

Health Research in Action 2021



Research. Evidence. Action.

Introduction

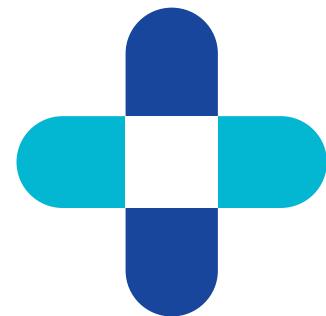
The Health Research Board (HRB) is Ireland's lead funding agency supporting innovative health and social care research and delivering data and evidence that improves people's health and patient care. We are committed to putting people first, and ensuring data and evidence are used in policy and practice to overcome health challenges, advance health systems, and benefit society and the economy.

This year's *Health Research in Action* highlights some of the many notable impacts and outcomes of this work during 2021. This includes a snapshot in numbers of all work completed in 2021, followed by 20 success stories about wide-ranging health and social care research across four themes.

These stories include projects about calculating nursing needs in real time in hospitals; building a network for better dementia research in Ireland; and helping healthcare teams work better together for patient safety. We also cover farm-based research into tackling antimicrobial resistance in the food chain, and new insights into how skin changes might help to identify Parkinson's disease.

But these are just a few examples of many fascinating projects covered in *Health Research in Action 2021*, all of which demonstrate how our work is benefitting Ireland's economy, its society, and, above all, its people, who are at the heart of everything that we do at the HRB.

Thanks to science writer Dr Claire O'Connell and our valued HRB and HRB-funded researchers for helping us compile this publication. Sincere acknowledgement also to the public, patients and carers, as well as the health and social care professionals, that make so much of our work possible.

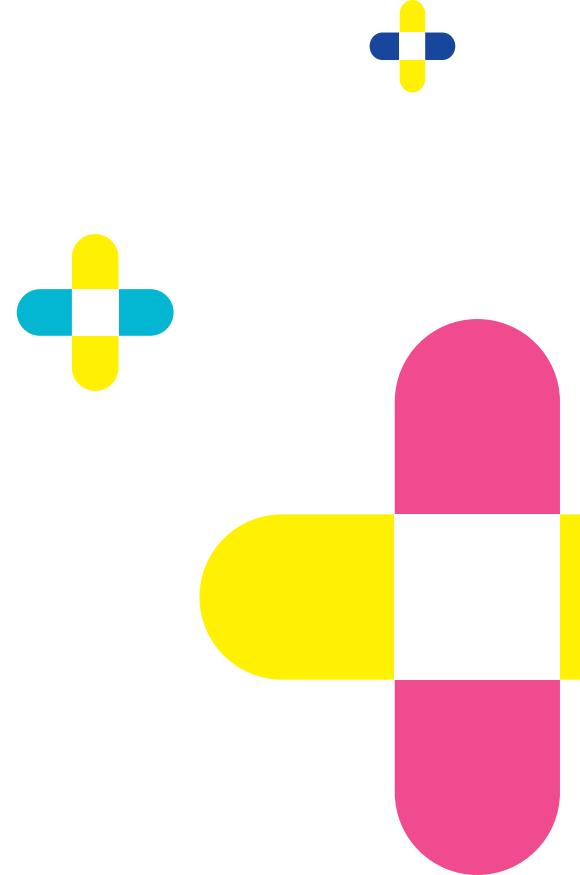


Contents

HRB by numbers 2021	2
---------------------	---

HRB success stories 2021

Theme 1: Strengthening Ireland's health and social care	4
Theme 2: Emerging discoveries to improve health	12
Theme 3: Spotlight on dementia	18
Theme 4: HRB evidence reviews for better outcomes	23



HRB by numbers

- A snapshot of work completed in 2021

The team managing our National Health Information Systems:

Serviced 78 requests for data

Published 6 peer-reviewed journal articles

Published 7 annual reports and national bulletins on drugs and mental health

The HRB Evidence Centre:

Completed 13 evidence products for the Department of Health:

5 evidence reviews

6 evidence briefs

2 major publications:

- *Alcohol consumption, alcohol-related harm and alcohol policy in Ireland*
- *The 2019–20 Irish National Drug and Alcohol Survey*

In terms of funding

65 awards
completed in 2021,
worth a total of
€47,938,615

This research resulted in:

54 new methods or materials (e.g. assays, databases, training materials)

18 healthcare innovations (e.g. medical devices, therapies or interventions)

122 influences on policy or practice (e.g. new clinical guidelines, policy reports)

252 engagements with public bodies and media

93 instances of public, patient and carer involvement (PPI) in research



Supported 240
research jobs

102
healthcare professionals

43
biomedical scientists

5
statisticians and
bioinformatic scientists

5
social scientists

41
other scientists

44
other



Significant
academic outputs

22 PhDs completed
or in progress

463 Peer-reviewed
publications

59 Non peer-reviewed
publications

540 Presentations at
scientific conferences

84 Academic collaborations
with national colleagues

127 Academic collaborations
with international
colleagues



The economic
impact



Leveraged
€77,422,616 total
funding on foot
of these awards



Started **16** industry
collaborations



Filed **one**
patent

Theme 1: Strengthening Ireland's health and social care



TeamTalk: Training healthcare teams to work collectively for patient safety

Lead researcher: Professor Eilish McAuliffe, University College Dublin (UCD)

The problem

When healthcare teams work as a collective, rather than a hierarchy, it improves patients' safety. However, healthcare teams often struggle to find the time to learn and practise these skills.

The project

Using the findings of a previous HRB-funded study called Collective Leadership for Safety Cultures, this project saw a team at UCD work with the Institute of Art, Design and Technology to develop a series of videos. The aim of these videos is to help healthcare teams to engage in a self-directed training programme about working together for patient safety.

The outcomes

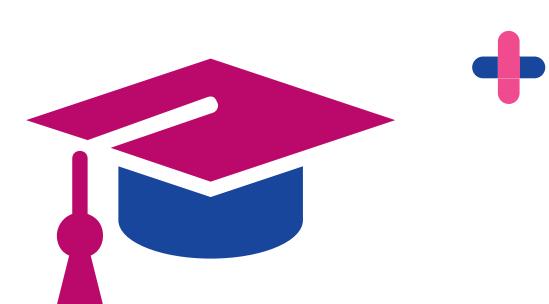
- TeamTalk: A free and interactive resource hub for healthcare teams, which includes a series of training modules and video instructions to help healthcare teams work together
- The training was first used by four different teams in hospitals and community settings, and has since been used by teams across the health system in Ireland
- Healthcare teams that used TeamTalk reported a greater feeling of 'psychological safety', where team members could speak up, whatever their rank and/or profession
- Healthcare teams in Northern Ireland and Wales are now using the TeamTalk platform to improve the focus on patient safety.

Eilish McAuliffe, Professor of Health Systems at UCD, says:

"We developed a comprehensive set of open-source training modules and video instructions targeted at improving collective working, team performance and patient safety. When social distancing and other COVID-19 preventive measures were introduced, we adapted the materials so that teams could use them in online meetings. The training promoted a positive internal team environment and fostered the recognition that partnership is required for effective patient care. And, very importantly, teams reported a more collective mindset."



[www.ucd.ie/collectiveleadership/
resourcehub/toolkit](http://www.ucd.ie/collectiveleadership/resourcehub/toolkit)



A serious game to support older people's healthcare decisions

Lead researchers: Dr Deirdre O'Donnell and Professor Thilo Kroll, University College Dublin (UCD)

The problem

The Assisted Decision-Making Capacity Act (2015) is reshaping how we understand and provide support in Ireland to older people when they are making decisions about their healthcare. We want to know how to enable healthcare professionals to assist people in decision-making in the best possible way.

The project

The Promoting Assisted Decision-Making in Acute Care Settings (PADMACS) project led by UCD examined the research literature on what can help people with thinking and memory problems to make decisions. They also interviewed healthcare staff and older people (with and without dementia) and their carers. Based on this information, they developed a scenario-based training game.

The outcomes

The research found that:

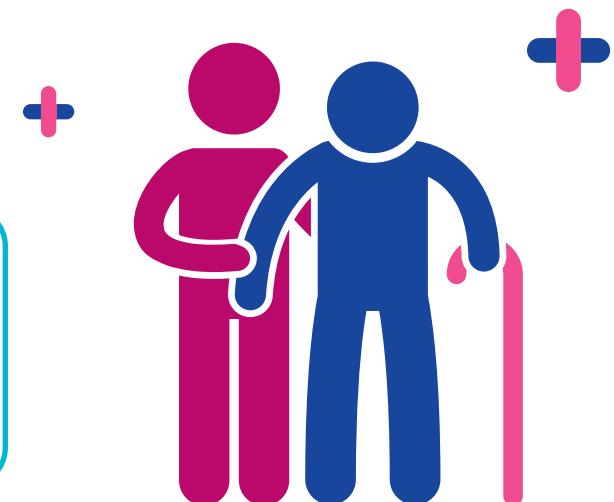
- A positive relationship between healthcare professionals and the older person and family carers is critical before decision points about healthcare arise

- Older people with and without dementia and their carers are best supported in decision-making when different healthcare professionals work together
- The hospital building and social environment can impact the capacity to make healthcare decisions.
- The findings informed the development of a 'serious game'. It contains evidence-informed decision-making scenarios about patients and situations in acute care, which players (healthcare professionals and students) then discuss
- The game has been used to train healthcare professionals and students in acute and rehabilitation settings
- The Royal College of Physicians in Ireland plans to use the game for education programmes for healthcare professionals.

The PADMACS project is a collaboration involving University College Dublin, The Royal College of Physician of Ireland, St Vincent's University Hospital, the Mater Misericordiae University Hospital, the Alzheimer's Society of Ireland and Family Carers Ireland.

Thilo Kroll, Full Professor of Health Systems Management at UCD, says:

"People have the right to be involved in making decisions about their healthcare, and we need to start out with the view that people have the capacity to do that. We must also recognise that their capacity may fluctuate over time and context. Through the PADMACS project we are providing evidence-based tools for healthcare staff, patients, and carers to work together to help protect the right of the patient to make decisions about their care whenever possible."



Matching nursing levels to patient needs leads to safer care

Lead researcher: Professor Jonathan Drennan, University College Cork (UCC)

The problem

When patients get the appropriate level of nursing care they need, they do better. But how can you tell how many nurses and healthcare assistants (HCAs) are needed in a hospital ward or emergency department at any given time?

The project

Researchers at UCC worked with the Department of Health Taskforce on Safe Nurse Staffing and Skill Mix to identify how many nurses and HCAs are required in hospital wards and emergency departments in Ireland based on patient need.

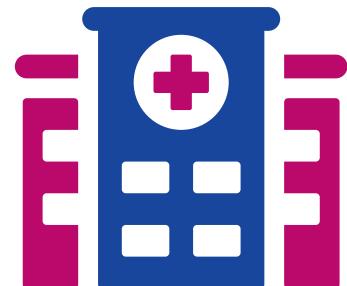
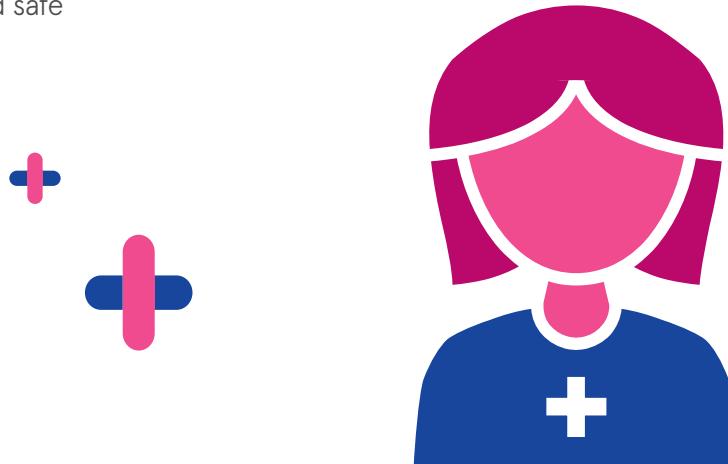
The outcomes

- The safe staffing framework, along with new computer software, was deployed in medical and surgical wards to allow nursing managers to calculate patients' nursing needs and safe staffing levels in real time

- The introduction of the safe nurse staffing framework has led to fewer adverse events among patients, reduced burnout among nursing staff, lower staff turnover in hospitals and a lower reliance on agency nurses to provide care
- A new approach based on patient need was also established to help emergency departments identify safe nurse staffing levels. This led to patients receiving care more quickly and reducing the number who leave without being seen
- The Framework is being established nationally in hospitals across Ireland
- The researchers are currently developing a model to identify safe nurse staffing levels in nursing homes.

Jonathan Drennan, Professor of Nursing and Health Services Research, UCC, says:

“We found that taking a systematic approach to matching patient needs with nursing requirements has a tremendous impact on the services and provision of safe care. Because we work closely with the Department of Health and the Office of the Chief Nursing Officer, the models are currently being put into practice nationally, improving the working life of nursing staff and increasing patient safety.”



Igniting change to involve the public in health research

HRB-PPI Lead: Dr Anne Cody, Head of Investigator-Led Grants at the Health Research Board (HRB)

The problem

When members of the public, patients and carers are involved in shaping health research, it helps the outcomes of that research to be more focused on the needs of those directly affected by it. However, they are often left out, or included only at the end of research projects.

The project

The PPI Ignite Network is funding people in universities around Ireland specifically to enhance public, patient and carer involvement (PPI) in research culture and embed it in health research.



The outcomes

- Seven universities in Ireland now have personnel dedicated to raising awareness of and sharing good practices in PPI
- Each PPI Ignite site provides training and advice to local researchers
- Research-performing organisations have started to include PPI in their research and dissemination strategies
- The PPI Ignite Network plans to hold an annual festival that will, among other things, reach out to people who are not currently involved and allow a creative space for innovation in PPI. The first of these took place in October 2022.

Dr Anne Cody says:

"PPI in planning, doing, and communicating health research has been part of the HRB strategy since 2016. We are committed to create a vibrant culture of PPI at major universities. The PPI Ignite Network is making great strides towards this goal."

PPI Ignite Network is made up of:

- Dublin City University
- University of Galway
- RCSI University of Medicine and Health Sciences
- Trinity College Dublin
- University College Cork
- University College Dublin
- University of Limerick
- 10 national partners
- 53 local partners

Portal power to the patients – the value of accessing your epilepsy data online

Lead researcher: Professor Colin Doherty, Trinity College Dublin (TCD)

The problem

A person with epilepsy may need medical attention quickly. But what if their data are not at that clinic or hospital? PiSCES is an online portal that allows people with epilepsy to access their own data and share it with healthcare professionals. This project sought to discover whether using PiSCES improves the experience and care of the patient.

The project

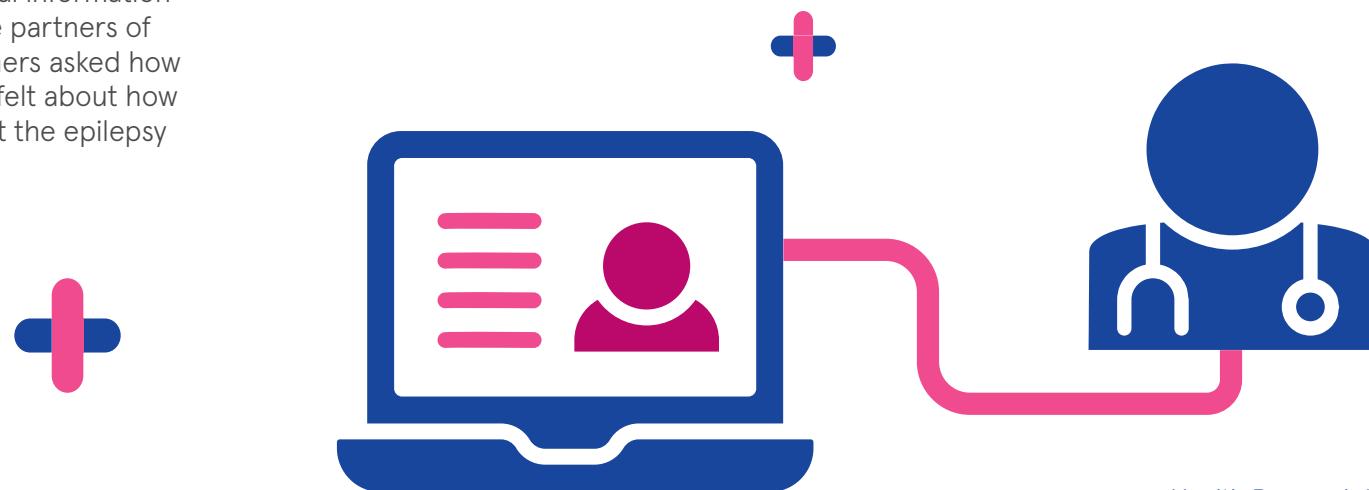
Teams in RCSI University of Medicine and Health Sciences and TCD at the FutureNeuro Research Centre worked with 72 individuals with a clinical diagnosis of epilepsy whose medical information is on the PiSCES portal and 18 care partners of people with epilepsy. The researchers asked how they and healthcare professionals felt about how the portal might enhance or inhibit the epilepsy care process.

The outcomes

- Patients, carers, and healthcare professionals are generally positive about an online portal where people with epilepsy can access and share their own health data, believing it can foster inclusion, confidence, and trust
- Patients and their carers felt empowered by having access to their own data, and it helped them to recall previous episodes and to understand epilepsy better
- Some healthcare professionals had concerns about how work practices may need to change when patients use the portal to share data in the clinic.

Professor Colin Doherty, Consultant Neurologist and Head of TCD School of Medicine, says:

“For a person with epilepsy, an electronic portal where they can access their own relevant data immediately and share it with healthcare professionals has the potential to transform care. But we wanted to know how patients and carers and healthcare professionals would feel about it. Overall, the results show that the electronic portal brings the potential for patients to feel empowered, and to understand their conditions more deeply.”



What helps or hinders people seeing the GP in Ireland?

Lead researchers: Dr Anne Nolan and Dr Gretta Mohan, the Economic and Social Research Institute (ESRI)

The problem

Ireland's public healthcare system is moving towards broader access for people to medical care. For this to work well, we need to understand how healthcare policy can make it easier for people to visit the General Practitioner (GP).

The project

Researchers at the ESRI used data collected in three large studies in Ireland – the Growing Up in Ireland study, The Irish Longitudinal Study on Ageing (TILDA) and the Healthy Ireland survey – to look at how policy changes in Ireland affected people's access to GP care.

The outcomes

- The project published 13 papers, many of which were used by policymakers in the Department of Health
- We now know that people in Ireland who do not have a medical card or GP visit card tend to visit the GP less often

- The work showed that introducing free GP care for people aged over 70 in Ireland was linked with reduced financial stress in this age group
- The data showed that those living in areas with higher levels of deprivation make significantly more use of GP services, even taking account of many factors affecting the need for GP care and GP supply (i.e., number of GPs within walking distance)
- We now know that children in migrant families in Ireland are less likely to access GP care, suggesting the need for more focused policy in this area.

Dr Anne Nolan, Associate Research Professor with the ESRI, says:

"It is important that everyone in Ireland has the access they need to GP care. In this study we could see how changes to healthcare policy – particularly providing free GP care to people over 70 – facilitated access to the GP and reduced financial stress, and we can see now that we need to enable greater access for migrant families to GP care in Ireland."



Evidence to support better primary care in Ireland

Lead researcher: Professor Tom Fahey, RCSI University of Medicine and Health Sciences

The problem

GPs often need to weigh up many factors to help their patients. A 2006 report highlighted the need for more research in primary care in Ireland to help GPs make better evidence-based decisions.

The project

The HRB Centre for Primary Care Research (CPCR) was founded in 2008 as a collaboration between the RCSI University of Health Sciences and Medicine, Trinity College Dublin and Queen's University Belfast. It has been researching and evaluating tools and approaches for GPs to help with diagnosis (finding out the condition a patient has), prognosis (predicting how they are likely to fare) and therapeutics (providing appropriate treatment).

The outcomes

- More than 350 publications about evidence-based practice in primary care

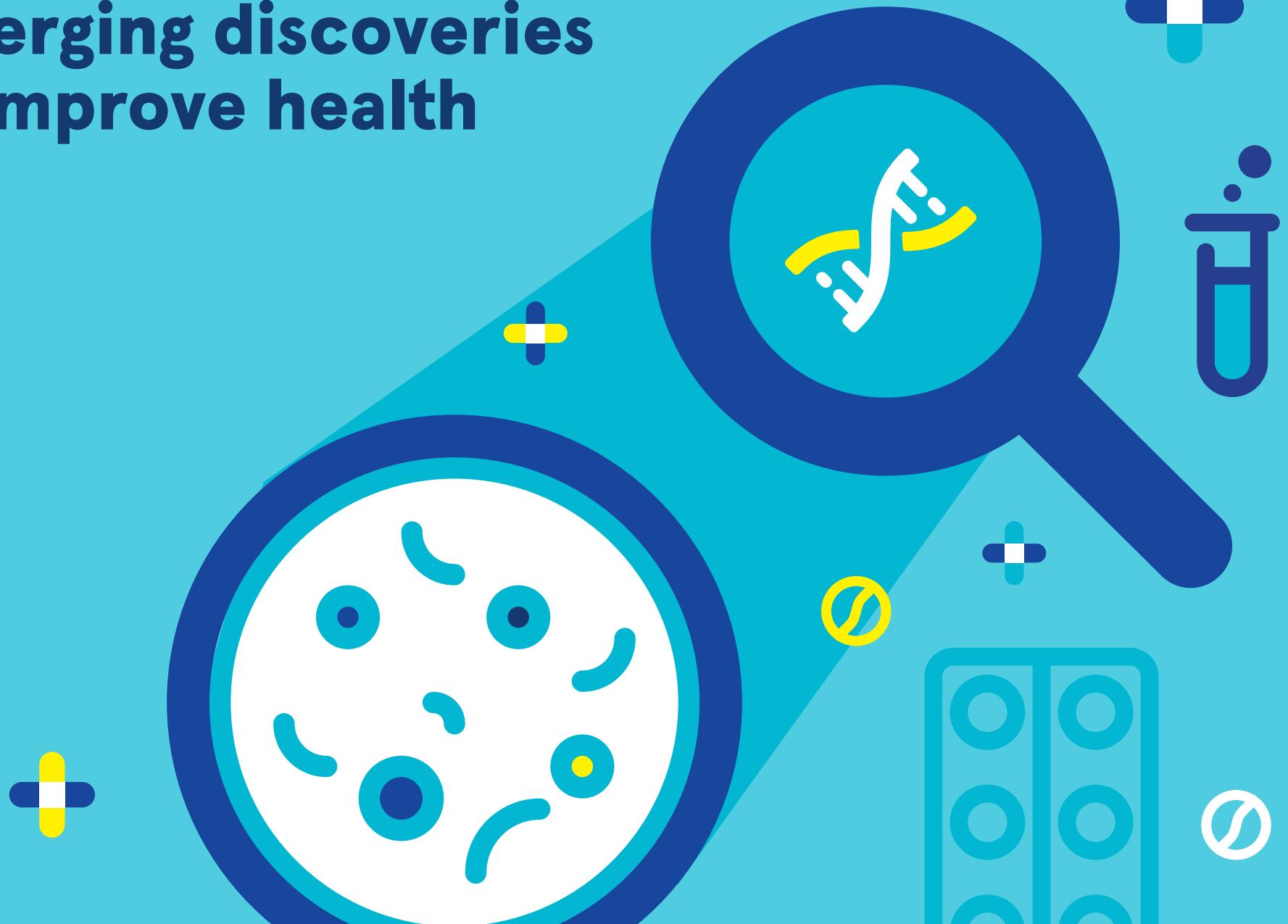
- Several tools to support diagnosis have been validated, including the Centor clinical prediction tool to assess whether a sore throat is bacterial or viral, thereby helping to reduce unnecessary antibiotic use
- The OptiScript trial has reduced the amount of potentially inappropriate prescriptions (where a patient may be, for example, on two similar drugs or drugs that interact with each other)
- Research at CPCR has improved the prescribing of proton-pump inhibitor drugs to control stomach acid, meaning that patients are more likely to be on an appropriate dose
- CPCR has employed around 100 clinical and non-clinical researchers in evidence-based practice in Ireland.

Tom Fahey, Professor of General Practice at RCSI University of Medicine and Health Sciences and Director of CPCR, says:

“Through the work at the CPCR we now have a better understanding of the diagnostic and predictive rules and models that GPs can use in everyday clinical practice. We have made particular strides in areas such as diagnosing Streptococcal sore throat and reducing levels of potentially inappropriate drug prescriptions. As a centre, we are enabling clinicians and researchers to develop their skills in primary care research.”



Theme 2: Emerging discoveries to improve health



Parasite's trick has potential to calm inflammatory bowel disease

Lead researchers: Professor Aisling Dunne and Dr Hannah Fitzgerald, Trinity College Dublin (TCD)

The problem

Inflammatory bowel disease (IBD, which shows up as ulcerative colitis or Crohn's disease) affects around 20,000 people in Ireland and three million in Europe. Current generation IBD medicines often don't work well in the long-term and they bring side-effects, so we need new medicines to calm the body's immune system and stop it from damaging the bowel.

The project

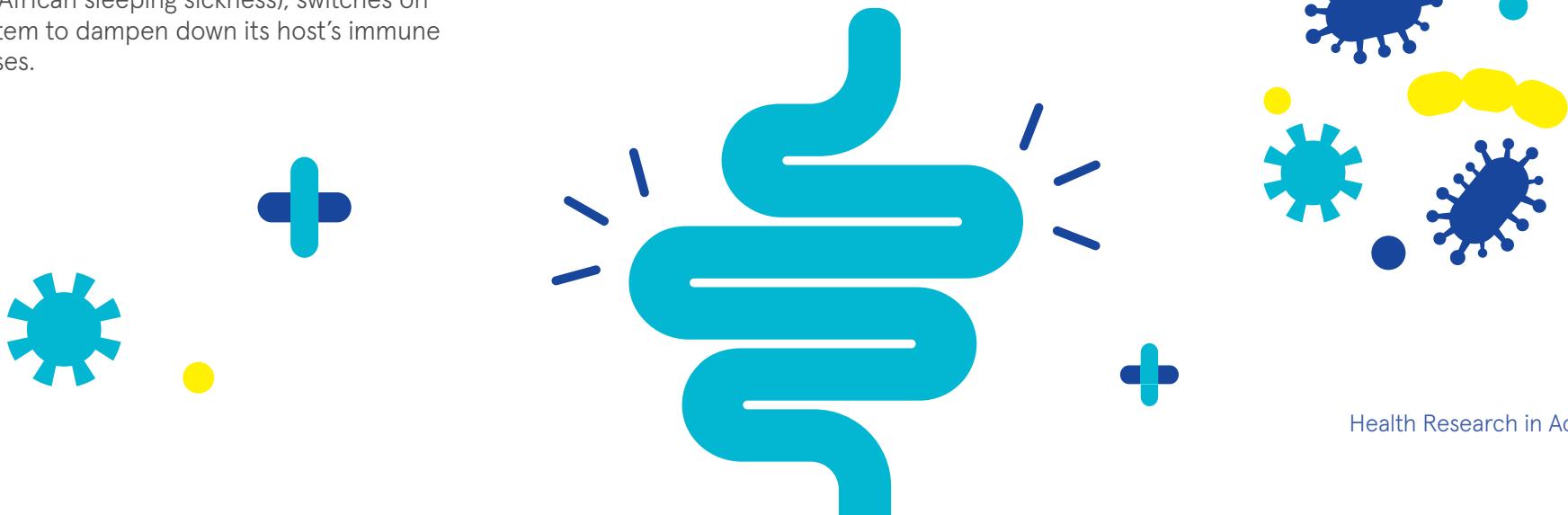
Research at TCD explored ways to switch on a natural anti-inflammatory mechanism in the body called the heme oxygenase system. It looked at how a parasite, *Trypanosoma brucei* (which causes African sleeping sickness), switches on this system to dampen down its host's immune responses.

The outcomes

- The researchers identified a new type of chemical from the parasite that switches on the heme oxygenase system
- In laboratory tests, the parasite chemicals calmed inflammation in cells that came from patients with IBD
- The chemicals can now be tested further as possible anti-inflammatory medicines of the future.

Aisling Dunne, Professor in Neuroinflammation at TCD, says:

"The project identified new drug candidates for IBD. A key advantage of these is that they are affordable and they can be commercially synthesised. While further study is required to unlock their full therapeutic potential, if successful, it paves the way to investigate their effects in a range of other inflammatory and autoimmune conditions."



Getting the benefits of stem cells into injured lungs

Lead researcher: Dr Daniel O'Toole, University of Galway

The problem

When someone is critically ill, particularly with a serious infection or pneumonia, their lungs can become severely damaged, and this can lead to death. Previous research has shown that adult stem cells might be useful to help treat people with acute lung injury (ALI) and acute respiratory distress syndrome (ARDS), but injection of the whole cells into patients can be problematic.

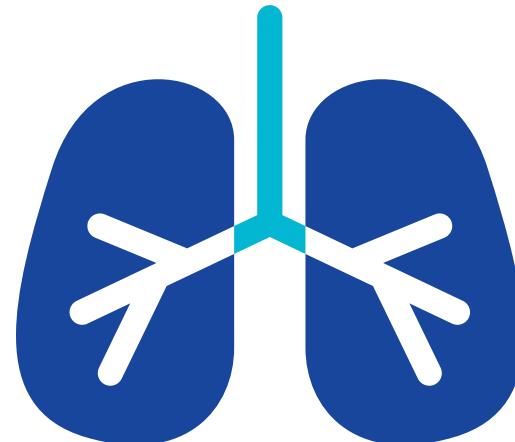
The project

A collaboration between University of Galway and Irish companies Aerogen (Dr Ronan MacLoughlin) and Orbsen Therapeutics (Dr Steve Elliman) collected biological sacs released naturally by stem cells that contain potentially medicinal molecules and tested how they could be delivered directly into the lungs using a nebuliser.



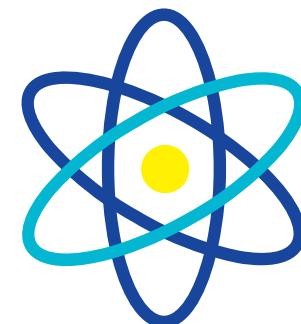
The outcomes

- The research showed that substances from stem cells with the potential to treat lung injury could be collected and then delivered into lung tissue in a lab model
- The project found that the stem cell products fared well in the nebuliser
- The work has paved the way for upcoming clinical trials in humans using cell therapy and nebuliser technology at the HRB Clinical Research Facility in Galway.



Dr Daniel O'Toole, Principal Investigator in CÚRAM and REMEDI at the University of Galway, says:

“Using products from stem cells, rather than the stem cells themselves, opens up the opportunity to deliver promising medicines directly deep into injured lungs. Working with Orbsen Therapeutics meant that we had stem cell products of full medical standard and the quantity we needed for all the planned experiments, while the Aerogen nebuliser technology allowed us to test the delivery. Our findings pave the way for us to plan and conduct future clinical trials.”



Skin sebum testing – a new frontier in Parkinson’s disease

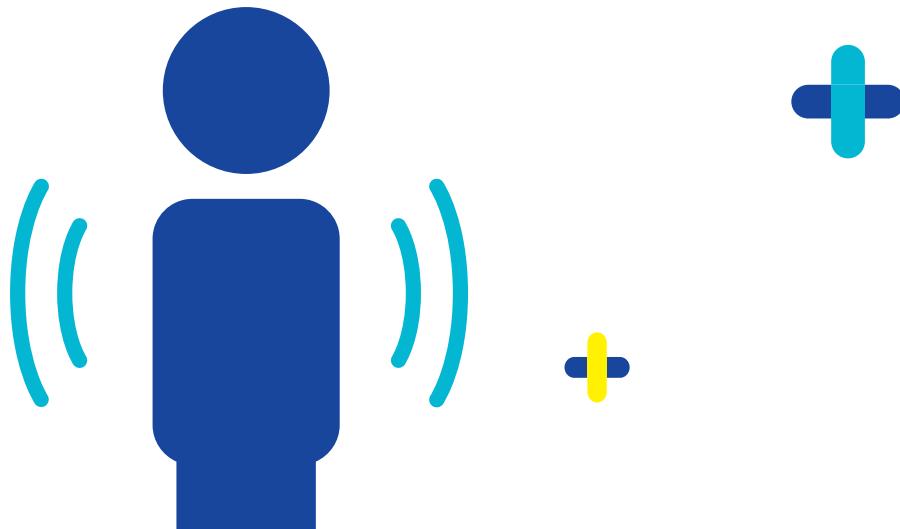
Lead researcher: Professor Tim Lynch, Mater Misericordiae University Hospital, Dublin

The problem

Parkinson’s disease (PD), which affects a person’s movement, is difficult to diagnose and monitor. Could changes in a person’s skin offer a quick and painless way to help doctors assess patients with suspected PD?

The project

The Dublin Neurological Institute in the Mater Hospital took swab samples from the foreheads of 70 patients with and without PD to compare them. The samples were analysed at Charles Institute of Dermatology in University College Dublin (UCD).



The outcomes

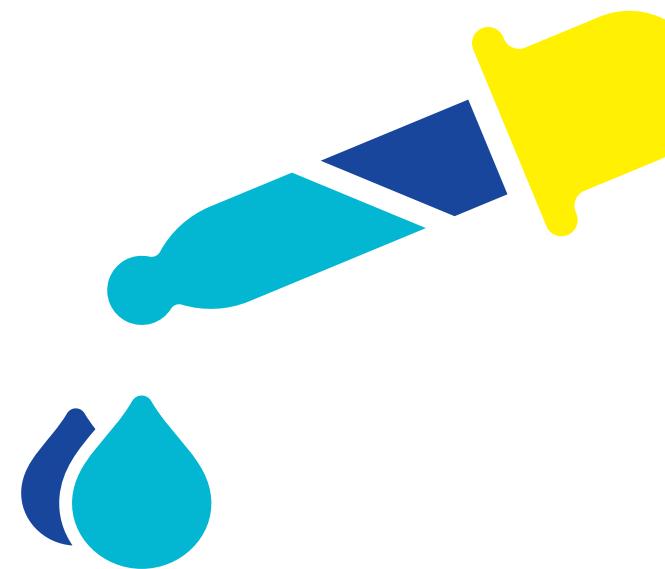
We now know that:

- Levels of sebum, an oily substance in the skin, tend to be higher in people with PD
- Male patients with PD had higher sebum level than females with PD
- Other factors, such as skin acidity and hydration did not differ between people with and without PD in the study.

The project has opened the way for continued work on skin in PD in UCD, funded by the Michael J. Fox Foundation.

Dr Dimitra Khalil Chaity, Neurology Research Registrar at UCD, says:

“For a long time, people had noticed that the skin can become oilier or shinier in PD. My colleague Dr Diana Olszewska decided to investigate this further. She and I have found that sebum on the skin surface is higher in patients with Parkinson’s, pointing to the potential to develop this as a non-invasive test when assessing people for the disease.”



Compost, time, and grass – how to tackle drug-resistant bacteria in the food chain

Lead researchers: Professor Fiona Walsh, Maynooth University and Dr Fiona Brennan, Teagasc

The problem

Drug-resistant bacteria can spread from manure into soil and from there potentially into the human food chain.

The project

Researchers at Maynooth University and Teagasc tracked bacteria and genes that make the bugs resistant to drugs in pig manure that was either composted or untreated and then spread on grass, a typical practice on farms in Ireland.

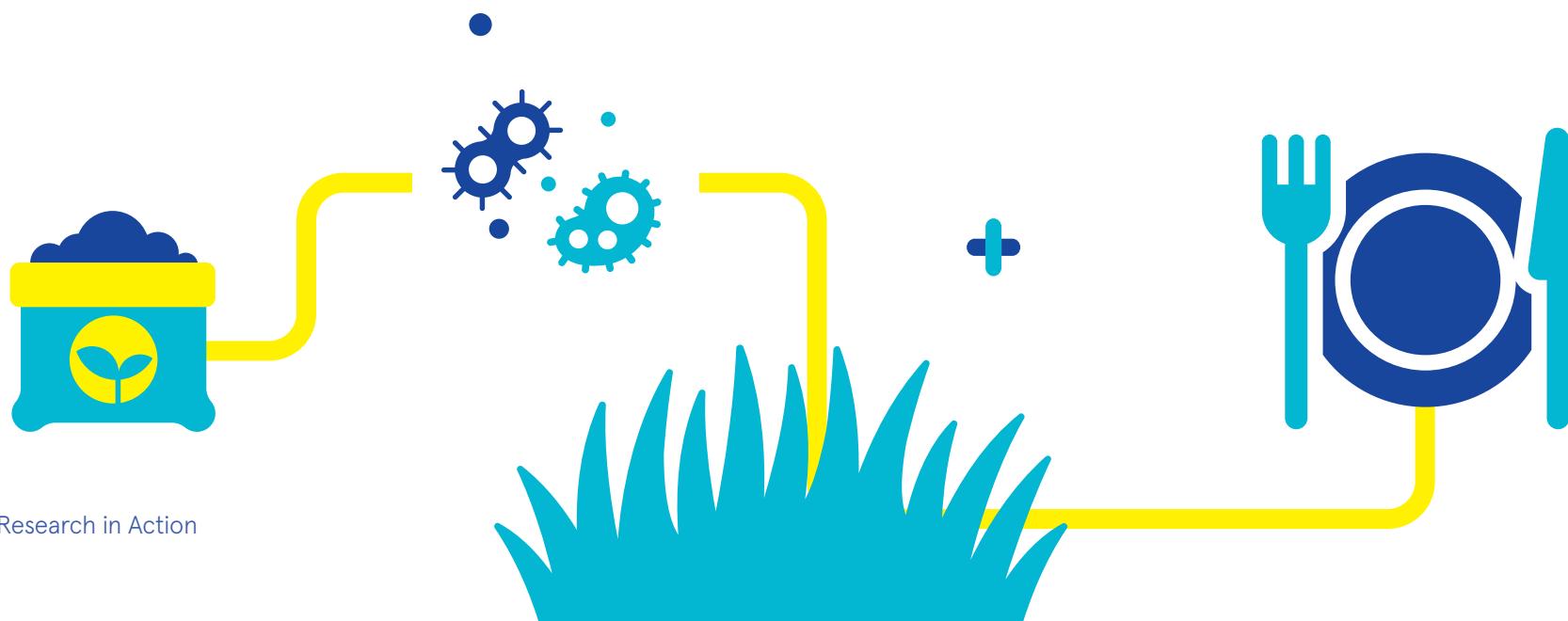
The outcomes

We now know that:

- Composting is an effective way to reduce drug-resistant bacteria in manure
- The widespread practice of delaying animals from grazing where manure (whether composted or not) has been spread reduces the spread of antimicrobial resistance
- The microbes (bacteria, fungi etc.) present on grass may help to reduce the spread of antimicrobial resistance in the food chain.

Professor Fiona Walsh, Kathleen Lonsdale Institute for Human Health at Maynooth University, says:

“We showed that the current practices of treating manure and having a gap before allowing animals graze the grass reduces the levels of antimicrobial resistance on the grass, which is good news. This is the first study to show the importance of farmland grass in understanding the movement of antimicrobial resistance from the manure to the environment.”



Steps towards a new treatment for diabetic foot infections

Lead researchers: Dr Deirdre Fitzgerald-Hughes and Professor Andreas Heise, RCSI University of Medicine and Health Sciences, and Dr Mary Pryce, Dublin City University (DCU)

The problem

Worldwide, more than 400 million people have diabetes. The condition increases the risk of developing long-term and hard-to-treat wounds on the feet. If they become infected, patients may need to attend hospital and, in severe cases of infection, they may need a toe, foot or leg amputated.

The project

Researchers at RCSI University of Medicine and Health Sciences and DCU made and tested many protein molecules called peptides to see if they could kill bacteria that cause infections in diabetic foot wounds. They also spoke with patients to find out their preferences for treating diabetic foot infections at home.



The outcomes

- Patients with diabetes are keen to have more options to treat diabetic foot infections at home
- The project made star-shaped and linear peptides that, in lab tests, killed bacteria commonly found in diabetic foot wounds
- The researchers put extra chemical structures onto the peptides that may increase their germ-killing ability when a light is shone on them
- The HRB project has led to the next phase of research, funded by Science Foundation Ireland, to explore and test options for the peptides and light-activated molecules
- The discoveries could lead to creams and light treatments that reduce the need for patients to attend hospital for diabetic foot infections and that tackle the problem of antibiotic-resistant infections.

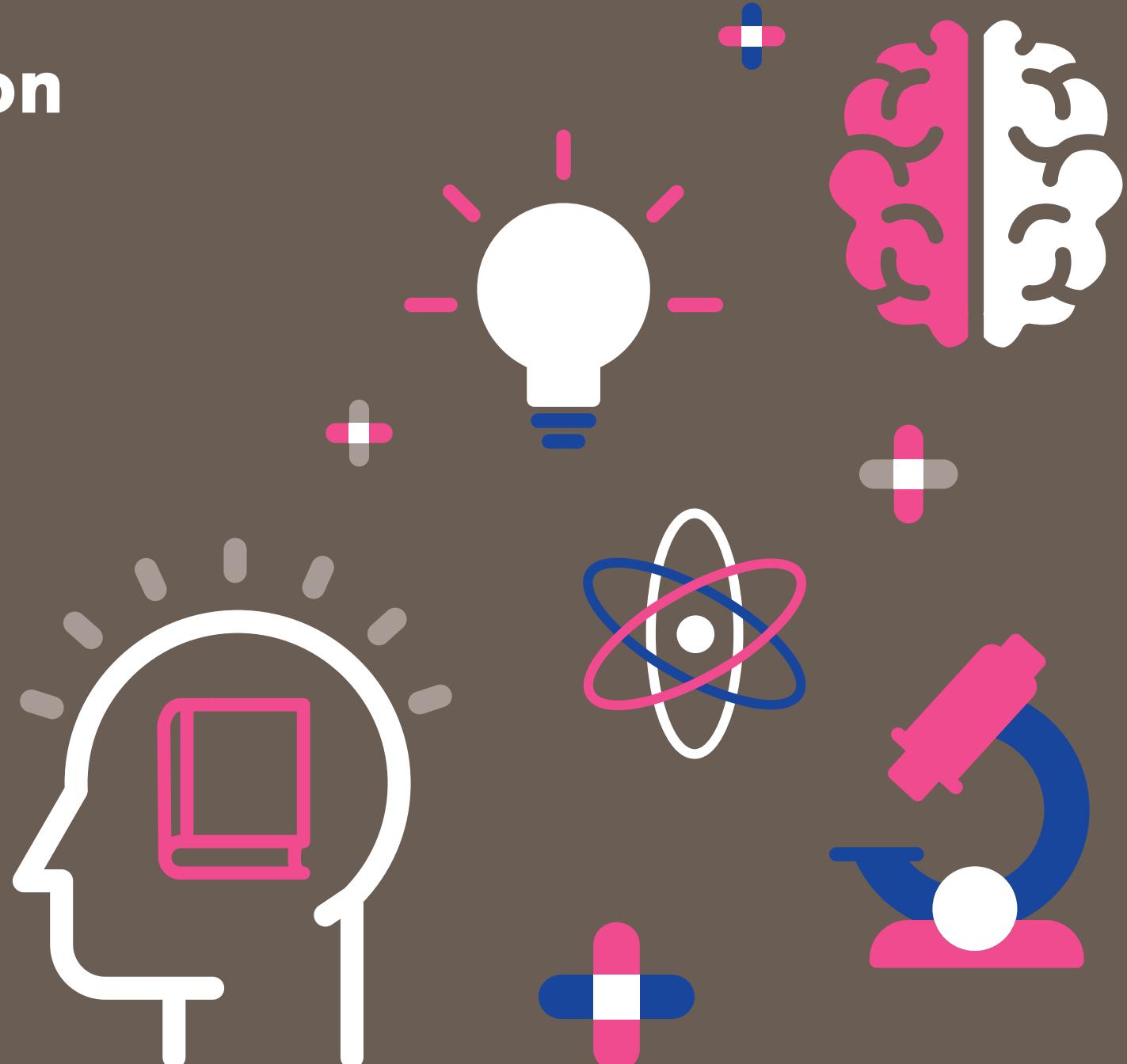


Dr Deirdre Fitzgerald-Hughes, Senior Lecturer in Clinical Microbiology at RCSI University of Medicine and Health Sciences, says:

“What really came through to me in this research was how difficult it can be for patients to have to repeatedly attend hospitals and clinics to manage foot wounds. We hope that we can develop new and easy-to-use treatments for use at home, and that our approach of these bacteria-killing peptides and light-activated molecules could then extend beyond diabetes and help to treat other chronic wound infections too.”



Theme 3: Spotlight on dementia



Preparing Ireland to support ‘personhood’ in dementia care

Lead researcher: Professor Eamon O’Shea, University of Galway

The problem

Around 60,000 people in Ireland are currently living with dementia. This is expected to rise to 150,000 by 2050. Discrimination and stigma are still major issues for some people with dementia in Ireland and internationally. The challenge is to develop future care models that support ‘personhood’ and the human rights of people with dementia.

The project

With funding from the HRB and Atlantic Philanthropies, the Centre for Economic and Social Research on Dementia (CESRD) at the University of Galway is gathering evidence about the economics, psychology, public attitudes, and social policy of existing and future dementia care in Ireland.

The outcomes

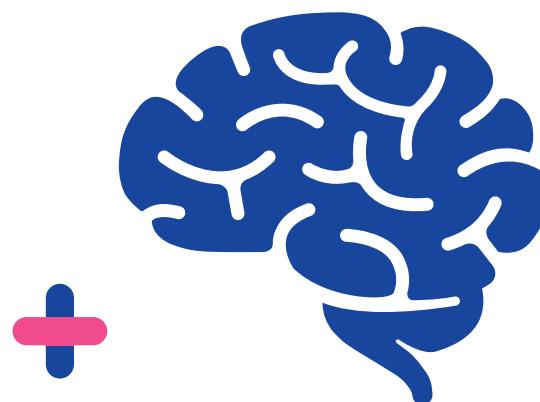
- Since 2015, the Centre has produced more than 40 academic, peer-reviewed publications and 20 policy reports about allocating resources and setting priorities in dementia care in Ireland
- We now have evidence that citizens in Ireland are in favour of supporting person-centred dementia care through additional taxes to

support new programmes for people with dementia and family carers

- Researchers at the Centre are working directly with people living with dementia and with health agencies and policymakers to develop new policies that make a difference to people with dementia and their family carers, especially about providing home care
- In 2018, CESRD nominated health activist and disability rights campaigner Dr Helen Rochford-Brennan, who has early-onset Alzheimer’s disease, to receive an honorary doctorate from University of Galway. This raised public awareness of the importance of the voice of the person with dementia and demonstrated its enormous potential.

Eamon O’Shea, Professor of Economics at University of Galway, HRB Research Leader in Dementia and Director of CESRD, says:

“The HRB funding has allowed us to scale up our research on dementia care. Standouts from that expanded research include: building a strong portfolio of work on the economics of dementia care; developing impactful relationships with patients and policymakers; showing that citizens in Ireland value personhood, respect, dignity, voice, choice and autonomy in dementia care; and that as a nation we are willing to invest in such care.”



A network in Ireland to boost research into dementia

Lead researcher: Professor Sean Kennelly, Trinity College Dublin and Tallaght University Hospital

The problem

Dementia is a complex condition. Researchers in science and in social science, clinicians, patients and their families need to work together and share information about it.

The project

The HRB-funded Dementia Research Network Ireland (DRNI) links people on the island of Ireland working across areas such as basic science, clinical science, population health, social science and patient advocacy.

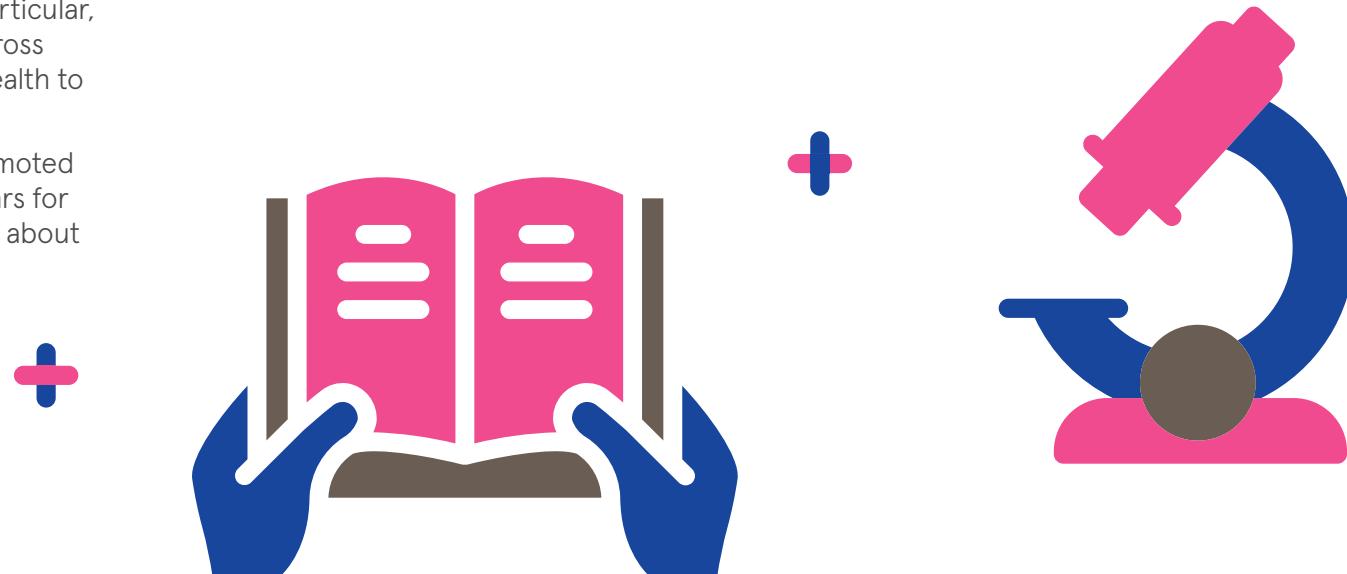
The outcomes

- DRNI connects more than 140 researchers across the island of Ireland, and in particular, facilitates early-stage researchers across science, social science, and public health to work together
- The organisation has hosted and promoted numerous events, forums and webinars for researchers, clinicians and the public about dementia

- DRNI and The Alzheimer Society of Ireland launched TeamUp for Dementia Research to help people with dementia and their families take part in research projects across Ireland
- The network is part of the recently launched Dementia Trials Ireland (DTI), a HRB research network to enhance dementia care and outcomes, which aims to substantially increase the number of dementia clinical trials in Ireland
- A DRNI survey of researchers identified research priorities for future focus, including improvements in diagnosing dementia and finding more treatments for people with dementia.

Dr Vanessa Moore, Scientific Project Manager with DRNI, says:

“The network brings together a broad spectrum of people who are working in dementia research. We help spread knowledge and understanding of dementia and neurodegeneration, from prevention of dementia to ongoing care and quality of life issues. We are sharing research findings with policy makers, government, national and international audiences.”



Towards greater resilience for people living with dementia and their communities

Lead researcher: Professor Dympna Casey, School of Nursing & Midwifery at University of Galway

The problem

When people have dementia or memory problems, they may stop participating in society, leading to a decline in mental and physical health. What interventions could help people with dementia continue to connect in their communities?

The project

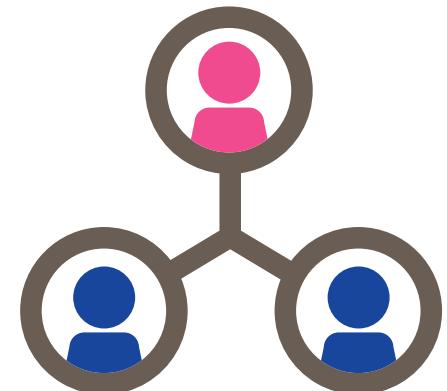
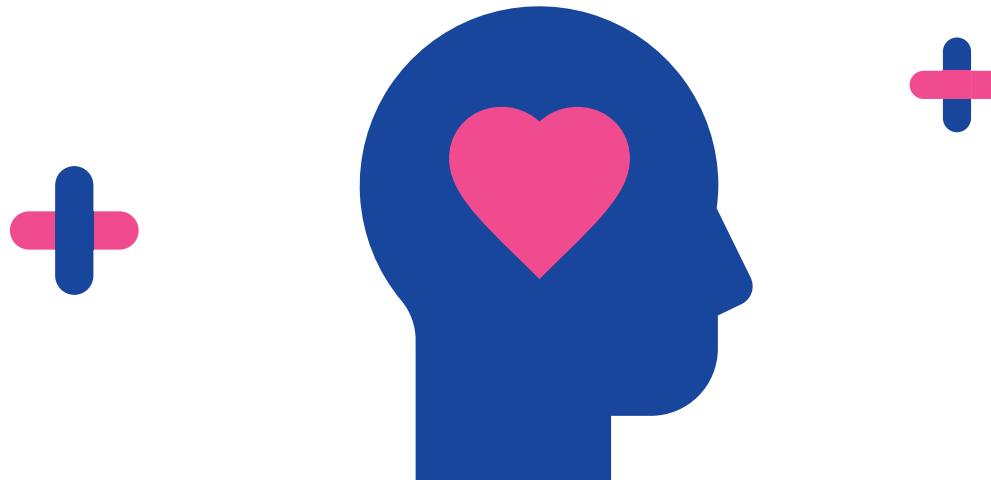
The CREST project examined published literature for interventions to help build resilience both in people with dementia/memory problems and in their communities and caregivers. Based on what they found, they ran and evaluated a pilot study in the community, which included an exercise programme, cognitive therapy, education and public awareness events.

The outcomes

- Nine people with dementia/memory problems who were living in the community took part in a seven-week cognitive stimulation programme and an eight-week physical exercise programme. Their caregivers took part in a six-week educational programme
- The study showed that people were happy to take part, and that there were additional benefits, such as caregivers meeting and providing informal social support for each other
- The CREST study will now inform larger trials of the intervention in the community setting.

Professor Dympna Casey says:

“The CREST study was the first of its kind to test out a resilience-focused intervention in the community setting for people with dementia/memory problems and their carers. We were able to show that overall, the intervention was feasible in this setting and that people were happy to take part. Our findings will inform how this intervention could be run in larger scale settings in the future.”



Participatory research helps put dementia-palliative care guidance into practice

Lead researcher: Professor Alice Coffey, University of Limerick (UL)

The problem

People living with dementia may be unable to communicate their needs. Previous research had developed evidence-based guidance to help staff in residential care facilities meet the palliative care needs of people with dementia. The researchers wanted to help put this palliative-care guidance into practice.

The project

Research by the Departments of Nursing and Midwifery at UL and University College Cork, in partnership with the Irish Hospice Foundation, introduced guidance documents on managing pain, medicines, hydration and nutrition into three Health Service Executive (HSE) long-term care facilities. The researchers examined current practices in each facility and tailored the training to suit that environment. Staff took part in work-based learning groups to introduce the guidance over the course of six months. The researchers then examined the changes that had occurred in practice and asked staff about their experience.

The outcomes

- Staff in three HSE long-term care facilities received training on evidence-based guidance for aspects of palliative care for people with dementia
- Staff reported enjoying the work-based learning, particularly as it was tailored to their learning needs and the clinical environment. The training used a participatory problem-solving approach
- The research found that knowing the practice environment and how best to engage staff are important first steps to practice change. In addition, time and timing was an important factor for staff to be able to take part in the training
- Three published journal articles shared the findings about how strategies are needed to implement guidance and how a 'participatory action' framework that tailors learning and engages staff as participants helps make sustainable change.

Alice Coffey, Professor of Nursing at UL, says:

"We learned that facilitation, engagement and participation were key factors required to translate new guidance into changed clinical practice. We need to first assess the needs of a facility, deliver training at times that suits staff and patients and have champions to lead changes on site. We could see there was a real appetite for this kind of engagement with staff."



Theme 4: HRB Evidence Reviews for better outcomes



Care bands – a useful way to allocate resources for healthcare at home?

Lead researcher: Joan Quigley, Research Officer, the Health Research Board (HRB)

The problem

The Irish healthcare system wants to support older people and adults with disabilities to live independently by providing care and support in the home. Might grouping people into 'care bands' based on their needs help to ensure they get the care they need and that care providers are reimbursed appropriately?

The project

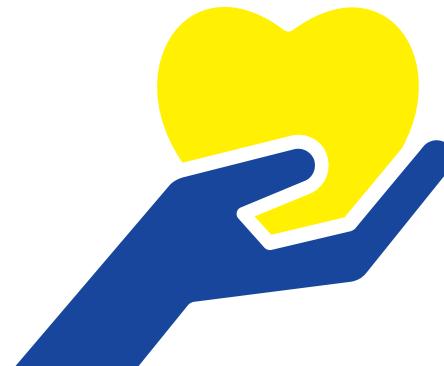
The Department of Health asked the HRB to examine the international evidence for allocating people into 'care bands' based on their care needs, compared to other reimbursement systems, such as paying healthcare providers on a flat rate or fee-per-service basis. The HRB carried out a systematic review of 46 studies published between 1990 and 2020 and evaluated the impact of using care bands to allocate resources in six countries.

The outcomes

- The study described how care bands have been used to classify care needs in Australia, Canada, Germany, the Netherlands, New Zealand and the United States of America
- We now know that linking care bands to service or resource allocation resulted in increased costs of healthcare in some countries
- The review showed that using a reimbursement system based on care bands had little impact on the quality and outcome of care
- We have evidence that a care band system could reduce access to care where the person has very complex needs
- The findings are now being used to help inform a care band allocation system for Ireland.

Dr Kathryn Lambe, Research Officer with the HRB Evidence Review Team and a co-author on the report, says:

“When we looked at the existing studies of care bands and allocation of resources for home supports, we could see that many had a low degree of certainty. That said, from the systematic review we could see that using care bands to allocate resources generally didn't affect the level and quality of care itself. But there are things to watch out for, particularly a rise in cost and to ensure that people with the most complex needs have access to the care they need. We have shared the findings with the Department of Health and the HSE, so they can help inform how a home-support system could be financed in Ireland.”



Helping people over 65 to help themselves live well at home

Lead researcher: Martin Keane, Research Officer, the Health Research Board (HRB)

The problem

People aged over 65 living at home may experience a decline over time in their ability to carry out everyday tasks such as cooking, cleaning and looking after themselves. Could 'reablement' programmes to build up their mobility and everyday functioning help them to live more independently?

The project

The Department of Health asked the HRB to examine international evidence about reablement interventions for people over 65 in their homes. These are activities that focus on increasing strength, movement and confidence. The research identified 13 evidence reviews and weighed up the quality and findings of the studies, to see what kinds of impacts reablement programmes in the home can have.



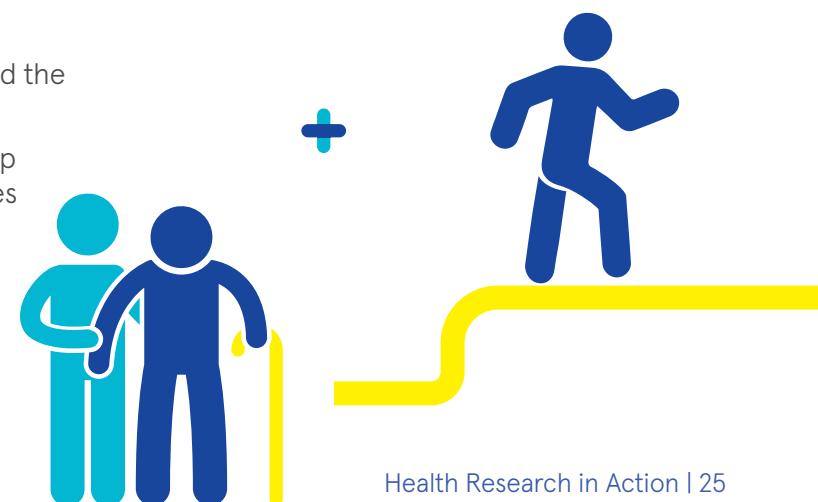
The outcomes

The HRB review found that:

- Reablement programmes take place in homes in Australia, Norway, UK, USA and Canada
- People often need fewer home visits for healthcare after they have taken part in a reablement intervention
- A person-centred approach, where the person understands why they are doing a reablement intervention and what the goals are, is likely to lead to a better outcome
- We need more research to understand whether reablement programmes at home improve a person's quality of life and reduce their unplanned hospital visits
- International studies have since confirmed the HRB review's findings
- The HRB findings are now available to help inform home-based reablement strategies and interventions in Ireland.

Martin Keane says:

"Reablement is an approach that looks to build up a person's skills and functions so they can carry out everyday activities independently. It's not suitable for all people over 65, however our evidence review has shown that where it is suitable, that a reablement intervention can have positive outcomes, such as reducing a person's reliance on home visits for support. We have also shown where direct evidence is lacking, particularly around quality of life, and this can inform future research."



The benefits of person-centred drug treatment services

Lead researcher: Brian Galvin, Programme Manager for Drug and Alcohol Research, the Health Research Board (HRB)

The problem

The Irish national drugs strategy wants to encourage people who use drug treatment services to play a more active role in their own treatment and recovery. However, we lack information about how users currently experience those drug treatment services.

The project

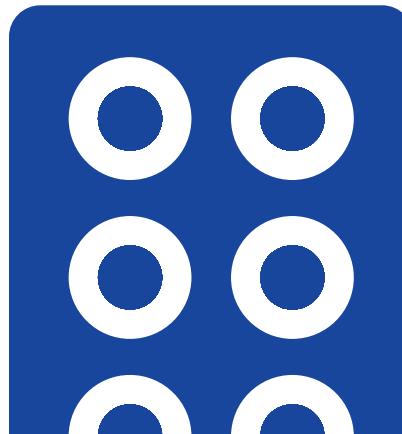
On behalf of the Department of Health, the HRB commissioned research to systematically review the international evidence about how people experience drug treatment services.

The outcomes

- The review found that establishing two-way relationships with people who are using drug treatment services, treating them with respect and avoiding stigma helps foster positive engagement.
- The research showed that person-centred care, where the person engaging with drug treatment services is listened to and takes part in making decisions about their care, helps to build that positive relationship
- The findings can be used to help design new interventions and approaches in drug treatment services in Ireland.

Brian Galvin says:

“People who engage with drug treatment, recovery and harm reduction services often have a good deal of knowledge that can help the services to help them. From the evidence review, we can see that a person-centred approach that listens to the individual and avoids judgement and stigma brings benefits for their treatment. We now need to bring this finding into policy and system-wide practice.”



Gambling addiction – new insights to help inform treatment in Ireland

Lead researchers: Ita Condron, Dr Suzi Lyons, Dr Anne Marie Carew, the Health Research Board (HRB)

The problem

Gambling addiction is a serious problem for those who experience it and for those around them. We had little insight into the people who access treatment for gambling addiction in Ireland and knowing more about their situations could help us to design and deliver better treatments.

The project

HRB researchers analysed almost 3,000 anonymised cases of people undergoing treatment for gambling addiction between 2008 and 2019 in Ireland. They examined factors such as gender, educational status, homelessness and combination with drug and alcohol addiction.



The outcomes

- This was the first Irish national study that used routinely gathered health surveillance data from the HRB's National Drug Treatment Reporting System to describe treated problem gambling
- In the dataset analysed, we now know that nine out of 10 cases being treated for gambling addiction were men, just under one in 13 were homeless and one in five lived with dependent children
- The research found that problem gambling was often not the only issue, with almost half of cases reporting substance addiction problems too. The most frequently reported was alcohol, but also cannabis, cocaine and benzodiazepines.
- The study was presented at two European conferences on addiction.

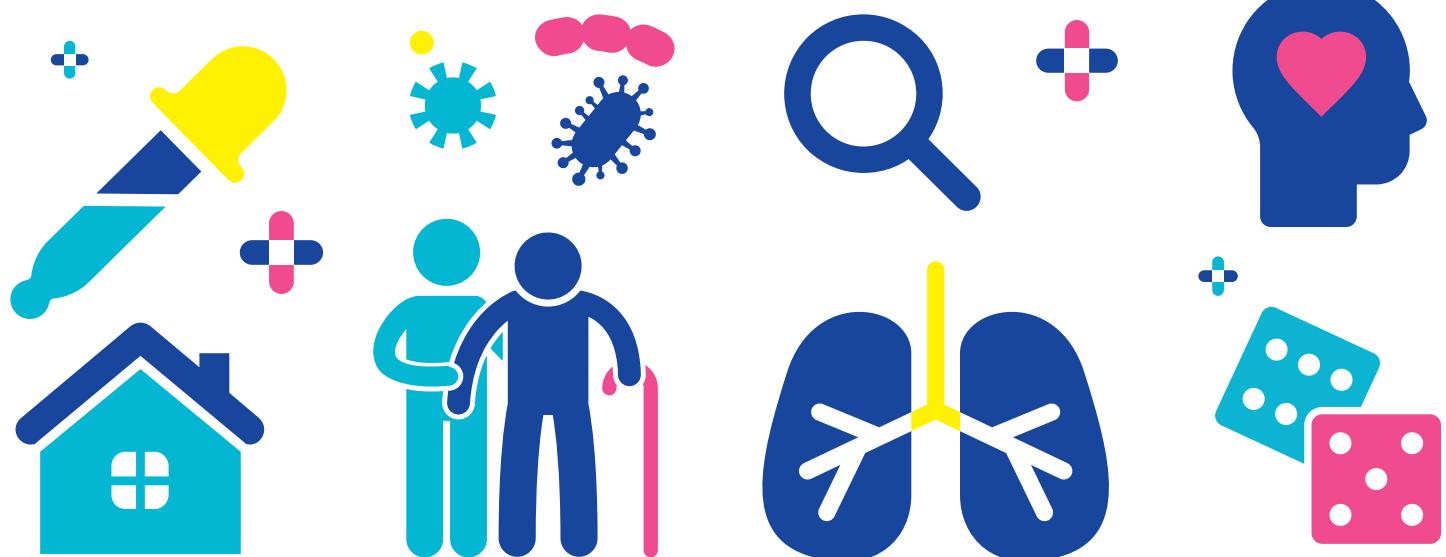


Ita Condron, Research Analyst with the National Health Information Systems, at the HRB, says:

“There is limited research on gambling treatment and gambling-related harm in Ireland. This research will help fill the gaps in knowledge and research in this area and inform approaches to gambling treatment programmes in Ireland.”



Notes



Health Research Board
Grattan House
67-72 Lower Mount Street
Dublin 2
D02 H638
Ireland

t 353 1 234 5000
e hrb@hrb.ie
w www.hrb.ie