bedfordshire – Organ Donation and Transplant Research Centre

<http://www.beds.ac.uk/research/ihr/odtc>

University of Manchester – Postural Stability Instructor training

<http://www.laterlifetraining.co.uk/courses/postural-stability-instructor/>

University of Bradford – Dementia Research Group

<http://www.bradford.ac.uk/health/career-areas/bradford-dementia-group/research/>

Sheffield Hallam University – Keeping Warm in Later Life

<http://kwillt.org/>

University of Leeds – Pressure Ulcer Prevention

<http://ctru.leeds.ac.uk/Skin>

University of East Anglia – Pan-African Community Based Rehabilitation Network (Afri-CAN)

<http://www.afri-can.org/>

Brunel University – MS Professionals Network

<http://www.mssociety.org.uk/join-the-professional-network>

Coventry University – HOPE Programme

<https://hopeprogramme.coventry.ac.uk/>

University of Manchester – Early Intervention Feedback Questionnaire

<https://apps.mhs.manchester.ac.uk/surveys/TakeSurvey.aspx?SurveyID=g22Ln02>

University of Central Lancashire – Normal Birth Campaign

<http://www.rcmnormalbirth.org.uk/>

University of Bournemouth – Online Breastfeeding Resource

<http://www.healthtalk.org/peoples-experiences/pregnancy-children/breastfeeding/topics>

➤ The Council of Deans of Health is the representative voice of the 85 UK university health faculties providing education and research for nursing, midwifery and the allied health professions. We aim to influence health and higher education policies that impact on the development of an expert healthcare professional workforce across the UK and build partnerships that help demonstrate and support the contribution of our members to research.

➤ [www.councilofdeans.org.uk](http://www.councilofdeans.org.uk)



**Council of Deans of Health**

Woburn House, 20 Tavistock Square

London WC1H 9HD

0207 419 5520

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