



C|A|R|D|I

Fellow

Leadership Programme in Ageing Research

About CARDI

CARDI, established in 2007, is a non-profit organisation developed by leaders from the ageing field across Ireland, North and South, including age-focused researchers, academics, statutory, voluntary and community sector representatives with support from The Atlantic Philanthropies. It is hosted by the Institute of Public Health in Ireland.

CARDI was established to provide a mechanism for greater collaboration among age researchers, for wider dissemination of ageing research information and to advance a research agenda relevant to the needs of older people across the island of Ireland

Its underlying purpose is to improve the lives of the ever-increasing number of older people in Ireland, North and South, by supporting policy-relevant research. CARDI's strategy 2013 – 2015 centres on three areas of work:

- stimulating, supporting and developing strategic age research in Ireland, North and South;
- developing skilled leaders on ageing research across the island of Ireland;
- translating and communicating relevant research to help ensure it makes maximum impact on age policy and practice.

CARDI's vision:

"The island of Ireland as a place of excellence in ageing research contributing to the highest possible standard of life for our ageing population."

Acknowledgement

The CARDI Leadership Programme in Ageing Research is funded by the Health and Social Care Research and Development Division, Public Health Agency, Northern Ireland (NI) and The Atlantic Philanthropies.

Foreward

Across the island of Ireland, people are living longer lives and the proportion of our population aged 60 and older is growing. Research can play a vital part in ensuring that people age in a healthier and more active way than previous generations. To help inform this change CARDI (between 2009-2013) funded 32 pieces of all-Ireland research on ageing which produced valuable evidence for policy-makers and practitioners.

Our focus is on developing a strong community of researchers in Ireland, North and South, and in particular supporting the development of next-generation leadership engaged in high-quality and policy relevant research into ageing issues.

In 2013 we launched The CARDI Leadership Programme in Ageing Research and have so far invested £1 million to support five post-doctoral Fellows to carry out high-quality research into aspects of ageing and undertake training and development. The aim is to foster a new generation of leaders in ageing research.

CARDI is delighted to provide this support to a group of early-career researchers from a range of backgrounds and is confident that the resulting research will add to the existing knowledge and evidence base about ageing in Ireland, North and South.

We would like to take this opportunity to thank the funders of the programme: the Health and Social Care Research and Development Division, Public Health Agency, Northern Ireland (NI) and The Atlantic Philanthropies, the members of the International Scientific Advisory Panel and the CARDI staff team for their work.

We wish the CARDI Fellows every success.

Professor Davis Coakley
Co-Chair of CARDI

Professor Bob Stout
Co-Chair of CARDI

Overview of Programme

Planning for an ageing society in Ireland, North and South, is essential if we are to unlock the benefits of greater longevity and meet the challenges of the coming decades. We face a three-fold challenge: collecting the data needed, having skilled researchers to lead the analysis of the evidence, and supporting policy-makers and practitioners to use it to best effect.

In 2013 to help address this challenge, CARDI launched a Leadership Programme in Ageing Research, worth £1 million, aimed at supporting post-doctoral researchers. It is designed to develop a new generation of researchers and support high-quality policy relevant research into ageing and older people in Ireland, North and South.

CARDI is funding five Fellows who were chosen on the basis of the quality of their research proposals, their potential to become leaders in ageing research and the support of their universities and mentors. Support will include salaries for three years, funding for research costs, attendance at conferences and travel. Each Fellow has a mentor in their host university who will guide and advise them during their research to help build their expertise, as well as an international mentor nominated by CARDI.

CARDI will also provide support, training and networking opportunities for them to develop their skills and knowledge in ageing research. It will provide international networking opportunities for Fellows including working with The American Federation of Aging Research (AFAR). AFAR runs the renowned Paul Beeson Career Development Awards in Aging Research and will provide places for the CARDI Fellows to attend the annual Beeson fellowship meeting in the USA with the first participation taking place in October 2014.

International Scientific **Advisory Panel**

The programme is overseen by the CARDI Steering Group and advised by an International Scientific Advisory Panel consisting of:

Professor Anne Martin Mathews (Chair)

University of British Columbia
Canada

Professor William R Hazzard

J Paul Sticht Center on Aging
USA

Professor Carol Jagger

Institute for Ageing and Health, Newcastle University
UK

Dr Giovanni Lamura

National Institute of Health & Science on Ageing
Italy

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Leadership Fellows:



Dr Mark O'Doherty

Employed by Queen's University Belfast

Mentor: **Professor Frank Kee**

Dr Mark O'Doherty PhD is a postdoctoral research fellow from the UK Clinical Research Collaboration Centre of Excellence for Public Health, Queen's University Belfast, where he obtained his PhD in nutritional and cardiovascular epidemiology in 2009. Mark's post-doctoral training to date has been in cancer epidemiology and healthy ageing, and he has extensive experience in the utilisation and management of large datasets, both in an all-Ireland setting and during his time at the National Cancer Institute, Washington DC, United States. Mark was core to the strategic organisation of the cardiovascular disease and diabetes Work Package within the EU 7th framework CHANCES Project: Consortium on Health and Ageing: Network of Cohorts in Europe and the United States.

His research as a CARDI Fellow will explore differences in trends in work related disability and in the way people report disability between nations and across different national health and welfare service contexts. The aim of this research is to develop expertise in the evaluation and assessment of work-related disability among older adults through the use of disability vignettes which will supplement self-reported disability. This approach provides the capacity to compare variations in reporting thresholds with representative data for differing ageing populations from The Irish Longitudinal Study of Ageing (TILDA) and the Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA). Only by comparing self-reported disability and health with those confirmed by objective health assessment can we form a better understanding of the degree to which perceptions of work disability are guided by objective health status, by socio-economic environment and by personal characteristics and circumstances.

As the state pension age increases and larger numbers of older people remain in work the issue of work disability will grow in importance.

This research will help us explore implications for policy especially as disability rates among older people are higher in Northern Ireland than elsewhere in the UK or in the Republic of Ireland.



Dr Charlotte Neville

Employed by Queen's University Belfast

Mentor: **Professor Jayne Woodside**

Dr Charlotte Neville obtained her PhD in nutritional epidemiology in the Centre for Public Health, Queen's University Belfast in 2010. She also holds a BSc Honours Degree in Human Nutrition and an MPhil from the University of Ulster. Her research has centred around the role of diet and lifestyle on health and disease outcomes including obesity, cardiovascular disease, musculoskeletal health and cognitive health, ranging from adolescent populations through to older adults. In recent years, Dr Neville's research has expanded into lifestyle and ageing. She was trial manager of the Ageing and Dietary Intervention Trial (ADIT) examining the effect of increased fruit and vegetable consumption on measures of immune function and musculoskeletal health in older adults.

In her research as a CARDI Fellow Dr Neville will explore the association between fruit and vegetable intake, retinal microvascular health and cognitive decline and dementia risk. Accurate assessment of dietary intake in older populations is vital to unravel the potential role of diet in healthy ageing. The research will examine the efficacy of assessment methods currently used in NICOLA and test other potential dietary assessment methods that may be particularly suited to older people. Her research will also draw on TILDA to examine the topic of dietary intake and its link to dementia in older people.

In 2012 it was estimated that there were 35.6 million people worldwide with dementia and that the number will approximately double every 20 years because of growing life expectancy. The ability to identify those at high risk of dementia at an early stage and set in place strategies to reduce age-related morbidity and chronic disease prevalence can help encourage healthy ageing, and have financial and societal benefits.

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Leadership Fellows:



Dr Joanna McHugh

Employed by Queen's University Belfast

Mentors: **Professor Frank Kee with Professors Brian Lawlor, Rose Anne Kenny and Ian Robertson**

Dr Joanna McHugh completed her PhD research at Trinity College's Institute of Neuroscience (2007-2010) where her thesis concerned social and emotional perception. She also holds a first class honours BA in Psychology (2006) from University College Dublin. Dr McHugh worked for the Neuro-Enhancement for Independent Lives (NEIL) Research Program as a post-doctoral research fellow before becoming a CARDI Fellow. Her research interests include health behaviours and social functioning in later life, particularly with reference to cognitive outcomes. Within NEIL she coordinated a randomised controlled trial evaluating a novel nutritional and social intervention for socially isolated older adults. Joanna has published 13 peer-reviewed articles in which she was first named author and presented her research at 19 national and international conferences. Prior to joining NEIL, Joanna was senior post-doctoral research fellow on the "Dem@Care" project, an FP7-funded collaborative project investigating the application of sensor technology to supporting health and social behaviours among individuals with dementia (2012-2013).

The focus of her research as part of the CARDI Leadership Programme is the social determinants of cognitive decline among older adults in Ireland, North and South. It will examine the causal links between loneliness, social isolation and cognitive decline, and aims to reveal the mechanisms behind these links studying and comparing longitudinal Irish population studies, TILDA and NICOLA. The project will investigate several factors such as social support, stress, neuro-inflammation and white matter structural integrity to clarify their contributions to the relationship between social isolation and cognitive outcomes in later life.

Identifying the specific social factors that relate to cognitive decline will be valuable for policy-makers and practitioners alike, and can help inform strategies relating to the promotion of social support for older adults in Ireland, North and South. The knowledge generated from this work can also help inform future evidence-based prevention, diagnostic, therapeutic and other strategies for the prevention of dementia.



Dr Aisling O'Halloran

Employed by Trinity College Dublin

Mentor: **Professor Rose Anne Kenny**

Dr Aisling O'Halloran holds a PhD in cardiovascular disease and genetics from the Royal College of Surgeons in Ireland (RCSI) and a BA (Mod) in Natural Science, specialising in genetics, from Trinity College Dublin. She joined TILDA as a post-doctoral fellow in health research in January 2012 where her research interests included all aspects of frailty, resilience and falls, with an interest in characterising the physiological, cognitive and behavioural factors which predispose or protect older people to these outcomes. She is the research lead on both the Frailty Working Group and the Biomarker Working Group within TILDA. Previously Dr O'Halloran was the Senior Researcher on the Falls Prevention Strand at the Technology Research for Independent Living (TRIL) Centre at St James's Hospital in Dublin (2010-2011). She has published in high impact journals and presented at scientific and medical conferences both nationally and internationally.

Dr O'Halloran's research as a CARDI Fellow is on the theme of frailty and older people in Ireland, North and South. Frailty is a driver of functional and cognitive decline, predicting multi-morbidity, disability, increased health care utilisation and mortality in older people. However, frailty can be ameliorated through early detection and intervention. This study will use data from TILDA and NICOLA to track transitions along the frailty spectrum from one wave of the surveys to another. This will help to identify risk factors for frailty in older people with the aim of developing new evidence-based targets for the early detection of frailty and suitable interventions. It will also seek to develop estimates of future healthcare needs related to frailty.

Frailty rates rise with age and 36% of people aged 80+ in Northern Ireland and 15% in the Republic of Ireland are frail. This research will raise awareness and deepen understanding of both the levels of frailty and frailty prevention in Ireland, North and South. The findings will be of interest to researchers, healthcare professionals, policy makers and older people's groups.

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Leadership Fellows:

Dr Joanne Feeney

Employed by Queen's University Belfast

Mentors: **Professor Ian Young and Professor Rose Anne Kenny**



Dr Joanne Feeney graduated with a PhD from TCD in 2010. Her thesis examined neurocognitive changes in associative and working memory with age, and in relation to the stress hormone cortisol. She also holds a postgraduate diploma in statistics from TCD and a first class honours BSc in pharmacology from UCD (2005). She joined TILDA at TCD in July 2011 where her research interests included the impact of psychological and physiological stress on healthy ageing with a particular focus on neurocognitive and cardiovascular health. Joanne was the lead researcher on the Neurocognitive Working Group within TILDA overseeing the cognitive and mental health domains of the study. She also chaired the Vision Working Group and contributed to research linking retinal health and brain function.

For the CARDI Leadership Programme she will explore the impact of stress on the neurocognitive and cardiovascular health of older adults in the North and South of Ireland, using data from NICOLA and TILDA. The experience of severe or persistent psychological stress can alter immune mediators, trigger inflammatory processes and increase oxidative stress, damaging brain and cardiovascular health. Determining the impact of stress on neurocognitive and cardiovascular health is important in order to help uncover potential pathways to, and early indicators of, disease and disability.

A better understanding of the role of stress and the varying cultural and historical experiences of people in Ireland, North and South, can help to predict and manage age-related disease. Identifying early pathways and risk factors linking stress exposure to disease and disability can help inform the design of interventions and educate the public about protective measures.

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Centre for Ageing Research
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