

In Ireland North and South

a picture of ageing research

2014

C|A|R|D|I

Centre for Ageing Research
and Development in Ireland

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about
CARDI

About CARDI

The Centre for Ageing Research and Development in Ireland (CARDI) was established in 2007.

It 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."

CARDI's work is funded by The Atlantic Philanthropies and by the Health and Social Care Research and Development Division, Public Health Agency, Northern Ireland.

The
A T L A N T I C
Philanthropies

 **Public Health Agency**

foreword



Foreword

Across the island of Ireland, people are living longer lives and the population aged 60 and older is growing. As our populations age research will increasingly play a vital role in helping us live healthier and more active lives than previous generations.

This publication provides an overview of major academic research into ageing being undertaken across the island of Ireland. It updates a previous edition published in 2010 and highlights that ageing research is flourishing with increasing co-operation between institutions in Ireland, North and South.

You also have an opportunity, within this publication, to gain an overview of the 32 pieces of all-Ireland research supported by CARDI, recently published commissioned research, as well as a profile of the five CARDI Fellows who have received awards from our Leadership Programme in Ageing Research.

The island of Ireland is gaining recognition as a place of excellence in ageing research. Ageing is increasingly viewed as a research priority as evidenced by the establishment of major ageing projects in Ireland, North and south, including the Irish Longitudinal Study on Ageing; the Trinity, Ulster and Department of Agriculture Ageing Cohort Study; and the newly established Northern Ireland Cohort for the Longitudinal Study of Ageing.

CARDI is delighted to present this updated publication which illustrates the continued growth and quality of research on ageing being carried out in a wide range of disciplines by researchers in Ireland, North and South.

I would like to take this opportunity to thank all those who have contributed to this publication.

Dr Roger O'Sullivan
Director
CARDI



This publication provides an overview of major academic research into ageing being undertaken across the island of Ireland.

ageing research in context

Ageing research in context

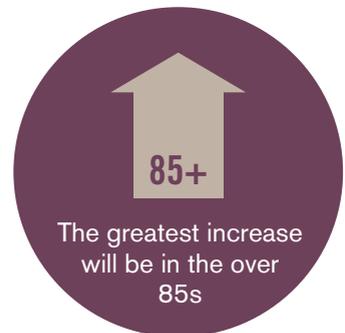
Ageing in Ireland, North and South

Today 1.1 million people aged 60 and over live on the island of Ireland. By 2041, there will be 2.44 million aged 60 and over making up nearly one third of the island's total population¹.

The number of people aged 75 and over is a crucial feature of the ageing populations in the Republic of Ireland (ROI) and Northern Ireland (NI). By 2041, the number of people aged 75 and over is projected to reach almost one million on the island of Ireland. The number of 85 year olds and over is predicted to rise from 92,000 to 357,000 in 2041 on the island of Ireland².

The expansion of the older population is due, in part, to the dramatic increase in life expectancy experienced in ROI and NI in the past 100 years. Life expectancy at birth in the ROI (2005-2007) is now 76.8 years for men and 81.6 years for women. In NI (2011-2013) it is 78 years for men and 82.3 years for women (NI Statistics and Research Agency, 2014)³.

This demographic transformation is a significant success but one that requires changes in policymaking and service provision in order to ensure that people not only live longer but also experience a healthier and more active later life.



¹ Central Statistics Office, 2013; Office for National Statistics 2011

² Central Statistics Office, 2013; Office for National Statistics 2011

³ Central Statistics Office, 2009; NI Statistics and Research Agency, 2014

⁴ TILDA 2014

Research on ageing in Ireland, North and South

Research on ageing involves a wide range of academic disciplines from biomedicine to the social sciences. Studying ageing across disciplines allows us to build up a picture of the processes, impacts and experiences of ageing from the cellular to the personal.

Such research touches on subjects including physical and cognitive diseases associated with ageing, determinants of healthy ageing, ageing and economic inequalities, social integration and participation, changing cultural structures, work and retirement, and social and economic development.

These subjects can provide a valuable evidence base for effective policy planning and for allowing all people to experience healthier, happier and a more fulfilled old age. As such, ageing research is a vital resource for all those involved in making policy and providing services to cater for ageing populations.

Ageing research is a growing area in Ireland, North and South, with academic institutions increasingly recognising it as a priority area of research and development. In recent years, both ROI and NI have established important longitudinal studies into ageing: The Irish Longitudinal Study on Ageing led by Trinity College Dublin and the Northern Ireland Cohort for the Longitudinal Study of Ageing led by Queen's University Belfast. Other major collaborative projects include The Trinity, Ulster and Department of Agriculture Ageing Cohort Study led by Trinity College and Ulster University and The Survey of Health, Ageing and Retirement in Europe hosted in Ireland by University College Dublin.

The submissions to this publication illustrate the growing importance of research in ageing among institutions across the island of Ireland. Notable examples include:

- Dublin City University has designated healthy ageing as a major research priority and established a major study - Dementia Elevator. This study is examining and developing best practice and training for dementia care with an emphasis on care within community settings.
- University College Cork has an ageing research cluster drawing in a wide range of disciplines to examine ageing issues. It hosts the Centre for Gerontology and Rehabilitation, and ELDERMET research consortium which is conducting pioneering research into nutrition and ageing.
- University of Limerick has established a Health Research Institute. Its research activities relating to ageing, include falls prevention, age-related chronic disease and social innovations in ageing.
- Dundalk Institute of Technology has two centres focused on active ageing and assistive technologies: Netwell (Social Networks, Environments and Technologies for Wellness and Ageing-in-place) and CASALA (Centre for Affective Solutions for Ambient Living Awareness).

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- The National University of Ireland Galway's Irish Centre for Social Gerontology focuses on social and economic issues associated with ageing including isolation, rural ageing and community participation of older people.
 - University College Dublin hosts the National Centre for the Protection of Older People which focuses on research relating to elder abuse. In addition its Connected Health research theme contributes to the area of active and independent living for ageing populations.
 - Trinity College Dublin's Trinity EngAGE Centre for Research in Ageing coordinates the efforts of 135 ageing researchers across social aspects of ageing, neuroscience, physical health, and the built environment. Additionally, ageing is identified as a main research theme for the university.
 - Waterford Institute of Technology has achieved international recognition for its pioneering research into age-related macular degeneration and links between nutrition and eye health.
 - Ulster University and Queen's University Belfast are collaborating on a new ARK Ageing Programme, aimed at building links between the academic community and policy, and voluntary and community sectors.
 - The NI Centre for Food and Health at Ulster University recently established a Centre of Excellence in Nutrition and Ageing (CENA) with funding from the NI Department of Employment and Learning.

CENA will further enhance existing cross-border collaborations focused on the promotion of better health in older age through nutrition.

Other academic institutions are pursuing a diverse array of ageing research projects as illustrated in this publication.

The funding of ageing research in Ireland, North and South, is supported by a range of government departments, charities, trusts and businesses. Some of the major funders include The Atlantic Philanthropies; The Health Research Board (HRB) ROI, The Health and Social Care Research and Development Division Public Health Agency NI; and Science Foundation Ireland among others. For example, Science Foundation Ireland recently announced a Targeted Research Professorship Programme which listed ageing as a key area. The HRB and Health Service Executive, ROI and Health and Social Care Research and Development Division Public Health Agency, NI have prioritised dementia as a theme of research funding with the support of The Atlantic Philanthropies.

Ageing research in Ireland, North and South, also benefits from significant funding from European Union organisations through Horizon 2020 and FP7. Horizon 2020 is the largest funded EU Research and Innovation programme with nearly €80 billion available over 7 years (2014-2020). The ageing population is a key theme for research funding under health, social science, and information and communications technology (ICT) themes of the programme.

major
collaborative
research
projects

The Irish Longitudinal Study on Ageing (TILDA)



TILDA was established in 2006 and is a nationally representative survey of over 8,500 individuals aged 50 and over in Ireland.

TILDA provides insights into the ageing process, enhancing practice and policy-making, and promoting research opportunities in Ireland and beyond. TILDA is led by Trinity College Dublin in collaboration with an interdisciplinary panel of researchers and funded by The Atlantic Philanthropies, the Department of Health and Irish Life.

A key feature of the TILDA study is its multi-disciplinary approach to collecting data on older persons' lives. TILDA replicates core health, economic and social data from other principal international longitudinal studies of ageing thus enabling important cross-country comparisons and harmonisation. The Northern Ireland Cohort Longitudinal Study of Ageing, which is currently in the field with wave 1, is closely modelled on TILDA and will enable comparative research on the determinants of successful ageing North and South.

TILDA, with its unique multi-domain longitudinal design, provides an essential research base for developing and assessing policy responses to the challenges and opportunities arising from population ageing. TILDA's research findings have been referenced in a number of recent policy initiatives including *Healthy Ireland: A Framework for Improved Health and Well-Being* (2013); *the National Positive Ageing Strategy* (2013); and *the Dublin City Age Friendly Strategy* (2014).

Presently in its third wave, TILDA has emerged as a significant component of the research infrastructure on ageing in Ireland providing training for PhD students, post-doctoral researchers, nurses and interviewers; developing new technologies to measure health and cognitive function; generating additional research funding to further enhance research capacity in Ireland; and providing a freely-available dataset for use by researchers both in Ireland and abroad to better understand the ageing process.

For more information

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www.tilda.tcd.ie

Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA)



The Queen's University Belfast-led NICOLA Project will involve 8,500 people aged 50 and over who will be randomly selected from across NI over the next 18 months. It was officially launched in February 2014.

NICOLA consists of three stages: an interview conducted in the home; a questionnaire; and a health assessment which will take place at the new NI Clinical Research Facility at Belfast City Hospital. The assessments, completed by registered nurses, will include blood pressure readings, brain function (thinking) tests, blood sample collection and a detailed eye examination using equipment not available elsewhere in NI. Participants will also be asked to provide biological samples for detailed laboratory analysis, including genetic analysis. Follow-up interviews will be conducted every two years.

NICOLA will collect information on health and social care utilisation, health behaviours, medication, mental, physical and cognitive health, employment, finances, retirement, social connectedness, social participation, driving and travel, housing, consumption and expectations. It has a special focus on intergenerational poverty, transition points in ageing and the effects of diet on the aging process. The study will also include questions of unique relevance to NI.

NICOLA is funded by The Atlantic Philanthropies; the Economic and Social Research Council ; the Medical Research Council; Health and Social Care Research and Development Division, Public Health Agency; CARDI; and the Office of the First Minister and Deputy First Minister NI.

For more information

Email NICOLA@qub.ac.uk or call 0044 (0) 28 9063 3078

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The Survey of Health, Ageing and Retirement in Europe (SHARE)



SHARE is a multidisciplinary and cross-national panel database of micro data on health, socio-economic status, and social and family networks of more than 85,000 individuals from 20 European countries (and Israel) aged 50 or over. The first wave of data was collected in 2004 and Ireland joined **SHARE** in 2006. Data from the fifth wave of the survey will be released in 2015.

SHARE has become a major pillar of the European Research Area selected as one of the projects to be implemented in the European Strategy Forum on Research Infrastructures in 2008 and given a new legal status as the first ever European Research Infrastructure Consortium (**SHARE-ERIC**) in March 2011.

SHARE is centrally coordinated at the Munich Center for the Economics of Aging, Max Planck Institute for Social Law and Social Policy.

The Geary Institute at University College Dublin runs the study in Ireland, collecting and managing a cohort of approximately 1,000 people aged 50 and over from across the country. Participating in this project connects Ireland to an international research network involving the major experts throughout the world in a number of diverse ageing fields including medicine, economics, epidemiology and several others. Combined with the comparable data-set there is an enormous opportunity for Ireland to learn in advance from the experiences of countries further along the ageing process.

For more information

<http://www.share-project.org/>

Trinity, Ulster and Department of Agriculture Ageing Cohort Study (TUDA)



TUDA is a large all-island study involving 5,186 non-institutionalised older people recruited from GP clinics in NI and outpatient clinics at St James's Hospital, Dublin, and sampled between 2008 and 2012.

The TUDA study is part of a much larger cross-border research programme: the National Nutrition Phenotype Database Project (otherwise known as "JINGO"), funded by Irish Department of Agriculture, Food & the Marine and HRB (Food Institutional Research Measure FIRM Initiative); and the NI Department for Employment and Learning, under its Cross-Border Research and Development Funding Programme - "Strengthening the All-Island Research Base".

The TUDA study led by Trinity College Dublin and Ulster University represents an all-Ireland investigation of clinical, drug, nutritional, metabolic and genetic factors in the development initially of three common diseases of ageing: cardiovascular disease, osteoporosis and dementia. This valuable resource now provides a unique platform to enable research aimed at improving the quality of life in older people through a better understanding of the relationships of nutrition, lifestyle and health. The research will also have major implications for emerging policy in relation to healthy ageing⁵.

More information:

www.ucd.ie/jingo/database/tuda/

⁵ The Joint Irish Nutrigenomics Organisation (JINGO) is the umbrella body for the current TUDA project and two other related projects. It incorporates four universities working together to create a National Nutrition Phenotype Database.

**academic
institution
profiles**

Academic institutions across the island of Ireland are engaged in a wide range of research programmes, projects and networks relating to ageing.

This research is providing valuable information on health, living conditions, social participation, economic and the psychological well-being of older people. Other research is investigating novel ways of securing independent and active lives for older people. This research is being conducted across a wide range of disciplines examining all aspects of ageing.

CARDI invited institutions in Ireland, North and South to submit updated information on the range of research relating to ageing being carried out by their respective departments. The institution profiles in this publication provide a snapshot of academic research activity and illustrate the continued growth and quality of ageing research in Ireland, North and South.

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AIT is working on ageing research projects spanning across science to software. Significant research projects include: 'An examination of "social capital" and the older person in Ireland', 'Development of novel technologies (pulsed electric fields, high pressure and advanced microwave) to disinfection high risk feeds prepared in situ for patients in healthcare, especially the elderly', right through to exploring the opportunities for new and innovative forms of "connected media" (personalised, real-time interactive) applications in a wide range of commercial fields including telecoms, gaming, TV, e-health, e-learning, e-tourism, e-retailing, entertainment and digital marketing in aiding living for the older person. Training and learning is also offered in care of the older person in General Nursing, together with a Certificate in End of Life Care and a Certificate in Gerontology Nursing.

Cork Institute of Technology (CIT)



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Cork Institute of Technology (CIT) has a wide range of activities that support ageing research. CIT's strength of working within the industry means that much of the research in this area supports commercial deployment. Research activities relating to ageing include:

MEDIC

The MEDIC group (Medical Engineering Design and Innovation) specialises in the discovery and design of medical devices, bringing together the full set of skills required to develop medical devices including an extensive network of clinicians, inventors and industry partners. Research into improved bone fracture healing and orthopaedic implant assessment is amongst recent applications that have assisted towards improving the lives of both young and old.

NIMBUS

The NIMBUS centre for Embedded Systems Research focuses its expertise on sensor networks to provide integrated solutions from safety and monitoring of health parameters in the home to point of care monitors and supporting mobility.

CAPPA

The CAPPA research centre (Centre for Photonics and Process Analysis) uses photonics to provide real-time and pseudo-real-time point-of-care solutions (e.g. blood analysis), and specialises in establishing multidisciplinary teams to address its research.

Cork Institute of Technology (CIT) *continued*

www.cit.ie

BioExplore

The BioExplore research centre focuses on diagnostics and bio-analysis, virology and microbiology, and bioinformatics and peptide engineering with applications in nutraceuticals and food spoilage that assist with protecting the health of susceptible older individuals.

Rubicon

The Rubicon Incubation Centre is home to 60 start-up companies several of which are involved in businesses researching into new products that relate to healthy ageing. The Rubicon is constantly seeking new companies with significant international marketing potential but also offers mentoring programmes (with some specifically focused on assisting female entrepreneurs).

In addition to these research activities, CIT offers programmes which assist in healthy ageing by providing opportunities for individuals from all backgrounds and all ages to stay involved with personal development. Examples include its extensive Lifelong Learning suite of programmes which apply to all courses and ages, its recognition of prior learning which encourages older citizens to engage or re-engage with the educational process, and its many community-based programmes which take education into the heart of where people live.

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Health technologies and the healthy and ageing society is a priority research area for DCU. There is particular emphasis on dementia, preventive medicine, supporting 'ageing in place' through technology, intergenerational and lifelong learning, and the health effects of physical activity.

Some of these projects are broader than a strict research remit, taking community development approaches to knowledge generation and blurring the boundaries between research and practice:

In-MINDD (INnovative Midlife INTERvention for Dementia Deterrence)

The EU FP7 In-MINDD project looks to develop and rigorously validate online tools that enable personalised dementia risk to be modelled, generate personal risk reduction strategies and facilitate adherence to these strategies. This technical work is enhanced by extensive communications and awareness-raising.

Dem@care

The EU FP7 Dem@care project utilises a sensor system with the aim of early detection of problems in people living at home with dementia, in order to increase the sophistication of responses to the types of problems that require people with dementia to be admitted to a nursing home.

Elevator

Elevator, funded by The Atlantic Philanthropies and Health Service Executive, aims to develop and evaluate a wide range of training for people with dementia in order to upskill communities to support ageing in place. The research outputs of this project are a National Dementia Educational Needs analysis and an in-depth evaluation of various different approaches to awareness training and skills training.

Dublin City University (DCU) continued

www.dcu.ie

Intergenerational Learning Programme

The Intergenerational Learning Programme (ILP) has been developed as a teaching, learning and research space where older and younger people can learn from each other through formal and informal learning programmes, in a way which is mindful of the learning needs of older people and which values their contribution to higher education in terms of their lived experiences, knowledge, competences and skills. The ILP has become a repository of social and cultural capital as well as a bank of expertise available to DCU students. It is anticipated that the ILP will develop into a centre that will become a hub and gateway as part of the Age Friendly University initiative of DCU.

MedEx

MedEx (Medical Exercise) is a unique chronic illness rehabilitation service at DCU which has grown dramatically over the past six years to become one of the largest centres of its kind in Europe. Inactive lifestyles in older adults contribute to the aetiology and symptoms of many chronic diseases. Physical activity is an established, inexpensive and generally safe, primary and secondary therapy in the prevention and treatment of chronic diseases. MedEx delivers exercise-based programmes with parallel educational and related support to individuals with diverse chronic illnesses including heart disease (HeartSmart), lung disease (BreatheSmart), peripheral vascular disease (SmartSteps), cancer and diabetes.

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DIT undertakes research that is strongly focused on problem-solving; social and technological development and innovation; that advances human knowledge and makes a real impact on people's life experience. Some research areas specific to ageing include:

Healthier Lives for Children, the Elderly and Vulnerable Populations

The Environmental Sustainability and Health Institute is a dedicated national translational research platform based on collaboration between DIT, the Health Service Executive and Dublin City Council, in association with the active participation of other academic institutions. The overarching mission and vision is to achieve 'Healthier Lives for Children, the Elderly and Vulnerable Populations'. Key areas of ageing research within the institute include dietary and nutritional studies, and assistive technology research. Some of the research projects that have been completed or are currently being undertaken are outlined below:

The Community Life of Older People in Ireland

This study is based on primary research that examines the everyday lives of older people in two geographic locations - a suburban area in North Dublin and a rural area in County Donegal.

Together Old and Young (TOY)

Together Old and Young (TOY) is a research project on intergenerational learning funded by the European Commission under the Lifelong Learning Programme (GRUNDTVIG). The focus of the TOY project (2012-2014) is to bring together young children (0-8 years) with older people (aged 55+) so that they can learn together and from each other. The project seeks to develop an underexploited area in policy, practice, training and research with the aim of extending and enhancing intergenerational learning and practice. The project is being implemented by nine partner organisations in seven EU countries - Ireland, Italy, the Netherlands, Poland, Portugal, Slovenia and Spain. DIT is the

Dublin Institute of Technology (DIT) *continued*

www.dit.ie

Irish partner and the Consortium is headed by International Child Development Initiatives in the Netherlands. More information: www.toyproject.net.

Nutrition and diet

Researchers in the School of Biological Sciences have researched the nutritional status and the diet of older citizens in a number of projects e.g. researchers examined the nutritional status of recipients of meals-on-wheels and the nutrient content of a sample of meals provided to determine whether statutory minimum nutritional standards would be beneficial. Research is also focusing on the use of oral nutritional supplements in an older Irish community setting.

Within the School of Biological Sciences a number of small research projects have been undertaken on the nutritional status of older persons e.g. undergraduate research projects in a number of the Dublin teaching hospitals have examined the nutritional status of older people admitted as acute medical admissions, the prevalence of sarcopenia in older people who attend hospital as day patients and a recent small study has examined the nutritional risk of older orthopaedic patients.

Investigating age-related visual impairment

Age-related macular degeneration (AMD) is the most common cause of visual impairment in people aged 65 and over in developed countries. The Department of Optometry has conducted a research project to measure the "Functional health literacy and medical information in adults with macular degeneration visual impairment". This research aims to provide data on the relationship between health information, near visual ability, AMD visual impairment and the extent to which this influences medication compliance. The results of this study will help develop strategies to improve medical compliance and access to written medical prescription labels compatible to individuals suffering from AMD.

Dundalk Institute of Technology (DKIT)



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Ageing research within DKIT is led by the Social Networks, Environments and Technologies for Wellness and Ageing-in-place (Netwell) and the Centre for Affective Solutions for Ambient Living Awareness (CASALA). These two research centres in conjunction with ICT researchers are working in collaboration with industry, governmental bodies and other academic institutes in developing new ideas that enhance the quality of life and well-being of older people and those who care for them, through more integrated community-oriented services, more sustainable home and neighbourhood design, and more age-friendly technologies.

Netwell

Netwell's mission is to promote social networks, environments and technologies for wellness and ageing-in-place. It aims to provide a centre of excellence for the applied research, development and application of innovative service models and technologies to support older people to age-in-place. The main areas of Netwell's research are focused on three primary areas: social gerontology to provide information on the social, economic, psychological and healthcare aspects of ageing; environmental gerontology to improve the quality of the built environment through process and capability development; and geron-technology to develop and support a range of technologies that fulfil the needs of an ageing society.

CASALA

CASALA is a regional living lab for innovation to enhance longer living in smarter places. Its mission is to work with industry in applied research, helping to achieve product innovation and to bring products to market in the emerging Ambient Assisted Living sector and also act as the commercialisation arm of Netwell. Key activities are built around the Great Northern Haven's 'smart housing' scheme and core ICT platform. Pilots include several tele-healthcare projects (i.e. Home Sweet Home) with Bosch and Fujitsu Labs. The ICT platform also supports community energy monitoring (Member of European Network of Living Labs).

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Ageing research at NUIG is carried out across a wide range of disciplines and schools. The main centre for ageing research is the Irish Centre for Social Gerontology.

Irish Centre for Social Gerontology (ICSG)

The ICSG is a multidisciplinary research centre with a national and international focus on research, education and training in the field of social gerontology. Acting as a major resource for research, policy and practice communities, ICSG aims to develop understanding of gerontological questions in Ireland with a view to promoting a more holistic and positive view of ageing and life-course issues. The main themes of research at the centre include dementia, life-course perspectives, social isolation, rural ageing, and gender, work and retirement. More information: www.icsg.ie

Other schools engaged in research on ageing include the School of Political Science and Sociology, School of Nursing and Midwifery, College of Engineering and Informatics, School of Medicine, and Department of Psychology. Projects include:

School of Political Science and Sociology

The Galway Wisdom Project explores the different approaches to wisdom using ethnographic and other perspectives.

School of Nursing and Midwifery

The **DementiA education programme incorporating REminiscence for Staff (DARES)** examines the effectiveness of a structured education reminiscence-based programme for staff in long-stay care units on the quality of life of residents with dementia.



The Restore Study explores the educational and support needs of carers of older people with dementia living at home.

The Connectedness Study examines connectedness with local communities for older people living in long-stay care.

School of Psychology

Interactive Mental and Physical Exercise

This study examined the effects of a single bout of interactive mental and physical exercise compared to standard physical exercise on both executive functioning and event-related potential amplitudes in both younger and older adults, and found that older adults' executive functioning performance improved more than younger adults as a result of exercise.

College of Engineering and Informatics, and School of Medicine

The College of Engineering and Informatics, and School of Medicine are involved in a range of connected health projects targeted at older populations. Project areas focus on interventions in Parkinson's disease (PD), and in falls detection and prevention.

The **REMPARK** project is an FP7-ICT funded project designed to develop a personal health system with response and treatment capabilities for the management of PD patients. In this project the NUI Galway team is leading the development of a novel gait cueing system for PD patients.

National University of Ireland Galway (NUIG) *continued*

www.nuigalway.ie

NUI Galway is involved in three significant projects related to falls:

Wireless Insole for Independent and Safe Elderly Living (**WIISEL**) is an FP7-ICT funded project. Its main goal is to develop a flexible research tool to collect and analyse gait data from real users and correlate parameters related with the risk of falls from the older population. NUI Galway is leading a team working on user centred design and usability of the system, focusing on the older adult user.

FALL DeTector for the Elderly (**FATE**) is a CIP-ICT funded project. Its ultimate goal is to validate an innovative ICT-based solution focused on improving the quality of life of older people using an accurate falls detection system that works both at home and outdoors.

E-NO FALLS is a thematic network bringing together knowledge, experience and best practice in the areas of fall prevention, intervention and safety. This project is funded under the ICT Policy Support Programme as part of the Competitiveness and Innovation Framework Programme by the European Community.

Maynooth University (NUIM)



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Research into healthy ageing takes place across a wide range of disciplines and themes at Maynooth. Some examples of research work related to ageing include:

The Science of Ageing

In the Department of Biology a range of projects examine the fundamental science of human ageing. Teams examine the potential use of adult stem cells to repair degenerating tissues and how the immune system can be supported with advancing age. A special project uses advanced technology large-scale and high-throughput biochemical analysis to understand the sarcopenia of old age. The aim is to identify novel disease-specific markers of ageing in the main types of skeletal muscles in the body. This biomedical knowledge can then be used to promote healthy ageing by improving diagnostic procedures, providing information on the most suitable preventative schemes to lessen age-related muscle wasting and to identify new therapies.

Innovative Engineering for Active Ageing

The Biomedical Engineering Group uses innovative engineering approaches to create new devices, algorithms, techniques and systems that advance and support active ageing. Specific research projects include using brain-computer interfacing for stroke rehabilitation and developing novel activity monitoring and interventions as part of future smart homes. These engineering approaches are designed to support active ageing in the home, maintaining the autonomy of the older person and reducing health care budgets.

Maynooth University

(NUIM) continued

www.maynoothuniversity.ie

Exploring the Healthy Mind

The Department of Psychology examines influences on cognitive ageing, together with how attitudes towards self-ageing influence cognitive performance, and the relationship between participation in engaging activities and healthy ageing. Research collaborations have been formed with the Age-Related Health Care/Stroke Service at the Adelaide and Meath Hospital to develop an understanding of the psychological impact of stroke and the role of technology in cognitive and physical recovery after stroke.

Geographies of Caring and Disability

Teams from the Department of Geography specialise in using spatial data for needs assessment and study accessibility to secondary care services with the Centre for Cross-Border Studies. An understanding of spatial information and its relevance to the planning of services for ageing populations is a specialisation in the University and is helping to provide the evidence base for planning the provision of services for the older population.

www.qub.ac.uk

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Ageing research takes place across a number of schools and centres, primarily in the medical field at QUB. Major themes and projects include:

Dementia

At the Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, research on older people has focused on clinical and translational aspects of dementia. There is an ongoing genetic programme with a core involvement in the large Genetic and Environmental Risk for Alzheimer's Disease Consortium which has seen significant publications. Studies also concentrate on mild cognitive impairment and conversion to a formal diagnosis of dementia, use of FDG-PET in dementia diagnosis, metabolics in dementia syndromes, outcomes in dementia and also studies on delirium and post-operative cognitive dysfunction. There are collaborations with QUB's School of Pharmacy, School of Nursing and Institute for Global Food Security. Within the Centre for Public Health there are also studies of nutritional aspects of ageing.

NICOLA

Launched in 2014, NICOLA is a longitudinal study designed to help inform policy and services. It will involve 8,500 people aged 50 and over who will be randomly selected from across NI (see page 14).

Appropriate use of medication

Researchers in the Clinical and Practice Research Group, School of Pharmacy, lead a long-standing and successful research programme that has focused on appropriate use of medicines in older people, particularly those living in their own homes or in long-term care e.g. nursing homes. In conjunction with colleagues from the Centre for Public Health at QUB there is an increasing focus on appropriate use of medicines in people with dementia.

Queen's University Belfast (QUB) continued

www.qub.ac.uk

Ophthalmology/Vision Science

Research at the Centre for Experimental Medicine is focused on the major sight threatening diseases of ageing such as age-related macular degeneration, glaucoma and diabetic retinopathy. Studies range from those understanding the epidemiology and risk factors for such diseases to laboratory research exploring mechanisms of disease development and progression, as well as the development of effective therapeutics through to large multi-centre clinical trials.

A significant ophthalmic component within the NICOLA study will enable assessment of the extent of ocular disease within the NI older population as well as investigation of how ocular markers may be useful for early detection of systemic diseases. Within the Centre there is also a portfolio of primary and secondary research evaluating effectiveness and cost-effectiveness of health care interventions and models of care for chronic age-related eye conditions.

Caring

At the School of Nursing and Midwifery researchers are carrying out a study titled "Promoting informed decision-making and effective communication through advance care planning (ACP) for people living with dementia and their family carers". The purpose of this study is to evaluate the application of a best-practice ACP model for individuals living with dementia in a sample of nursing homes in NI.

Metabolic and neurodegenerative diseases

Research under the Human Nutrition and Health Theme in the Institute for Global Food Security in the School of Biological Sciences is examining the development and application of metabolomics platforms for the study of human metabolic and neurodegenerative diseases. Working closely with colleagues from the Centre for Public Health at QUB the researchers aim to further the use of this technology for Alzheimer's disease diagnostics.

ARK

The ARK Ageing Programme, funded by The Atlantic Philanthropies, is a resource involving researchers from QUB and Ulster University. It aims to support engagement between the academic and age sectors by encouraging and facilitating the production of research to support lobbying and advocacy in NI.

Perception and action

The Perception Action Research Lab at the School of Psychology examines the link between the brain and physical movements. By investigating sensory information change over time the lab is exploring how movement based games can be used to improve mobility and balance in people with PD and stroke.

Royal College of Surgeons in Ireland (RCSI)

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Research into ageing is mainly carried out in the RCSI's Schools of Physiotherapy, Nursing and Midwifery, Pharmacy and General Practice, and in the Division of Population Health Sciences. Recent ageing-related research includes:

School of Nursing & Midwifery

Wounds and ulcers

Pressure ulcers are a common and costly health care problem which adversely affect health-related quality of life and compound challenges in achieving patient safety targets in health service delivery. The prevalence and incidence of pressure ulcers is closely associated with increasing age, therefore, such changes in demographics mean that there is likely to be a corresponding increase in those with pressure ulcers in the future. Researchers at RCSI are involved in a number of studies investigating the prevention of pressure ulcers and treatments for wounds in older people. These include Cochrane systematic reviews:

- Service delivery models for preventing and treating pressure ulcers;
- Bed rest for pressure ulcer healing among wheelchair users;
- Involving patients, family and lay carers in pressure ulcer prevention for at risk individuals.

School of Pharmacy

Potential for alcohol and drug interactions in older adults

Researchers at the School of Pharmacy and HRB for Primary Care Research, in collaboration with TILDA, are examining the magnitude of risk posed by alcohol consumption and alcohol interactive medications for adverse outcomes such as falls, functional disability and mortality. This work will also examine the stability of alcohol consumption over time among older Irish adults.



Adherence to anti-hypertensive medication among older Irish adults

The School of Pharmacy is also co-ordinating a study of approximately 1,600 community-dwelling older adults to provide a comprehensive assessment of factors influencing adherence to antihypertensive medication and associated outcomes among older adults.

School of Physiotherapy

Falls Related Events after Stroke (FREESE) Study

Falls are a major cause of death and injury for older people. At the School of Physiotherapy researchers are examining the incidence and circumstances of falls of stroke survivors in the FREESE study. Researchers are also investigating novel footwear technology to promote falls prevention through gait analysis.

Prevalence and burden of osteoarthritis amongst older people in Ireland

Data from TILDA is being analysed to determine the impact of osteoarthritis on a range of health and quality-of-life measures in the 50 and over population in Ireland.

Population Health

“Should older people with chronic pain avoid physical activity or does engaging in physical activity help to keep away depressive symptoms no matter how much pain you experience”? This question was addressed by researchers, funded by CARDI, who examined three national datasets (Healthy Ageing Research Project, TILDA, NI Health Survey) and found that regular exercise reduced depression in older people, irrespective of what pain level patients reported.

Royal College of Surgeons in Ireland (RCSI) *continued*

www.rcsi.ie

General Practice

Inappropriate Prescribing

Older patients often have multiple conditions requiring multiple drug therapy which increases the risks of polypharmacy. This study funded by the HRB is part of a large study investigating prescribing practices in the older population.

Other research into ageing issues is carried out by RCSI researchers at postgraduate level including a study on perceptions of the effects of day care on the quality of life of older people.

Trinity College Dublin (TCD)



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TCD has a large community of researchers engaged in ageing research, which has been supported by approximately €240m in national and international funding to date.

EngAGE Centre for Research in Ageing

The Trinity EngAGE Centre for Research in Ageing coordinates the efforts of 135 researchers across four domains: mind, body, social environment and the built environment. In collaboration with the College's teaching hospitals, St James's and Tallaght, Trinity EngAGE advances research by:

- cultivating multi-disciplinary and collaborative approaches so that a greater understanding of the biological, social, and environmental components of healthy ageing emerges (Knowledge Generation);
- advancing evidence-based research that generates innovative technologies and informs policy so that health and well-being are improved across the lifespan (Knowledge Translation);
- promoting knowledge exchange between researchers and the public in order to empower a science-literate population that can advocate for its own health and well-being (Public Engagement).

Major ageing research and clinical programmes include:

The Irish Longitudinal Study on Ageing (TILDA)

Funded by The Atlantic Philanthropies, the Department of Health and Irish Life, TILDA is a flagship research programme for TCD offering the most comprehensive data available on ageing in Ireland through a longitudinal study of the 50+ population. Data covers topics such as economic and social circumstances, health status (both objective and subjective), health and social care utilisation, and early life circumstances. Research findings have informed policy-level initiatives, including *Healthy Ireland – A Framework for Improved Health and Well-Being* (2013); *the National Positive Ageing Strategy* (2013); and *the Dublin City Age Friendly Strategy* (2014). More information: www.tilda.ie

Trinity College Dublin

(TCD) continued

www.tcd.ie/research

Mercer's Institute for Successful Ageing (MISA)

Based at St James's Hospital, MISA treats more than 16,000 patients per year and produces high-quality research in falls, syncope, brain health, bone disease and stroke. MISA represents the strongest critical mass of clinical research in ageing in Ireland attracting €58.25m in national and international funding to ensure excellence in service provision for Ireland's population through a new 8-storey medical centre. More information: www.misa.ie

Intellectual Disabilities Study (IDS-TILDA)

IDS-TILDA is a longitudinal study for people with an intellectual disability aged 40 and over. This study is the first of its kind in Europe and the only study to directly compare the ageing of people with intellectual disabilities with the general population. IDS-TILDA research has been translated into award-winning care facilities for people with intellectual disabilities and dementia through collaboration with the Daughters of Charity Service.

More information: www.idstilda.tcd.ie

Neuro-Enhancement for Independent Lives (NEIL)

NEIL advances independent living and improves quality of life by conducting research aimed at dementia prevention and cognitive enhancement, transforming this knowledge into internationally-replicable technology-linked interventions that educate and empower older adults.

More information: www.tcd.ie/Neuroscience/neil

Living with Dementia

The Living with Dementia research programme is designed to tackle the stigma and marginalisation of people with dementia by enhancing practice and service provision. *Creating Excellence in Dementia Care: A Research Review for Ireland's National Dementia Strategy* reports key findings from an extensive review undertaken on dementia and underpins the Irish Government's *National Dementia Strategy*.

More information: <http://livingwithdementia.tcd.ie>

The Social Policy and Ageing Research Centre (SPARC)

SPARC produces high-quality, comparative and policy-relevant research on the impacts and implications of ageing. Research findings generate policy advice to improve the lives of older people and to foster a new cohort of social gerontologists trained to PhD level.

More information: <http://www.sparc.tcd.ie>

The Centre of Health Policy and Management

This Centre focuses on research related to the consequences of population ageing on health and social care including hospice and palliative care. The Centre offers evaluations of healthcare services, the mechanisms for financing healthcare, and the system improvements for healthcare delivery.

More information:

www.medicine.tcd.ie/health_policy_management

TrinityHaus & Future Cities Research Centre

TrinityHaus provides innovative solutions for buildings, neighbourhoods and cities. Main research efforts are focused on energy efficient buildings and people-centred design of neighbourhoods. Future Cities Research Centre coordinates home and healthcare through technologies relevant to smart ageing.

More information: www.trinityhaus.tcd.ie

The Trinity College Institute of Neuroscience (TCIN)

TCIN leads brain research in Ireland and is the country's only dedicated neuroscience research institute. TCIN advances scientific knowledge about the human brain and mind, generating over 450 scientific publications in the past three years in world-class, peer-reviewed international journals.

More information: www.tcd.ie/Neuroscience

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UCC has a range of smart ageing research projects across a number of schools and disciplines. A selection of research programmes and initiatives relating to ageing include:

Collaboration on Ageing (COLLAGE)

The COLLAGE consortium includes research groups, academic institutions, healthcare providers, TILDA, public authorities and community groups. Further details on COLLAGE and many of the initiatives listed below and others are available at: www.collage-ireland.eu

SENATOR

Software ENgine for the Assessment and optimisation of drug and non-drug Therapy in Older peRsons (SENATOR) is a UCC led, FP7 funded project due for completion in 2017. The project aims to develop a software engine capable of individually screening the clinical status and pharmacological and non-pharmacological therapy of older people with multimorbidity to define optimal pharmacological and non-pharmacological therapy and highlight adverse drug reaction risk. More information: www.senator-project.eu

ELDERMET

ELDERMET combines expertise from a wide range of departments at UCC, Teagasc (The Irish Agriculture and Food Development Authority) and local Cork hospitals. The connection between diet, gut bacteria and health has been established by ELDERMET and the knowledge gained is being used to promote health in older people by shaping the design of new foods and food ingredients produced specifically for the older age-group.

More information: <http://eldermet.ucc.ie>

Centre for Gerontology and Rehabilitation

Research initiatives at the Centre for Gerontology and Rehabilitation include:

- **Community Assessment of Risk Tool and Strategies Programme (CARTS)** aims to identify, quantify, stratify and manage risk of adverse outcomes among community dwelling, older adults.
- **Let Me Decide** investigates the impact of simultaneously implementing the “Let Me Decide” advance care planning programme and a general palliative care education initiative in the long-term care setting in Ireland.
- **The Irish National Audit of Dementia** was carried out in all 35 acute public hospitals that admit adults with known/suspected dementia and was published in January 2014.
- **Optimal Dementia Care in Acute Care Settings** aims to determine the prevalence of dementia among older people in Irish hospitals and includes longitudinal follow-up and an economic appraisal.

ISS21

The Institute for Social Science in the 21st Century (ISS21) Ageing Research Cluster conducts interdisciplinary research on the social, economic and cultural implications of an ageing society. The cluster consolidates projects in a range of areas including ageing, physical, psycho-social and economic issues, older workers, dementia, community and environments. Projects of the ISS21 Ageing Research Cluster include the Age, Income and Food project (funded by CARDI) and *WellHouse* Promoting Mental Well-being in Older Age: the role of age-specific housing (funded by the Irish Research Council).

More information: www.ucc.ie/en/iss21/clusters/ageing

University College Cork (UCC) continued

www.ucc.ie/research

Healthy Ageing Research Theme School of Nursing and Midwifery

The aim of this research theme is to lead and develop collaborative multidisciplinary research of international standing that promotes healthy ageing and professional practice in working with older people. Current research projects include: European Later Life Network: a consortium of 26 European Countries working to develop a set of core competencies for health and social care professionals, working with older people. This project is funded by LLP - project ERASMUS Academic Networks.

Department of Epidemiology and Public Health

Lifestyle Changes through the Lifecourse has examined data from the TILDA study and found that older people who are obese have increased healthcare utilisation. Dietary patterns and changes within these have also been studied.

Thyroid Hormone Replacement for Subclinical Hypothyroidism Trial (TRUST) is an international EU-funded, double-blind placebo-controlled clinical trial, examining the treatment of subclinical hypothyroidism in adults aged 65 years and over, and is currently recruiting participants in Ireland and internationally.

Job Characteristics and Cardiovascular Disease in Older Workers

This study has demonstrated the importance of job characteristics in relation to the evolution of cardiovascular disease and functional limitations for older workers.

ELDERFOOD

This is a four year project funded by the Department of Agriculture, Food & the Marine. This project examines the effect of particular dairy components on gut microbiota to provide the scientific validation required to promote consumption of dairy products and ingredients in the older population.

NU-AGE

NU-AGE is a large multidisciplinary FP7 consortium with 30 partners, from 16 EU countries, involving nutritionists, biogerontologists, immunologists and molecular biologists from the most prestigious institutions in Europe. The UCC research team are analysing gut microbiota to determine if supplementation with a Mediterranean diet alters the microbiota and improves the health of older populations in Europe.

Tyndall National Institute

Tyndall is at the forefront of driving the convergence of ICT technology into healthcare applications. Through its alliances with clinical partners, industrial collaborators, and academic partners in biomedical research, Tyndall is creating new advanced solutions in connected health, diagnostics, therapeutics and monitoring that will enable: New portable devices for early/near-patient diagnosis, Implantable electronics for continuous monitoring and therapy, Wearable wireless electronics for physiological monitoring and personalised and targeted treatment of illness. More information at tyndall.ie

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Research into ageing spans a wide range of disciplines in UCD and includes international and national projects. Some of the major research projects and centres examining ageing in UCD include:

Connected Health

UCD is at the centre of a Connected Health education and research infrastructure that spans a range of activities from gathering, analysing and interpreting data through the development of new knowledge and care models, to implementing and evaluating change. UCD's Connected Health research revolves around the four central themes of Data, Care, Change and Sustainability, leveraging the underlying flagship programmes of ARCH and Insight as well as the core strengths of the Medical, Engineering, Business, Computer Science and Health Science Schools and Colleges.

More information: www.connectedhealthireland.com

Applied Research for Connected Health (ARCH)

ARCH is the Irish centre of excellence for applied connected health research. It is an industry-driven technology centre, funded by Enterprise Ireland, providing access to world class clinicians, academics and patient cohorts to explore and evaluate potential connected health solutions for the global market. ARCH is led by UCD and is based at NexusUCD, the UCD Industry Partnership Centre.

More information: www.arch.ie

Insight Centre for Data Analytics

Insight was established in 2013 by Science Foundation Ireland with funding of €75M. It aims to combine the skills of leading researchers with cutting-edge technologies from diverse research areas, including Connected Health. A key application area for Insight is that of health technologies.



Insight is a joint initiative between UCD, NUIG, UCC and DCU, and it builds on the six year research programme delivered by the Technology Research for Independent Living (TRIL) centre which focused on technology solutions to support independent ageing.

More information: www.insight-centre.org

European Network for the Joint Evaluation of Connected Health Technologies (ENJECT)

Based at UCD, the European Network for the Joint Evaluation of Connected Health Technologies (ENJECT) was funded under the European COST programme. ENJECT offers a forum for pan European agreement on standards and processes for the evaluation of new Connected Health technologies and programmes through five working groups: Economics and Impact; Technology Assessment; Standards of Care; Business and Revenue Models; and User Context and Design.

Geary Institute - Survey of Health, Ageing and Retirement in Europe (SHARE)

The UCD Geary Institute hosts SHARE activities in Ireland. SHARE is a longitudinal, multidisciplinary and cross-national panel database of micro-data on health, socio-economic status, and social and family networks of more than 85,000 individuals aged 50 and over from 20 European countries.

More information: www.share-project.org

Understanding health across the life course – ERC Advanced Investigator Programme (DEVHEALTH)

This pioneering and highly interdisciplinary project funded by the European Research Council is studying the origins and the evolution of health inequalities over the life course and across generations. Combining health, social and economic

University College Dublin (UCD) continued

www.ucd.ie/research

research, the project examines experiences and conditions of early childhood, and their long-term effects on health. The research will also explore policy implications for health prevention and remediation.

More information: <http://geary.ucd.ie/devhealth>

National Centre for the Protection of Older People (NCPOP)

This national centre, based at UCD, is funded by the Health Service Executive to carry out a programme of research examining elder abuse in Ireland. Research outputs from the Centre will contribute to the development of policy and practice in relation to elder abuse in Ireland. The Centre consists of a collaborative research team from the UCD Schools of: Nursing, Midwifery and Health Systems; Applied Social Science; Public Health, Physiotherapy and Population Science; and Medicine and Medical Science.

More information: www.ncpop.ie

Food4Me

Led by UCD, the Food4Me consortium consists of 25 partners from 12 European countries. The aim of the research programme is to advance the field of nutri-genomics by determining the application of personalised nutrition through the development of suitable business models. In addition, the project will compile current scientific knowledge and consumer understanding of personalised nutrition to be shared with EU institutions, the food industry, and other stakeholders.

More information: www.food4me.org



Institute for Sport and Health

The Institute for Sport and Health was set up in 2006 with the specific aim of optimising sporting performance and health for UCD and its wider community through the generation, application and sharing of scientific knowledge. Among its main areas of research expertise is exercise and functional fitness in the older people.

More information: www.ucd.ie/sportandhealth

AGELESS

The AGELESS project at UCD is funded by the European Research Council. It aims to understand more about the mechanisms that lead to ageing through the study of bats. The project is now following five colonies of greater mouse-eared bats living in Brittany in the north-west of France.

More information: <http://batlab.ucd.ie/research>

University of Limerick (UL)

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UL and its healthcare partners are implementing a strong programme of interdisciplinary research related to ageing across departments, faculties and specialties. The establishment of several research groups and centres along with the development of a Health Research Institute (HRI) has provided critical mass and a new platform to advance age-related research programmes. Examples of recent and ongoing research include:

Palliative Care

Researchers in the Cognitive Impairment Research Group at the Graduate Entry Medical School (GEMS) are investigating delirium in hospice and palliative care settings. The research will facilitate improved diagnostic accuracy and more optimal management of psychological and physical well-being of palliative care patients.

Health Services Research

UL, GEMS and its clinical partners at University Hospital Limerick and Primary Care, are leading several research programmes to better understand health care access, delivery and clinical outcomes in older people with chronic medical conditions. A National Kidney Disease Surveillance System is being developed that will identify, monitor and assess the outcomes of patients with chronic kidney disease and acute kidney injury.

Clinical investigators at UL are also seeking to better understand the epidemiology of age-related chronic disease through the exploration of national surveys (National Health and Nutritional Examination Surveys), international registries (US Renal Data System) and prospective observational cohorts (TILDA). Research funded by the Irish Heart Foundation is also exploring cardiovascular risks, treatments and outcomes between men and women with kidney failure.

The Division of Ageing and Therapeutics at University Hospital Limerick conducts research in the area of older medicine with a focus on the pharmacology of ageing, vascular biology and bone health. Specific research areas



include syncope, hypertension, stroke, mechanisms of pain, nitric oxide biology, osteoporosis and osteovascular instability.

Lifestyle and Health

UL is a partner in Food for Health Ireland, a research centre that addresses some of today's most pressing health issues through food. UL leads the Healthy Ageing and Performance Nutrition strand which has the aim of keeping healthy people healthy and promoting the scientifically proven, beneficial interaction between physical activity and dietary intake in the maintenance of health, particularly as people age.

UL's food health research is complemented by research on physical activity which is conducted by the Centre for Physical Activity and Health Research. A core theme for the Centre is the challenge of maintaining health in an ageing population.

Technology

The Falls Prevention Programme is directed by an interdisciplinary team and focuses on the assessment of fall-risk among community-dwelling older adults based on task performance using both standardised clinical assessment tools and wireless inertial sensors.

Researchers at the Irish Software Research Centre (Lero) are partners in the Applied Research for Connected Health (ARCH) initiative which is conducting innovative and applied research to support the deployment, adoption and reimbursement of connected health solutions. This is a major initiative for the management of several chronic medical conditions associated with an ageing population.

UL researchers are also conducting ambient assisted living research which aims to create a better condition of life for older adults through the use of ICT.

University of Limerick

(UL) continued

www2.ul.ie/web/WWW/Services/Research/Research_at_UL

Social

UL is a partner in the Strategic Innovation in Education and the Supporting Social Inclusion and Regeneration in Limerick Initiative. The purpose is to enable planning of a significant demonstration initiative that will establish Limerick as a nationally and internationally recognised locus for social innovation in ageing.

UL also performs research on various legal aspects related to ageing. Researchers in the School of Law are currently conducting research on the legal aspects of succession law and adequate financial provision for surviving spouses. Researchers are also examining the role of criminal law in regulating end-of-life decisions, particularly the role of the courts in deciding the proper balance to be struck between the desire to protect vulnerable individuals and the sanctity of life with the desire to respect individual autonomy.

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Ulster University undertakes research into ageing in a number of disciplines from the social sciences to biomedical. Research programmes and projects include:

ARK Ageing Programme

The ARK Ageing Programme, funded by The Atlantic Philanthropies, is a joint programme involving Ulster University and QUB. It aims to transfer existing knowledge between the academic, policy, and voluntary and community sectors; and to identify and fill research and information gaps on ageing issues.

More information: www.ark.ac.uk/ageing

Bamford Centre**MARQUE**

The Bamford Centre coordinates Ulster University's participation in the MARQUE (Managing Agitation and Raising Quality of life) study. It is a five year long study that aims to increase knowledge about dementia, agitation and personhood. The research involves observing and interviewing a wide range of people with dementia and those who care for them at home, in care homes and in hospital in order to better understand how agitation is currently managed, barriers to good practice and how care could be improved.

The Bamford Centre, in collaboration with the Public Health Agency NI, the Royal College of General Practitioners and the Alzheimer's Society will evaluate the use of a Healthcare Passport which will help to carry significant aspects of the individual's life and provide meaningful information between people living with dementia and the health and care services with which they are in contact. The findings will make an important contribution to the evidence base

<http://research.ulster.ac.uk/uuresearch/researchinfo.html>

on the use of services, communication needs and decision-making processes of people with dementia and their family caregivers as these unfold over time.

Art and Design Research Institute

The Memory Game

The Memory Game is a visual media system that supports the memories of people with dementia developed by researchers in collaboration with Cornell University and University of Texas. The programme used the theoretical dimensions of reminiscing and memory to develop a tablet-friendly programme that would allow older people to reminisce in a fun and engaging way.

Design for Dementia Friendly Dwellings

This multi-disciplinary research project explores how design can help inform decision makers when designing living environments for people with dementia.

Computer Science Research Institute (CSRI)

CSRI's Smart Environments Research Group in conjunction with the Information and Communications Engineering Research Group is conducting research and evaluation into novel assistive technologies to improve healthcare, well-being and independence associated with the domains of ageing and cognitive impairment. These include the development of mobile phone and home-based technologies for self monitoring and self-management of health and well-being that support 'active ageing'. Work includes long-standing collaborations with the end-users of technology including collaboration with Belfast City Hospital's Memory Clinic and Northern Health Trust to enable dementia patients and carers inform the development and assessment of cognitive tools.

Institute of Nursing Health and Nursing Research

The Institute of Nursing Health and Nursing Research is involved in a wide range of research projects dealing with issues including informing practice in nursing homes, improving the quality of life in nursing and residential homes and support for care managers. In addition research into effective family supports and training for family carers for older people is being carried out. Other research subjects include mood and anxiety disorders, and mental health across the lifecourse. Collaboration with the CSRI included a systematic review of the use of interactive computer games in older adults.

Transitional Justice Institute

Research on health and law overlaps with concerns about ageing and includes research on the right to access health and social services, and decision-making in the context of dementia.

Biomedical Sciences Research Institute

The Biomedical Sciences Research Institute at Ulster University undertakes research into nutrition and dietetics, optometry, pharmaceutical science and Stratified Medicine all of which is focused on the key degenerative diseases that affect an ageing population (diabetes, cancer, vision defects, bone health and cardiovascular disorders). The research has impacted on ageing society globally through the better prevention and diagnosis of disease, and through the development of new drugs for the improved therapeutic treatment of degenerative diseases; and also impacted on health and well-being by informing national and international health policy.

Ulster University (UU) continued

<http://research.ulster.ac.uk/uuresearch/researchinfo.html>

Psychology Research Institute

Researchers at this Institute led research into the health benefits of volunteering for older people. In collaboration with Volunteer Now the study examined the contributions made by older people in volunteering across NI and highlighted the motivations and benefits of volunteering among older people.

Centre of Excellence in Nutrition and Ageing (CENA)

CENA within the NI Centre for Food and Health was established to promote better health in older age through nutrition. The centre was funded initially by the Department of Employment and Learning NI to further enhance existing cross-border research activities in nutrition and ageing through the TUDA study (see page 16).

Waterford Institute of Technology (WIT)



Waterford Institute of Technology
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Ageing research takes place across a number of departments and disciplines at WIT. Some examples of current research work specific to ageing include:

Development of drug delivery technologies

Researchers in the Pharmaceutical and Molecular Biotechnology Research Centre (PMBRC) are developing prolonged release injectable depot formulations of drugs for the treatment of chronic diseases. These formulations release the drug over a period of weeks or even months and thereby eliminate the need for daily dosing. This is particularly important for older people where patient compliance can be poor and where patients can often be on several medications at any given time. Another age-related area of work is the development of drug delivery technologies for the treatment of eye conditions. This is beneficial to older people who often find eye drops difficult to administer.

More information: www.pmbrc.org

Biomedical research

Researchers within the PMBRC's Biomedical Research Group are studying sensitive biomarkers in blood samples which can help identify the presence of a disease. Early detection is often vital to allow tailored intervention and treatment. Amongst the conditions being investigated are carotid artery disease and cancer which often disproportionately affect older people.

More information: www.pmbrc.org

Macular Pigment Research Group (MPRG)

MPRG is conducting research into the role of nutrition for human health with emphasis on the role that nutrition (dietary pigments known as carotenoids) might play in the prevention of age-related diseases, including AMD the world's leading cause of blindness, and Alzheimer's disease. To date, the MPRG has contributed greatly to ways of preventing blindness and enhancing visual performance for the general population, and has published over 70 peer-review scientific articles on this topic. While the group continues to study and publish data on the link between nutrition and eye health,



its work has now evolved to study the link between human nutrition, and brain health and function with obvious potential for those with Alzheimer's disease.

More information: www.mprg.ie

Connected health

Researchers at the Telecommunications & Software Systems Group, in conjunction with researchers at Tyndall and the National College of Art and Design, are developing a system for tracking Alzheimer's and dementia patients.

More information: www.tssg.org

Educational gerontology

A research project at the School of Lifelong Learning and Education is exploring the subject of educational gerontology. The subject base for the project is older Fulbright scholars who received a core US Fulbright Scholar award at an earlier stage in their professional career and is drawn from faculty at universities in Florida, Georgia and North Carolina. The project is investigating: (i) what is different about the older learner, the older scholar, the older Fulbright Scholar, (ii) how older scholars integrate their learning and experience in order to accommodate new knowledge, and (iii) what internal and external transformative learning spaces work best within the world of educational gerontology.

Physical activity and health

Researchers in the Department of Health, Sport and Exercise, in conjunction with the Department of Vascular Surgery in Waterford University Hospital, have just completed a study comparing the activity and sitting patterns of peripheral arterial disease patients and age matched healthy controls, using week-long motion sensor devices.

WIT researchers along with representatives from Mary Immaculate College UL, DCU and UU, were recently involved in a CARDI-funded study to describe the physical activity and related health status of older adults living in the North and South of Ireland.

CARDI
leadership
programme
in ageing

CARDI Leadership Programme in Ageing



Pictured CARDI Fellows with CARDI Co-Chairs Professors Bob Stout and Davis Coakley (l-r): Joanne Feeney, Charlotte Neville, Prof Bob Stout, Mark O'Doherty, Prof Davis Coakley, Joanna McHugh, Aisling O'Halloran

In 2013 CARDI launched a Leadership Programme in Ageing Research and has 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. At the end of October 2014 CARDI launched a further Call for Fellows. The aim is to foster a new generation of leaders in ageing research.

The Fellows are 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 includes 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 also provides support, training and networking opportunities for the Fellows to develop their skills and knowledge in ageing research. It provides international networking opportunities for Fellows including working with The American Federation of Aging Research (AFAR).

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

Professor Anne Martin-Matthews (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

The CARDI Leadership Programme in Ageing Research is supported by the Health and Social Care Research and Development Division, Public Health Agency, NI, The Atlantic Philanthropies and the American Federation for Aging Research's Paul Beeson Career Development Awards in Aging Research Program.



The
ATLANTIC
Philanthropies



CARDI Leadership Fellows

appointed to date



Dr Mark O'Doherty

Employed by QUB

Mentor: Professor Frank Kee (QUB)

Dr Mark O'Doherty PhD is a postdoctoral research fellow from the UK Clinical Research Collaboration Centre of Excellence for Public Health QUB, where he obtained his PhD in nutritional and cardiovascular epidemiology in 2009. 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 TILDA and NICOLA. Only by comparing self-reported disability and health with those confirmed by objective health assessment can a better understanding be formed 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.



Dr Charlotte Neville

Employed by QUB

Mentor: Professor Jayne Woodside (QUB)

Dr Charlotte Neville obtained her PhD in nutritional epidemiology in the Centre for Public Health QUB in 2010. She also holds a BSc Honours degree in Human Nutrition and an MPhil from the Ulster University. 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.



Dr Joanna McHugh

Employed by QUB

Mentors: Professor Frank Kee (QUB) with Professors Brian Lawlor, Rose Anne Kenny and Ian Robertson (TCD)

Dr Joanna McHugh completed her PhD research at Trinity College 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 UCD. 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 and 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.



Dr Aisling O'Halloran

Employed by TCD

Mentor: Professor Rose Anne Kenny (TCD)

Dr Aisling O'Halloran holds a PhD in cardiovascular disease and genetics from RCSI and a BA (Mod) in Natural Science, specialising in genetics, from TCD. 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 multimorbidity, 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.



Dr Joanne Feeney

Employed by QUB

Mentors: Professor Ian Young (QUB) Professor Rose-Anne Kenny (TCD)

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). For the CARDI Leadership Programme she will explore the impact of stress on the neurocognitive and cardiovascular health of older people 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.



CARDI grants overview

CARDI Grants Overview

CARDI promotes high quality, interdisciplinary research into ageing issues across the island of Ireland. It supports co-operation in ageing research and the growing ageing research community in Ireland, North and South. CARDI also promotes engagement and involvement of older people in research.

Since 2009, CARDI has funded 32 pieces of all-Ireland research on ageing through its grant and data-mining programmes. The grant calls in 2009, 2010, 2011 and 2013 offered an opportunity to bring together researchers, policy makers, the voluntary and community sector and older people themselves to focus on the key issues related to ageing in Ireland, North and South.

The supported research projects and networks dealt with a range of subjects related to older people and ageing including long-term care, dementia care, inappropriate prescribing, health inequalities, physical activity, poverty and inequalities, and social isolation. The programme's aim was to improve the lives of older people especially the most vulnerable in society.

CARDI facilitated the communication and dissemination of research findings so that the evidence unearthed could be targeted at policymakers and service providers. Research briefs and translation papers were produced and events organised to communicate research findings to a wide audience with the aim of increasing their impact.



Information
about projects
funded by CARDI
can be found at
www.cardi.ie

CARDI funded research

Inequalities in Old Age: The Impact of the Recession on Older People in Ireland, North and South

Research Institution(s): QUB, UCD

Inequalities in old age 2011, North and South

Research Institution: QUB

These research projects, both led by Professor Paddy Hillyard QUB, examined the living standards and impact of economic decline on older people. In the first study the research team identified some of the specific factors that put pensioners at risk of poverty and some of the inequalities between groups within the older population including significant differences in pension income and provision. Through focus groups the study also highlighted the worries and anxieties about the future experienced by older people in the light of budgetary constraints.

The follow up study, conducted by Professor Hillyard and Dr Demi Patsios, used data from before and during the recession to show that pensioners were affected by cuts, particularly in the ability to keep their houses warm and to discretionary spending on items such as annual holidays. It found that while single pensioners in NI remained worst off, living standards for couples in NI and ROI had declined due to the recession.

Transport and Rural Ageing

Research Institution(s): UCD, UU, Age Action Ireland

This qualitative study led by Dr Aoife Ahern UCD explored older people's travel experiences in rural areas in ROI and NI. It found that rural transport services did not provide for an adequate alternative to the car for older people. This could lead to rural isolation and an inability to engage in an active social life as well as making health appointments difficult to attend. The research stressed the need for innovative and cost-effective ways of providing accessible transport to older people in sparsely populated rural areas as a means of reducing the risks of isolation and improving the quality of rural ageing.

End-of-life care standards for people with dementia

Research Institution(s): Dementia Service Information and Development Centre, TCD, UU

This research project led by Dr Suzanne Cahill TCD sought to identify key issues in end-of-life care for people with dementia and to produce a set of guidelines for end-of-life care for residents with dementia in care homes in Ireland, North and South. The authors argued that a set of guidelines to assist nursing homes in developing policies and practices in end-of-life care for residents with dementia may provide a useful basis for comparison with international best practice.

Universal design for older people

Research Institution(s): TCD, QUB, Centre for Excellence in Universal Design

This research network led by Professor Mark Dyer TCD was established to promote the concepts of universal design for older people to key stakeholders such as city and county councils. The network organised a series of workshops and seminars to discuss universal design as it applied to older people and how environments, particularly living spaces, could be made more accessible to them. The network found that workshops on universal design could promote collaboration in the design process, ensuring that the principles were understood and incorporated by architects, designers, planners and other stakeholders.

Inappropriate prescribing of medicines – Implications for older people and health budgets

Research Institution(s): UCC, UU and QUB

This research project led by Dr Stephen Byrne UCC investigated inappropriate prescribing in long-stay elderly facilities in Greater Cork and NI. The research found that in nursing homes in ROI, 73% of residents were receiving at least one potentially inappropriate medicine. In NI, 67% of those in the sample were receiving a potentially inappropriate medicine. Overall, nearly one fifth (19%) of the sample were receiving three or more potentially inappropriate medicines.

Ageing and Intellectual Disability

Research Institution(s): UU, TCD

There are over 3,100 older people with intellectual disabilities in ROI and nearly 2,000 in NI. A major breakthrough in research on this group came about in recent years with the intellectual disability supplement of TILDA. This feasibility study led by Professor Roy McConkey UU examined the possible extension of this supplement to NI. It concluded that extending the intellectual disability study to NI would be of great value although adaptations from the TILDA sampling strategy would be required to increase recruitment rates in NI.

Insights into elder abuse

Research Institution(s): Age Action Ireland, TCD, UU

This study led by Dr Emer Begley Age Action Ireland examined how elder abuse was defined and obtained the views of older people on elder abuse, and the services and support available to victims. The project revealed a link between older people's status and value to society, personhood and abuse in examining older people's perceptions of elder abuse. It also found that services and supports for elder abuse should be empowering in their approach and seek the views and opinions of older people.

The role of telecare in supporting carers of older people

Research Institution(s): Caring for Carers Ireland, UU

This research network led by Brigid Barron of Caring for Carers Ireland assessed the impact of telecare on carers of older people in terms of reducing stress and increasing quality of life. It found that while research showed some benefits for older people and their carers more evidence was needed to help build better strategies around the use of telecare for older people in the home.

Multimorbidity in the older population

Research Institution: TCD

Research led by Dr George Savva TCD found that older people suffering from two or more chronic conditions were 20 times more likely to report disability than those with none. The study urged more research in the area of multiple chronic conditions and argued that tackling them effectively across the life course may be vital in ensuring that longer lives were also healthier.

Physical activity and core depressive symptoms in the older Irish adult population

Research Institution: RCSI

Dr Karen Morgan RCSI led research which examined the link between an active lifestyle and depressive moods in order to examine how the physical and mental health of older people could be improved through changes in public health and other services. The study found that people over 50 years of age who were engaged in moderate to high levels of physical activity had a 50% reduction in the odds of having depressive symptoms.

Using aerobic exercise to promote brain plasticity

Research Institution(s): QUB, UCD, TCD

Promoting ways to increase brain plasticity in older people has the potential to increase healthy life expectancy and improve the quality of life of older people. This small-scale study led by Professor Richard Carson QUB found that older people exhibited changes in plasticity in response to brain stimulation similar in character to those shown by young adults. The study stressed the need for more research in this area to investigate the potential benefits to older people.

Dance for older people

Research Institution(s): UL, QUB

This network led by Dr Sylvia O'Sullivan UL included a series of seminars involving older people in Limerick and Belfast promoting both the work of the network and the benefits of dance for older people. These benefits not only included physical exercise but also social benefits in terms of participating in community activities. The network highlighted the benefits of dance in terms of falls prevention and also the benefits of pattern recognition in dance for helping dementia sufferers.

Understanding fuel poverty in the older population, North and South

Research Institution(s): DIT, Institute of Public Health, UU

This research project led by Professor Patrick Goodman DIT featured a review of national fuel poverty statistics relating to older people as well as an analysis of excess winter deaths among older people in both NI and ROI. It found that the risk of fuel poverty was concentrated among older people living alone across the island of Ireland. It also found that older people tended to live in houses which were not energy efficient and lacked either adequate insulation or central heating. The researchers argued that in order to tackle this issue standards of housing and insulation must be improved in addition to providing sufficient fuel subsidies for older people.

Mortality Modelling

Research Institution: QUB

Dr Declan French, QUB examined the factors driving the future of mortality in Ireland, North and South. The study aimed to contribute to providing realistic predictions for the future. In this way it could promote understanding of the factors that contribute directly to longer and healthier lives.

Age, Income & Food in Ireland

Research Institution: UCC

Research led by Dr Eleanor Bantry-White UCC examined the demographic and socio-economic influences on food expenditure in the older populations in NI and ROI. It found that diet in older people was linked to socio-economic factors and that improving nutrition levels required a multi-faceted policy approach including poverty alleviation and education

Encouraging behaviour change in mild cognitive impairment patients

Research Institution(s): QUB, TCD

This project led by Dr Jayne Woodside QUB used focus groups with mild cognitive impairment patients and their care-givers as well as structured interviews with professionals to design and test educational materials that could encourage changes in diet and physical activity.

Healthy ageing in rural communities

Research Institution(s): NUIG, QUB

In a bid to understand if ageing in rural communities increased or decreased the potential for exclusion in later life CARDI funded a research network, *Healthy Ageing in Rural Communities* (HARC) led by Dr Kieran Walsh NUIG.

This network included researchers and representatives from rural community organisations in ROI and NI. The network conducted community focus groups which revealed the views and concerns of older people about growing old in rural communities. It highlighted issues with social and health service provisions, and the sense of community enjoyed by many older rural dwellers.

Social exclusion and ageing in rural communities

Research Institution(s): NUIG, QUB

The HARC network's work laid the groundwork for a further research project led by Professor Eamon O'Shea NUIG which explored how age and rural living combined over the course of people's lives to have an impact on the likelihood of social exclusion. The researchers developed a new framework based on the indicators of social exclusion identified through the stakeholder engagement, as well as the mediating factors such as individual capacity and macro-economic forces. The research concluded that while rural ageing had many positive aspects such as community relationships, attention must be paid to the particular risk factors faced by older people in rural areas, and areas such as rural care services and transport should not be neglected even in times of economic constraint.

Measuring age-related social exclusion in a cross-border context

Research Institution: NUIG

This study led by Dr Kieran Walsh NUIG examined the issue of social exclusion among older people and contributing factors to isolation. It found that many older people enjoyed good social connections. However, a substantial number were at risk of social exclusion. It also highlighted that a lack of information about social exclusion hindered the effectiveness of policies and programmes aimed to help those older people most in need.

Older women and pension inequalities

Research Institution(s): NUIG, QUB

This research led by Dr Nata Duvvury NUIG highlighted the issue of gender inequality in pension provision in Ireland, North and South. The researchers found that one of the main sources of women's economic vulnerability at pension age was their interrupted work trajectories due to the traditional gendered caring norm and argued that resolving this problem required comprehensive action across employment, welfare and taxation policies.

Is age a determining factor in the treatment of men with prostate cancer?

Research Institution(s): NI Cancer Registry, QUB, National Cancer Registry Ireland

Prostate cancer is the most common cancer in men in Ireland. The research led by Dr Anna Gavin at the NI Cancer Registry found that access to urologists and curative treatment had increased for all men since the mid-1990s. However, older men were less likely to see a urologist or have radical treatment than younger men. The researchers concluded that decision-making relating to medical treatment for older patients was a complex process but argued that age should be just one factor taken into consideration alongside other health and well-being factors.

A comparison of people seeking help at memory clinics in Belfast and Dublin

Research Institution(s): QUB, TCD, NUIG

This project led by Dr Suzanne Barrett QUB examined and compared some of the characteristics of people seeking help at memory clinics. The researchers looked at two memory clinics: the Belfast City Hospital Clinic in NI and the Mercer's Memory Clinic at St James's Hospital Dublin in ROI. The researchers stressed the importance of identifying and understanding risk factors for dementia, and the role of early diagnosis in effective management and treatment of dementia.

Medication use in patients with dementia at the end of life

Research Institution(s): QUB, UCC

Despite the increase in the prevalence and incidence of dementia, research into palliative care for patients with advanced dementia is limited. This study found significant uncertainty and variation in the medicines doctors said they would prescribe for patients with dementia at the end of life when presented with clinical scenarios. The all-Ireland research found evidence that GPs and hospital physicians indicated they would continue with dementia medication and statins, and actively prescribe antibiotics when there was limited evidence of benefits to patients with dementia at the end of life.

Building balance with video games

Research Institution(s): QUB, TCD

This research project led by Professor Cathy Craig QUB explored whether older people could play specifically designed games on a Wii board to improve their balance and gait. The team developed age and ability appropriate games and tested it on groups of older people in Belfast and Dublin. The study found significant improvements in gait and balance for those playing the games. It also found that the fun element in the games helped to motivate and encourage older peoples' participation.

Future demand for long-term care in Ireland

Research Institution(s): TCD, QUB

This project led by Professor Charles Normand TCD constructed a predictive model for long-term care needs. It found that the number of older people needing long-term care was set to increase significantly in Ireland, North and South. It also highlighted the issue of unmet care needs and the urgency of developing policy planning to meet future demands for care.

Pain, Physical Activity and Depressive Symptoms in Older People

Research Institution: RCSI

This all-Ireland study led by Dr Frank Doyle RCSI examined the links between physical activity, pain and depressive symptoms across three datasets. The study found that pain was associated with increased depression and physical activity was associated with lower depression levels. It also found that having pain did not prevent people benefitting from physical activity.

Physical activity, ageing and health

Research Institution(s): Mary Immaculate College, UL, UU, WIT, DCU

The study led by Dr Elaine Murtagh Mary Immaculate College UL examined the relationship between health and physical activity among older people using official datasets. The resulting report underlined the importance of remaining active as we age. It also highlighted the need to develop innovative programmes to encourage those who were most inactive, including older women, to take up some physical activity.

Deprivation and Cognitive Dysfunction

Research Institution(s): UU, NUIM

Helene McNulty UU led a study which found that living in a disadvantaged area significantly predicted cognitive dysfunction in ageing. This meant that older people living in deprived areas of Ireland were more likely to suffer mental illnesses ranging from mild cognitive impairment to dementia.

Frailty and Disability in Ireland

Research Institution(s): TCD, QUB

This study led by Dr Matthew O'Connell TCD sought to develop a measure of frailty from the indicators used in the 2010/11 Health Survey NI and the first wave of TILDA. The final report used this measure to explore frailty in NI and ROI, and to assess the relationship between frailty and disability.

Inequalities in health behaviours among older people

Research Institution(s): UCD, TCD

Health behaviours are significant barriers to healthy ageing but little is known about how they differ by socio-economic status. This study led by Dr Eibhlin Hudson TCD examined inequalities in Ireland, North and South, in health behaviours and outputs, such as smoking, alcohol consumption, body mass index and physical activity. It explored at changes over time with the aim of developing a technique known as a concentration index – a single measure of inequality which can be decomposed to analyse factors underlying inequality.

Understanding disability in older heart disease patients in Ireland

Research Institution(s): QUB, TCD, NISRA

This research led by Professor Frank Kee QUB sought to assess the extent to which disability associated with coronary heart disease (CHD) varied by age, gender and socio-economic status. It reported on life expectancy free of CHD related disability and related inequalities, and examined risk factors such as smoking, diabetes, obesity, physical activity and psycho-social factors. It also evaluated how differences in healthcare and welfare systems in NI and ROI impacted on disability following CHD.

CARDI research commissioned by the Office of the First Minister and Deputy First Minister (OFMDFM) in NI

In 2012, CARDI was funded by OFMDFM to carry out a series of research projects on ageing in Ireland, North and South.

Online government, offline older citizens

This research led by Professor Irene Hardill Northumbria University found that as governments moved more services online there was a danger of a digital disconnect with many older people compared to wider society. The report entitled “E-government and older people in Ireland, North and South” found that while the numbers of older people with access to and using the internet were increasing these numbers remained low in comparison to other age groups.

Building stronger user engagement in age research

This research by Dr Brendan Murtagh QUB reviewed the nature of user involvement in research and how this could be strengthened to improve the quality of age research in Ireland, North and South.

Public and Community Transport for Older People in Rural Ireland, North and South

For older people, accessible transport services can help combat social exclusion and support independent living. Conor Breen CARDI conducted this research into public and community transport in Ireland, North and South, which examined how transport services could better meet the needs of older people in the future. It found a need for greater co-ordination of transport services in order to ensure that older people could access public and community services.

Wealth of Older People in Ireland

This study led by Professor Paddy Hillyard QUB explored the wealth and assets held by older people and evidenced intergenerational inequalities and inequalities within the older age cohort.

Understanding socio-economic inequalities affecting older people

This research project carried out by Paul McGill CARDI examined socio-economic inequalities among older people in Ireland, North and South. It found significant inequalities and that the average income of the poorest fifth of pensioners had fallen by €24 a week in the past two years.

agestats.ie

AgeStats.ie overview



In 2012 CARDI launched a website - AgeStats.ie - to support anyone undertaking research on ageing and older people in Ireland, North and South. This website provides an overview of selected datasets on ageing in NI and ROI.

Agestats.ie includes details of 50 surveys covering:

- 9 themes
- 190 sub-themes (compared with 187 in Nov 2012)
- 1659 measures in total
- 7427 individual data points identified across 50 surveys

While aimed primarily at researchers and statisticians, www.agestats.ie is an easy-to-use tool for policymakers, people in the voluntary and community sector, journalists and the like to find datasets and individual statistics on ageing topics. It does not require any background or training in research and can provide easy comparison between NI and the ROI on issues related to ageing and older people.



FIND OUT MORE BY VISITING <http://www.agestats.ie>

Glossary

AIT	Athlone Institute of Technology
AMD	Age-related macular degeneration
CARDI	Centre for Ageing Research and Development
CASALA	Centre for Affective Solutions for Ambient Living Awareness
CIT	Cork Institute of Technology
DCU	Dublin City University
DIT	Dublin Institute of Technology
DKIT	Dundalk Institute of Technology
ICT	Information and Communication Technology
NETWELL	Social Networks, Environments and Technologies for Wellness and Ageing-in-place
NI	Northern Ireland
NICOLA	Northern Ireland Cohort for the Longitudinal Study of Ageing
NUIG	National University of Ireland Galway
NUIM	National University of Ireland Maynooth (known as Maynooth University)
OFMDFM NI	Office of First Minister and Deputy First Minister Northern Ireland
PD	Parkinson's Disease
QUB	Queen's University Belfast
RCSI	Royal College of Surgeons in Ireland
ROI	Republic of Ireland
SHARE	The Survey of Health, Ageing and Retirement in Europe
TCD	Trinity College Dublin
TILDA	The Irish Longitudinal Study on Ageing
TUDA	Trinity, Ulster and Department of Agriculture Ageing Cohort Study
UCC	University College Cork
UCD	University College Dublin
UL	University of Limerick
UU	Ulster University
WIT	Waterford Institute of Technology

C|A|R|D|I

Centre for Ageing Research
and Development in Ireland

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