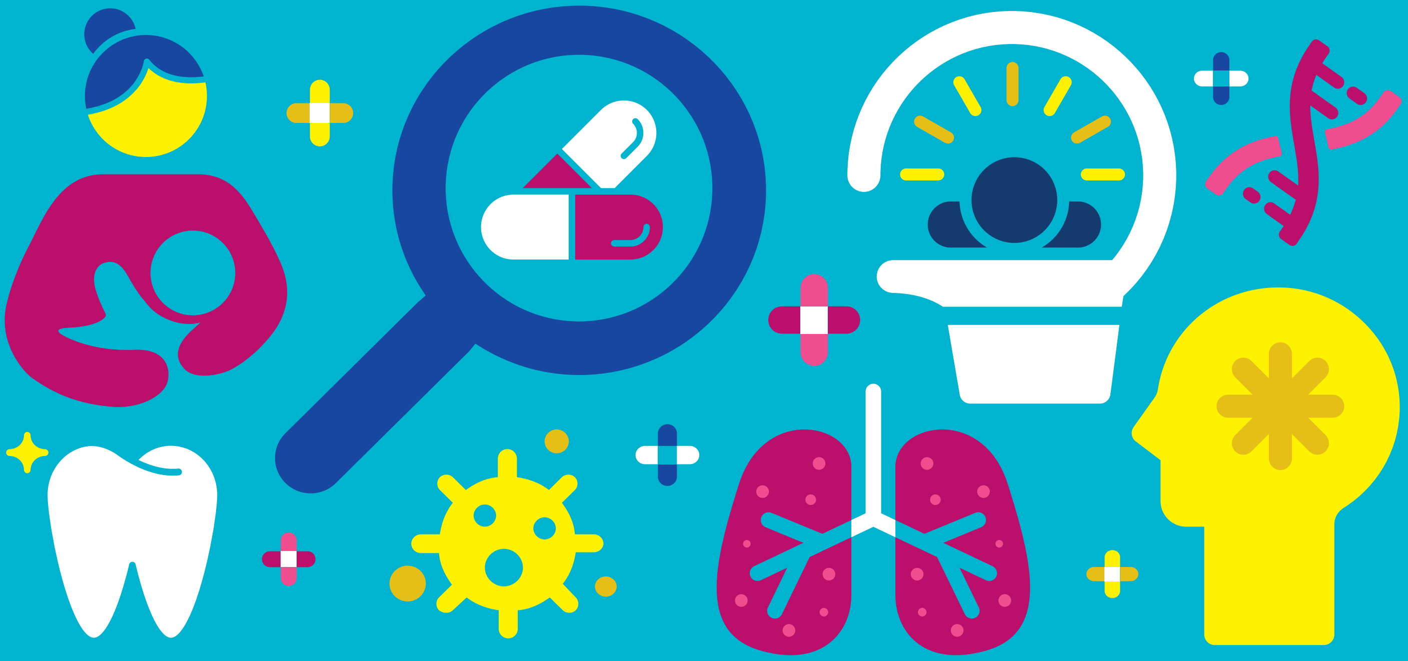
Health
Research
Board



Health Research in Action

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 that 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 our work. It includes a snapshot in numbers of recent work completed, followed by 22 success stories about wide-ranging health and social care research across five themes.

The stories include HRB-funded projects about identifying when and how people experience social exclusion, advancing drug screening for rare disease, examining factors influencing the wellbeing of family carers, and strengthening supports for breastfeeding. Research conducted directly by HRB staff made many important contributions to national conversations around varied aspects of health policy, including women's health, sunbed use and eating disorders in under-18s.

These are just a few examples of many projects covered in *Health Research in Action*, 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.

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

Contents

HRB success stories

HRB by numbers

– A snapshot of work completed in 2024

The team managing our National Health Information Systems (NHIS):

- Published **3** peer-reviewed journal articles using NHIS data
- Serviced **120** requests for data
- Published **9** annual reports and national bulletins on disability, drugs, alcohol, mental health and homelessness
- Supported **2,536** services to submit data through LINK – HRB's online data entry portal
- NPIRS mental health data accessed **184,884** times through the CSO's Open Data Platform, PxStat

The HRB Evidence Centre:

Completed **10** evidence products for the Department of Health:

3 evidence reviews

7 evidence briefs

In terms of funding

79

awards

completed in 2024, worth a total of

€41,338,125

This research resulted in:

64	new methods or materials (e.g. assays, databases, training materials)
11	healthcare innovations (e.g. medical devices, therapies or interventions)
149	influences on policy or practice (e.g. new clinical guidelines, policy reports)
348	engagements with public bodies and media
87	instances of public and patient involvement (PPI) in research

Supported 337 research jobs

14	PhD Candidate Academic
1	PhD Candidate Health and Care Practitioner
90	Postdoctoral Researcher/ Post-doctoral Scientist
10	Research Fellow
7	Clinical Nurse Specialist/Research Nurse
73	Research Assistant
2	Admin Assistant
6	Programme Manager/Coordinator
98	Lead applicant
36	**Other expertise** (e.g. Speech and language, OT, biostatistician, health economist, data manager, communication manager, dental hygienist etc)

Significant academic outputs

788	Publications
34	Academic collaborations with national colleagues
53	Academic collaborations with international colleagues

The economic impact

Leveraged €45,791,460 total funding on foot of these awards

Started three industry collaborations

Filed two patents

Theme 1: Ageing

Ireland is getting older, and the number of people aged 65 or over is expected to almost double by the early 2050s. Because health and social care needs can change in older age, Ireland must be ready to provide appropriate and increasing amounts of health and social care services to support older people's health and wellbeing.

The Irish Longitudinal Study on Ageing, or TILDA, is a national project part-funded by the HRB. It has collected information about health and social care from thousands of people in Ireland over 50, and has followed up with many of them for more than a decade. These data can provide important insights about trends in health and social care needs of older people.

In this section, we highlight some of the projects that have recently analysed data from TILDA and related studies. Their findings can inform a future of greater health and wellbeing for older people in Ireland.

COVID-19 resilience in older adults – the benefits of immune history

Lead Researcher: Professor Nollaig Bourke, Trinity College Dublin (TCD)

The problem:

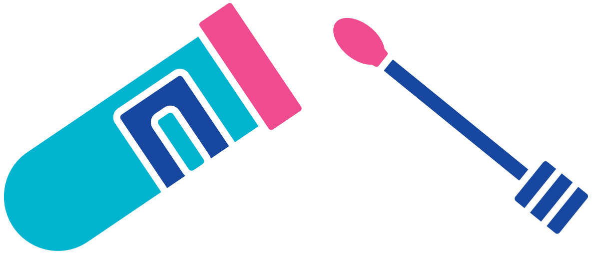
The health of older adults was disproportionately affected by the SARS-CoV-2 virus during the COVID-19 pandemic, but there was little understanding of who in the older population in Ireland were being infected, factors associated with infection and how that related to their underlying health.

The project:

Researchers at TCD received saliva swabs by post from 3,483 participants in The Irish Longitudinal Study on Ageing and analysed the saliva for antibodies to SARS-CoV-2, the virus that causes COVID-19.

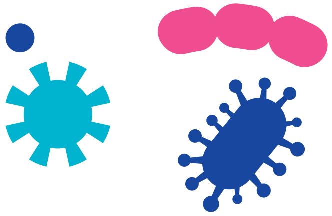
The outcomes:

- We now know that before the vaccine rollout in June 2021, COVID-19 infection among older adults was more widespread than initially thought, and almost half of those cases were completely asymptomatic.
- The study discovered that asymptomatic infection in older adults was linked to having more antibodies against seasonal coronaviruses, which cause the common cold.
- The researchers collaborated with the Institut Pasteur in France and showed that older adults, but not younger groups, are less likely to have symptoms of COVID-19 if they have had recent exposure to other coronaviruses.
- The findings have been presented at several international conferences, in particular by one of the researchers, Dr Matt McElheron, and discussed at outreach events. They also featured on RTÉ television's *'10 Things to Know About Viruses'*.



Professor Nollaig Bourke, Associate Professor, Medical Gerontology at Trinity Translational Medicine Institute, says:

> "These findings suggest that immune history, including prior exposure to seasonal coronaviruses, may influence how older adults respond to new infections. Understanding this could help refine vaccination and prevention strategies to better protect ageing populations. The study also showed that older adults can successfully participate in large-scale biological research from home, paving the way for more inclusive and accessible health studies in the future. In this way, the findings not only advanced understanding of COVID-19 in ageing, but also strengthened Ireland's capacity for rapid research response in future public-health crises."



How to build stronger ‘circles of support’ for people with intellectual disabilities

Lead Researchers: Dr Darren McCausland, Professor Mary McCarron, Trinity College Dublin (TCD)

The problem:

People with intellectual disabilities tend to have relatively small social networks, often focused on family and paid support, with gaps in friendships and community participation, as evidenced in Ireland by the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA) project.

The project:

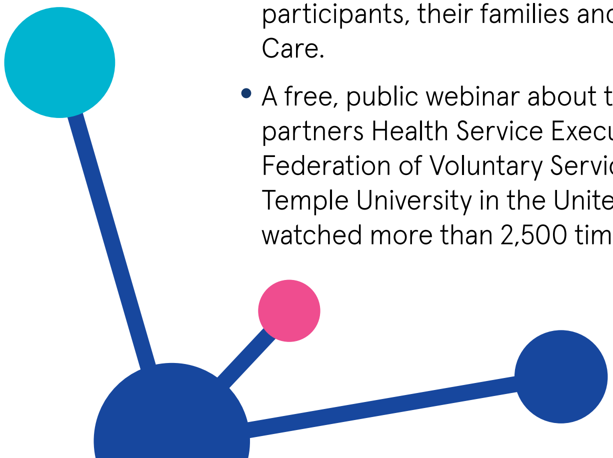
TCD researchers worked with Stewarts Care (a voluntary organisation providing community-based services to people with intellectual disabilities) to find out how people with intellectual disabilities can build ‘circles of support’ beyond family and support services, particularly expanding their friendships and community participation.

The outcomes:

- Video case studies of six people with intellectual disabilities and their circles of support, speaking about how they built and sustain strong circles of support.
- A free, downloadable booklet with practical steps to encourage people with disabilities to build wider circles of support.
- The public and patient involvement (PPI) panel at Stewarts Care contributed to the project, and a person with intellectual disabilities hosted the case-study videos.
- The findings were shared through events with participants, their families and staff at Stewarts Care.
- A free, public webinar about the project with partners Health Service Executive, National Federation of Voluntary Service Providers and Temple University in the United States has been watched more than 2,500 times.
- The resources have been integrated into training at Stewarts Care.

Dr Darren McCausland, Senior Research Fellow with the Trinity Centre for Ageing and Intellectual Disability (TCAID) and Head of Service Innovation, Stewarts Care, says:

> “We know from our research that people with intellectual disabilities are more vulnerable to isolation as they move into older age, and we identified the ‘circles of support’ framework as being a useful model to inspire them to create more connections through friendship and community involvement. In this project we worked with people with intellectual disabilities and their families and carers to develop accessible resources, based on interviews with our Research Assistant Iara Faria Synnott. The results aim to support positive change in social inclusion for people with intellectual disabilities, taking inspiration from the examples of others shown in the case studies.”



Care for the family carers: how to build resilience for wellbeing

Lead Researcher: Dr Christine Mc Garrigle, Trinity College Dublin (TCD)

The problem:

People who provide care for family members play a key role in Ireland's health system, but they experience social, financial, physical, and emotional demands, which can be challenging for them. There was little evidence about how to support the wellbeing of family carers in Ireland.

The project:

Researchers at TCD analysed data from the Irish Longitudinal Study on Ageing (TILDA) about the number of older carers in Ireland and examined factors relating to their wellbeing over time. Focus groups with carers through Family Carers Ireland explored their lived experiences and challenges.

The outcomes:

- We now know that around 5% of people over the age of 50 in Ireland provide family care, and that this figure tripled to 15% during the COVID-19 pandemic.
- Data show that the majority of older carers were resilient, and able to maintain their wellbeing during the caregiving period or recover it after it had ended.
- The study identified social integration and having a strong social network as the most important factors for resilience and wellbeing.
- The researchers found that those who struggled the most were caring for adult children and had chronic health issues or depression.
- The project highlighted the need for more formal care services and respite support for carers and showed that supporting the carers also benefits the care recipients.
- The findings were shared with the Department of Health and Family Carers Ireland to inform policy.
- A follow-on study supported by the US National Institutes of Health is now expanding the research across Europe and the US to compare societal contexts for carers.

Dr Christine Mc Garrigle, Senior Researcher with TILDA at TCD, says:

> "Family carers provide an enormous amount of home care for people in Ireland, and they do so on a voluntary basis. We need to protect their wellbeing and build their resilience. Our research showed that if carers can keep socially integrated within their community, then they will do better and the care recipients will do better. To support that, we need to provide formal services for the care recipients, such as respite, to give them the time and space to improve their own quality of life."

New insights into psychotropic prescribing for older adults with intellectual disabilities

Lead Researcher: Dr Máire O'Dwyer, Trinity College Dublin (TCD)

The problem:

Psychotropic medications, such as antipsychotics, antidepressants and anti-anxiety drugs are important in the treatment of diagnosed mental illness but are often and sometimes inappropriately prescribed for adults with intellectual disability. The Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA) had shown that in 2010, more than 40% of older adults with intellectual disability in Ireland were taking an antipsychotic medication, compared to 2% in the general older population.

The project:

In the 'EQUIP: Examining Quality, Use and Impact of Psychotropic (Use) in older adults with intellectual disabilities' project, TCD researchers worked with older people with intellectual disabilities, the Health Service Executive (HSE) and the College of Psychiatrists of Ireland to investigate trends in IDS-TILDA psychotropic prescription data since 2010 for people aged over 40 in Ireland who have intellectual disabilities.

The outcomes:

- The study showed a decrease in the prescription of anxiety and sleeping medications between 2010 and 2020, but an increase in prescriptions of anti-depressant medications. Overall, however, there was no significant change in the high rate of psychotropic medications prescribed in Ireland to older people with intellectual disabilities (60%) over this time.
- The researchers showed that one in three older people with intellectual disability and reported behavioural concerns, but no mental health diagnosis were still prescribed psychotropic medications, and only 40% of this group had access to non-medication support services.
- Data showed that people with Down Syndrome were less likely to take psychotropic medications, while people with intellectual disabilities who were over 65 and living in residential settings or community group homes were more likely to take psychotropics.
- The researchers worked closely with people with intellectual disabilities to co-create accessible educational materials about medications, including a leaflet, an audio guide and a 10-minute video.
- The findings were shared with various professional groups to inform practice and policy, and the College of Psychiatrists of Ireland is working with the researchers on a policy paper.
- The IDS-TILDA dataset is now linked to the HSE prescribing database for the first time, which will enable further research into prescriptions for older people with intellectual disabilities.

Dr Máire O'Dwyer, an Assistant Professor in Practice of Pharmacy in the School of Pharmacy and Pharmaceutical Sciences at TCD, says:

> "In the past decade, there have been many changes in prescribing oversight and approaches to supporting people with intellectual disabilities. Through EQUIP we now have the data to see how psychotropic prescriptions for older people with intellectual disabilities are changing. The overall levels of such prescribing remain very high for this group, and that updated evidence can now inform policy. We have also co-created educational resources to build awareness about these medications."

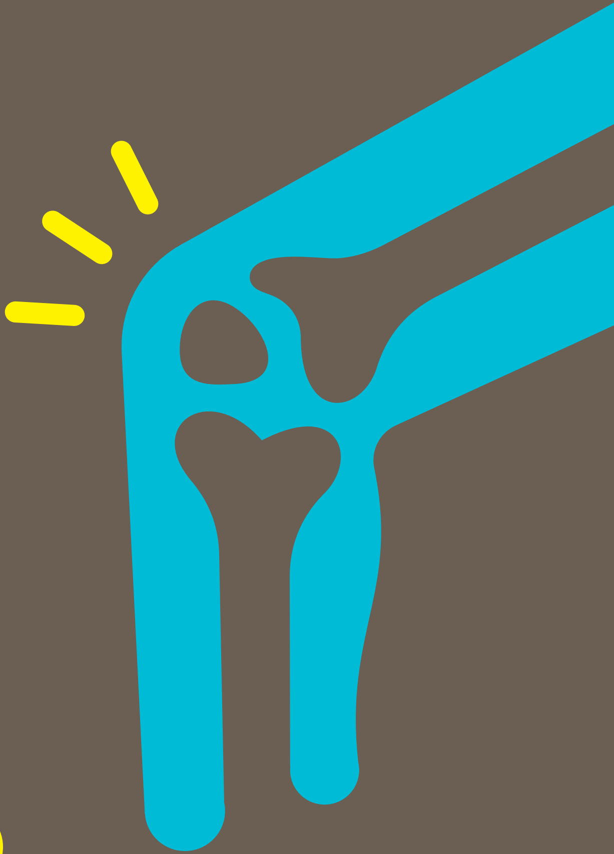
Theme 2: Evidence for Practice

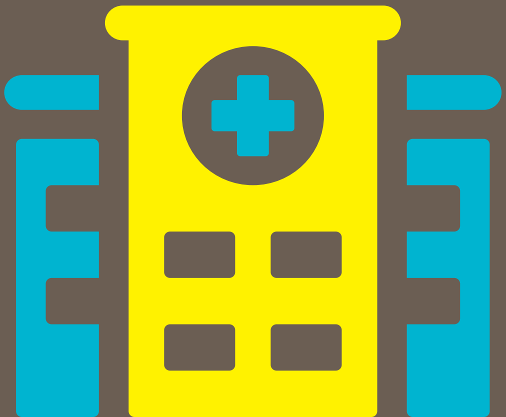
The goal of health and social care is to get the best outcomes for people. Evidence from research can help to inform how to do this. That might be finding the optimal ways to encourage and support breastfeeding, a move that can reap many health benefits for mother and baby.

Or it could be about ensuring that people who are taking multiple medicines get the best regimes and avoid medicine-related harm.

It could also be about empowering patients to better understand and engage with approaches to support their own wellbeing, particularly for painful conditions such as arthritis.

Here we outline some of the measures that are emerging from research that can build better practices and outcomes.





It takes a village – putting breastfeeding into practice in healthcare

Lead Researcher: Professor Patricia Leahy-Warren, University College Cork (UCC)

The problem:

Breastfeeding has multiple health benefits for mothers and babies, but Ireland has the lowest rates in Europe.

The project:

Researchers from UCC worked with women attending University Hospital Kerry (UHK) through pregnancy and after birth, with hospital staff, local GP practices and public health nurses to identify barriers and put improvements in place to support breastfeeding.

The outcomes:

- There is now greater awareness of and support for breastfeeding across all staff at UHK and among local GPs and public health nurses.
- Practical changes were brought in at UHK to support breastfeeding, such as privacy curtains, comfortable seating and access to nutritious meals for breastfeeding mothers.
- Additional healthcare assistants were brought in to help support breastfeeding women at night in UHK.
- Participating women wrote diaries about their breastfeeding journey, which were published as blogs.
- Supportive and welcoming information was displayed in GP and hospital waiting rooms, which received positive feedback.
- The project's approach and findings are now being used to scale up support for breastfeeding at other locations around Ireland.

Professor Patricia Leahy-Warren, Chair of the Maternity, Families and Primary Care Research Group in the School of Nursing and Midwifery at UCC School of Nursing & Midwifery, says:

> "The evidence that breastfeeding has positive health outcomes for mothers and babies in the short, medium and long-term is overwhelming, and it's time to put it into practice. With the Practice Enhancement for Exclusive Breastfeeding or PEEB study, we collaborated with women at all stages of pregnancy and breastfeeding, with all staff in the hospital who might meet those women, including administrative and catering staff and porters, and with GPs and public health nurses. That research and collaborative knowledge exchange has led to positive changes, both practical and cultural, to support breastfeeding."

Getting the measure of medication-related harm in older people

Lead Researcher: Dr Caitriona Cahir, Senior Lecturer, RCSI University of Medicine and Health Sciences

The problem:

Older adults tend to be particularly vulnerable to medication-related harm, including adverse drug reactions (ADRs) and adverse drug events.

The project:

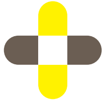
Researchers at RCSI, in collaboration with the Health Service Executive National Medication Safety Programme, analysed several datasets, including the Adverse Drug reactions in an Ageing PopulaTion (ADAPT) cohort, the Centre for Primary Care Research (CPCR) cohort and TILDA (The Irish Longitudinal Study on Ageing), to better understand the scope and nature of medication-related harm among older adults in Ireland.

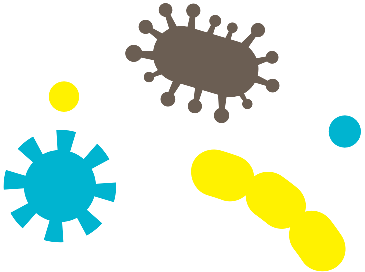
The outcomes:

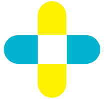
- We now know that one in 10 hospital admissions among adults aged 65 and older are related to adverse drug reactions.
- The study found that older adults taking multiple medications – particularly where they included blood-thinners, diuretics or heart medicines – were especially likely to experience an ADR-related hospital admission.
- The researchers developed and validated the Adverse Drug reactions and events in an Ageing PopulaTion risk Prediction (ADAPTiP) tool to support clinicians in identifying those patients at increased risk of adverse drug reactions or adverse drug events.
- A Medication Without Harm Knowledge Exchange Event in April 2024 brought together healthcare policy-makers, professionals, researchers, patients and the public to share evidence and perspectives on medication management and safety.
- Further collaborative events were hosted with the Irish Medication Safety Network and Trinity College Dublin in 2025.

Dr Caitriona Cahir, Data Science Centre, RCSI School of Population Health Sciences, says:

> “Our goal was to create a unified, coordinated approach to reducing medication-related harm and improving health outcomes for older adults in Ireland. We have been able to quantify the extent of medication-related harm in this population, to develop a tool to help clinicians identify people at risk of medication-related harm and to bring together many of the key people who can work towards reducing medication-related harm nationally.”







A signal in the data – spotting trends in prescription drug misuse

Lead Researcher: Professor Gráinne Cousins, RCSI University of Medicine and Health Sciences.

The problem:

There was a lack of information on the misuse of prescription drugs in Ireland, where such drugs are prescribed or taken inappropriately, or illicitly sourced, and can cause harm.

The project:

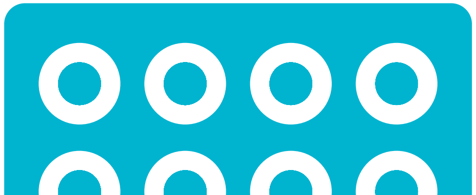
Researchers at RCSI analysed data from 2010-2020 in Ireland about benzodiazepines, opioids, gabapentinoids and stimulants. Data sources included prescriptions in the community and in prisons; drug seizures; treatment demand; drug-poisoning deaths; intentional drug overdoses; roadside tests for intoxication and post-mortem toxicology.

The outcomes:

- A detailed report and academic publications documented trends in the misuse of prescription drugs with potential for misuse and associated harms in Ireland between 2010 and 2020.
- The analysis identified an increase in prescriptions, illicit supply and post-mortem detections of the gabapentinoid pregabalin, a drug typically prescribed for epilepsy, neuropathic pain or generalised anxiety.
- The analysis also found that, while benzodiazepines account for the greatest overall harm with respect to treatment demand, intentional drug overdoses and drug-poisoning deaths, pregabalin had the largest annual increase in harm over the study period.
- The researchers shared a policy brief on gabapentinoids with the Department of Health.
- The research findings informed the Irish Medical Council’s 2021 report on overprescribing, which recommended reclassifying pregabalin as a controlled substance.
- The project helped to augment data sharing and collaboration between key stakeholders such as toxicology labs, Forensic Science Ireland, the State Lab and the Medical Bureau of Road Safety.

Professor Gráinne Cousins, Associate Professor at RCSI School of Pharmacy and Biomolecular Sciences, says:

> “Pregabalin was initially considered to have low abuse potential, but our findings in this analysis of secondary data in Ireland support concern regarding misuse, diversion and dependence. We also found high levels of polydrug use. It is important to stress that prescribing of medications should not be restricted if a patient with a legitimate need can benefit, however appropriate and safe prescribing is vital. The drug misuse landscape changes over time, and being aware of such changes can inform policy and clinical responses, meaning steps can be taken to protect people from harm.”



Optimising medicines in hospital for patients over 70

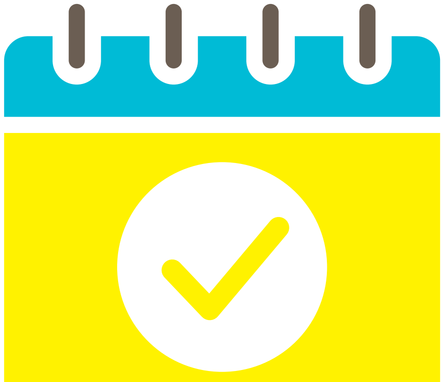
Lead Researcher: Professor Denis O'Mahony, University College Cork (UCC)

The problem:

Older patients being treated for many different conditions are at risk of experiencing medication-related harm, which can result in visits to the Emergency Department or hospital admission, and potentially death.

The project:

The OPTIMATE (Optimization of Medication by Transdisciplinary Assessment) project tested an intervention to improve how medicines are managed for more than 600 patients aged over 70 admitted with acute medical or surgical illness to Cork University Hospital, University Hospital Waterford and Ghent University Hospital. The researchers also compared what happened when the intervention was delivered by a trained physician and by a trained pharmacist.



The outcomes:

- The study showed that a structured intervention to optimise medication for patients in hospital over 70 who have many medical conditions can reduce their risk – in the following three to six months – of attending the Emergency Department, being re-admitted to hospital or dying.
- The researchers found the intervention did not cost extra for the healthcare system compared to the standard approach, and that it could reduce costs, particularly if it was administered by the pharmacist.
- The study offers valuable insights into reducing healthcare costs and improving how medicines are managed in high-risk patients over the age of 70.
- The findings have been presented at conferences in Ireland and internationally, and shared with experts tasked with informing Health Service Executive guidance on managing patients taking multiple medicines.

Professor Denis O'Mahony, at UCC Department of Medicine, says:

> "Previous studies have looked at interventions to reduce hospital readmissions and Emergency Department visits in older people with multiple chronic medical problems and associated multiple medications and not found clear benefit from those interventions. In OPTIMATE, however, by applying a new structured intervention designed to optimise medication at several time points, we found a significant reduction in the risk of patients needing readmission or Emergency Department attendance at 3-6 months follow-up. Furthermore, the intervention could be applied with equal efficacy by a pharmacist or by a trained physician in geriatric medicine."

An evidence-based ‘how to’ for patients with chronic pain in hips and knees

Lead Researchers: Dr Clodagh Toomey and Dr Helen O’Leary, University of Limerick (UL)

The problem:

Around 600,000 people in Ireland live with the painful joint condition osteoarthritis. Health professionals and patients alike needed trustworthy, evidence-based information about how self-care and exercise can help to tackle symptoms.

The project:

UL researchers worked with patients and healthcare professionals to develop an online resource for people with joint pain, particularly focusing on osteoarthritis of the hip and knee joints.

The outcomes:

- Through a series of online and in-person workshops, healthcare professionals and patients informed the content, format and design of an engaging website for managing hip and knee pain.
- The website www.jointpain.ie was developed to provide evidence-based, trustworthy information and tools for patients in Ireland to self-manage osteoarthritis.
- Since launching in April 2025, the website has had around 26,000 page views and has 500-800 users per month.
- The website is being shared with patient, GP, physiotherapy, rheumatology and orthopaedic networks in Ireland.
- Healthcare providers can now direct patients to the website as a trusted source of information and support for self-managing their osteoarthritis.

Dr Clodagh Toomey, Physiotherapist and Associate Professor at the School of Allied Health, UL, says:

> “There are many misconceptions about how to manage the symptoms of osteoarthritis, and if the symptoms aren’t managed it can lead to poorer mobility and quality of life. With the website we created, healthcare professionals and patients now have a resource that is evidence backed, trustworthy and tailored for people in Ireland.”

Putting the patient at the centre of inflammatory arthritis research

Lead Researchers: Professor Ursula Fearon, Trinity College Dublin (TCD); Peter Boyd, Arthritis Ireland

The problem:

Many people with inflammatory arthritis (including rheumatoid and psoriatic) can benefit from knowing more about diagnosis, medicines and lifestyle support for their chronic condition, and from taking part in research.

The project:

Researchers from TCD and Arthritis Ireland worked with patients, scientists and clinicians to develop resources for arthritis education and support, and to support a new referral pathway for patients to Arthritis Ireland to help them manage their condition.

The outcomes:

- Patients, clinicians and researchers co-designed a survey to find out what patients with inflammatory arthritis know about diagnosis, medication and research.
- Almost 2,000 people took the survey and identified a need for greater patient knowledge about diagnostic tests, adherence to medication and taking medicines during pregnancy.
- The survey answers informed:
  - National Patient Workshops around Ireland, led by a patient, a clinician and a scientist, that focused on the patient story, how a diagnosis is made, therapies, risks, side-effects and research prioritisation. More than 400 people have taken part.
  - Expert-led symposia about lifestyle, which patients with arthritis report have helped them to better manage their pain, fatigue and mental health through exercise, sleep and nutrition. More than 650 people have attended.
- The research supported Arthritis Ireland with their new referral pathway, which facilitates clinicians to refer patients directly to the STEPS programme run by Arthritis Ireland, which provides personalised, peer-led support that empowers patients, eases pressure on clinics and improves long-term outcomes.
- More than 808 people were referred to STEPS between January 2024 and October 2025.

Professor Ursula Fearon, Professor of Molecular Rheumatology at TCD says:

> “Research into arthritis needs to be a three-way partnership between patients, clinicians and scientists. This research was about finding out what patients want from research into these conditions, make it easier for patients to get involved in research and to have evidence and agency in improving their quality of life.”

Peter Boyd, Services Support Officer with Arthritis Ireland, says:

> “The research findings supported STEPS, which is a crucial service for patients across Ireland, answering an identified need for targeted information, peer perspectives and supported self-management. Arthritis Ireland is working to establish STEPS as part of the prescription in patient-centred treatment.”

Theme 3: Mental Health

Mental health and wellbeing are important for everyone in Ireland, and the National Mental Health Research Strategy, published in 2024, provides a comprehensive framework to guide and advance mental health research in Ireland.

The HRB played a central role in developing the strategy, which presents a unique opportunity to create a thriving mental health research system that can support mental health and wellbeing for all.

This includes young people, who naturally go through various transitions in their life that are well recognised as important periods for their psychological and social development. Data from surveys such as Planet Youth and from the Growing Up in Ireland studies are enabling researchers to discover patterns of change in mental health among young people, including the impact of the COVID-19 period.

We also need to better understand how social exclusion through circumstances like homelessness, racism and poverty can affect wellbeing, both physically and mentally. Research is integrating the data about social exclusion to make sure it is included, and can inform policy, practice and services.

Here we highlight how with evidence from research, Ireland can help ensure that people get the support they need, that the stigma in society around mental health can be tackled and that we build a healthier, more supportive and inclusive society.

How did children, adolescents and young adults fare mentally during the COVID-19 pandemic?

Lead Researcher: Professor Ross MacMillan, University of Limerick (UL)

The problem:

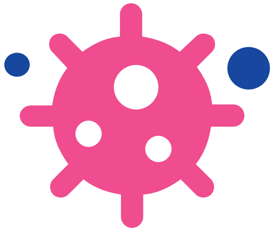
The transitions into adolescence and then into young adulthood are critical periods for psychosocial development, but little research had been carried out into the impact of the COVID-19 pandemic on mental health during these transitions.

The project:

UL researchers examined data from the Growing Up in Ireland studies, which followed people born in 1998 and 2008 who transitioned to adolescence or young adulthood during COVID-19. They explored the participants' mental health, experiences and environments in the years before and during the pandemic.

The outcomes:

- The research found that:
  - Young people who were doing well mentally before the pandemic appeared to do less well during the COVID-19 period.
  - People transitioning to young adulthood appeared more sensitive to the pandemic's disruptions compared to those entering adolescence.
  - People transitioning to young adulthood experienced jumps in depressive symptoms during the pandemic that were about 10 times larger than typical for the general population.
- Policy briefs about the findings were shared with key Government Departments with responsibilities for children, health, culture and sport.
- The researchers worked with a youth advisory group, the youth mental health organisation Jigsaw and DEIS (Delivering Equality of Opportunity in Schools) schools to learn their perspectives and to plan programmes and interventions based on the findings.
- The researchers shared the findings with young people through the Limerick Youth Partnership and identified important barriers to progress, such as having a space at home to study.



Professor Ross MacMillan, Professor of Sociology at UL, says:

> "Our research identified broad trends, such as how young people who had experienced challenges were sometimes more resilient in the pandemic. We also learned of small elements in a child's environment that can be changed, such as the importance of having an appropriate space to do schoolwork or homework. We are working now with schools and youth and mental health organisations to develop programmes and approaches to support children and young people and build resilience for major changes."

A more nuanced picture of adversity and mental health in teenagers

Lead Researchers: Dr Charlotte Silke, Dr Bernadine Brady and Dr Caroline Heary, University of Galway

The problem:

It is important to understand the nuanced relationship between adversity and mental health in teenagers in Ireland, in order to develop policies and interventions to support their wellbeing.

The project:

University of Galway researchers analysed data from over 15,000 teenagers in Galway, Mayo and Roscommon. These were 15-16-year-olds who took part in surveys by Planet Youth in 2018, 2020 and 2022 about mental wellbeing, suicidal ideation, lifestyles, behaviour and experiences.

The outcomes:

- The research found trends that 15-16-year-olds experienced a decline in mental health and wellbeing between 2018 and 2022, and a rise in depressive tendencies.
- Surveys showed that almost one-third of the students reported having self-harmed at some point in their lifetime, and girls and non-binary teens were more likely to self-harm than boys.
- The research identified that feeling safe at school, parental and friend support and good sleep are associated with lower self-harm and better mental health outcomes in this age group.
- Adolescents who experience adversity across multiple social domains (e.g., at home, with peers and in school) were found to be most at risk.
- A publicly available report of the findings by Dr Charlotte Silke, Dr Bernadine Brady and Dr Caroline Heary has been shared with the Health Service Executive National Office for Suicide Prevention and its network to inform policies and interventions.

Dr Bernadine Brady, Associate Director of the UNESCO Child and Family Research Centre at the University of Galway, says:

> "We found that young people experience adversity and challenges across diverse social settings at home, in school, or with peers, and that experiencing multiple forms of adversity is linked to a sharp increase in the risk of self-harm and depressive tendencies. We have presented our findings and engaged in dialogue with a diverse group of policy makers, NGOs practitioners and academics, with the aim of informing policy and practice in an Irish context."

Include the excluded to improve health research

Lead Researcher: Professor Clíona Ní Cheallaigh, Trinity College Dublin (TCD)

The problem:

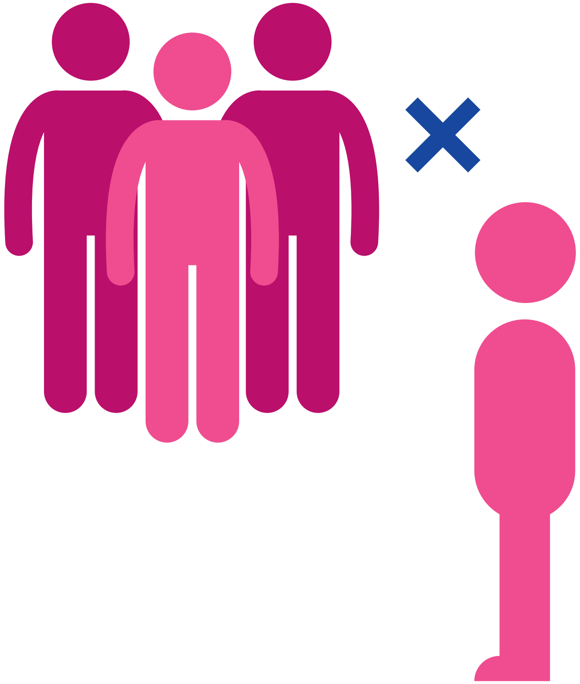
Experiencing social exclusion through, for example, homelessness, addiction, poverty, incarceration or racism, can profoundly affect a person's mental and physical health and wellbeing. In Ireland, however, we lack integrated data across different health and social services to measure and research social exclusion and health.

The project:

Researchers at Trinity College Dublin (TCD) worked with the Health Service Executive (HSE) and the Department of Health to link national information repositories and create the framework for an accessible, integrated national-level database of health and social care use over time, to identify when and how people are socially excluded.

The outcomes:

- The project created legal, technical and collaborative frameworks to integrate data from various health and social services in Ireland.
- A new database hosted by the HSE National Health Intelligence Unit will enable social exclusion to be identified and factored into health and social care research.
- The availability of data will fuel research to shed light on the patterns, mechanisms, and impacts of social exclusion on health outcomes in Ireland.
- The new database will inform how resources need to be allocated and how health and social care services need to be planned for people and populations experiencing social exclusion.



Professor Clíona Ní Cheallaigh, Associate Professor in the Department of Clinical Medicine, TCD and a Consultant in Infectious Diseases and General Medicine in St James's Hospital, Dublin, says:

> "We know that some people will experience social exclusion at some point in their lives, and that it can have a deep impact on health, including physical and mental wellbeing. The research is only starting to scratch the surface of why this happens, and making the data available in Ireland through this infrastructure is critical groundwork for empowering researchers and policy makers to better understand the issues and mechanisms, and to protect people and populations from the impacts of social exclusion."

THEME 4: Rare Diseases

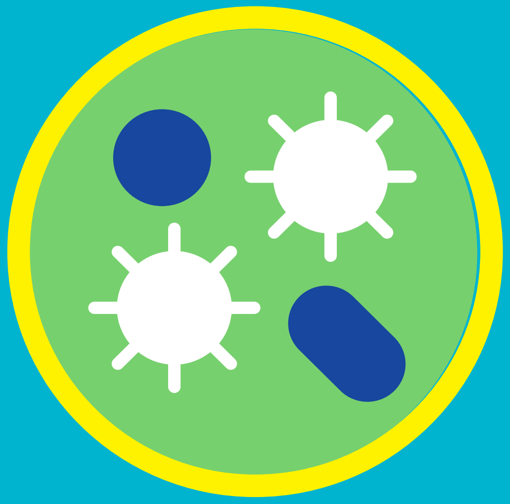
Rare diseases are collectively common. While the number of individuals who have a specific rare disease may be relatively small, across Europe it is thought that more than 30 million people live with a rare condition.

Research forms a key part of the National Rare Disease Strategy 2025-2030 in Ireland, and is crucial for advancing the understanding and treatment of conditions that may receive less attention due to their low prevalence.

Because a relatively small number of patients may have a specific rare or ultra-rare condition it is important that researchers and patient groups work together, to make sure people living with these rare conditions get access to new therapies. This is also why Ireland needs to be part of international research efforts, to enable larger and more powerful studies.

Even where research has made enormous strides, more needs to be done. Ireland has the highest number per capita in the world of people living with Cystic Fibrosis, where research has led to revolutionary and life-changing new treatments. But clinical challenges remain, including hard-to-treat infections and the need for more informed dental care.

In this section we spotlight some of the important research being carried out with HRB support to help people living with rare diseases to benefit from emerging and potential future treatments.



Busting a Cystic Fibrosis myth that’s long in the tooth

Lead Researcher: Professor Martina Hayes, University College Cork (UCC)

The problem:

People living with cystic fibrosis (CF) now have longer life expectancies thanks in part to new medical advances. This means people with CF need long-term support for their oral health, but evidence was lacking about their current dentistry needs in adulthood.

The project:

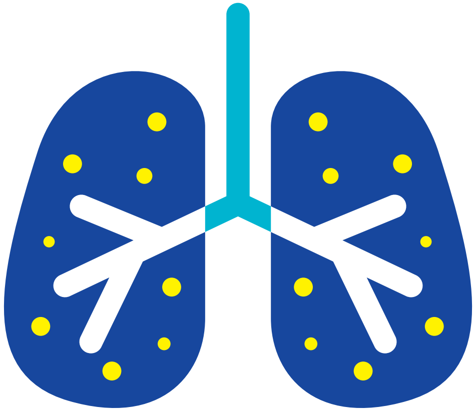
Researchers at UCC worked with Cystic Fibrosis Ireland, the Cystic Fibrosis Registry of Ireland and the CF care team at Cork University Hospital. Dr Fiona O’Leary and Dr Niamh Coffey carried out dental analyses of 92 adults with CF and 92 ‘controls’ who have no family history of CF. The researchers also surveyed dentists in Ireland about their awareness of CF.

The outcomes:

- The study found that the historical belief that people with CF have lower rates of dental decay is not true for adults living with the condition.
- The researchers showed that adults with CF had more enamel defects, plaque, calculus and gum inflammation and less advanced gum disease (periodontitis) compared to those without CF.
- The findings have identified adults living with CF as a potential high-risk group for dental needs, an insight that can now inform policies.
- The survey of dentists revealed many felt they lacked adequate training and knowledge about managing the oral health of patients with CF, and the research team worked with Cystic Fibrosis Ireland to develop educational resources and recommendations for dentists.
- The findings and recommendations have been shared with CF Care Units in Ireland and the UK, to promote more targeted oral health management and dental referrals for adults with CF.

Professor Martina Hayes, Consultant and Professor in Restorative Dentistry at UCC, says:

> “We knew from our previous research with Cystic Fibrosis Ireland that the CF community here had identified dental health as a priority. Now our clinical research provides evidence for the specific dental needs of adults living with CF in Ireland, and the findings can enhance their oral health and healthcare experiences. Our study also highlights that adults with CF should be reconsidered and supported as a high-risk group in Ireland’s National Oral Health Policy, ‘Smile Agus Sláinte’.”



Could old drugs be taught new tricks to tackle a dangerous CF infection?

Lead Researcher: Professor Joseph Keane, Trinity College Dublin (TCD)

The problem:

New treatments for cystic fibrosis (CF) have improved outcomes, but non-tuberculous mycobacteria (NTM) infections can still seriously affect the health and lung function of people living with CF.

The project

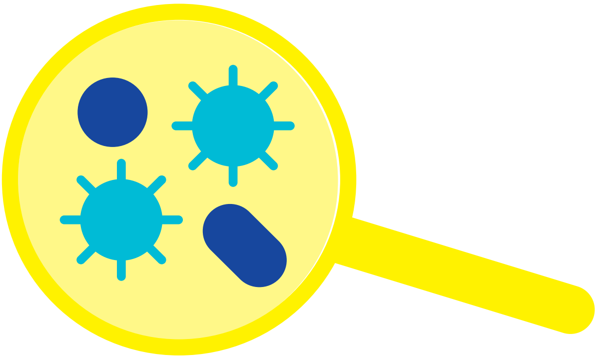
Researchers at St James's and St Vincent's University Hospitals used lung cells from CF patients to explore how the existing and well-known drugs dexamethasone and all-trans retinoic acid (ATRA) could be potential treatments for NTM. The research was supported by the HRB and the Irish Thoracic Society.

The outcomes:

- The researchers found that dexamethasone and ATRA were effective at limiting the NTM mycobacteria in human lung cell models in the lab.
- The findings pave the way to test the drugs in animal models of NTM, which in turn could enable progress to human clinical trials.
- The discovery offers hope for future affordable and effective treatment options for this serious infection in CF patients.

Professor Joe Keane, Consultant Respiratory Physician at St James's Hospital and the Professor of Medicine at TCD, says:

> "Developing effective, affordable treatments for NTM could vastly improve outcomes and quality of life for CF patients affected by this serious lung infection. One of the big strengths of our study is that we used cells obtained from CF patients undergoing bronchoscopies, which allowed us to model the human infection directly. The drugs dexamethasone and ATRA are already in use in the clinic for other conditions, and they are not expensive. We hope that our findings can translate into further studies to explore them as much-needed new treatment options for NTM infections."



Scaling up the search for a cure for Multiple Sulfatase Deficiency

Lead Researcher: Professor Lars Schlotawa, Fraunhofer ITMP-TNM and University of Göttingen.

The problem:

The ultra-rare disease Multiple Sulfatase Deficiency, or MSD, has no cure and people with it do not typically reach adulthood. Researchers at the Fraunhofer ITMP in Hamburg and Göttingen had screened compounds for potential drugs to treat the condition, and wanted to scale up the search.

The project:

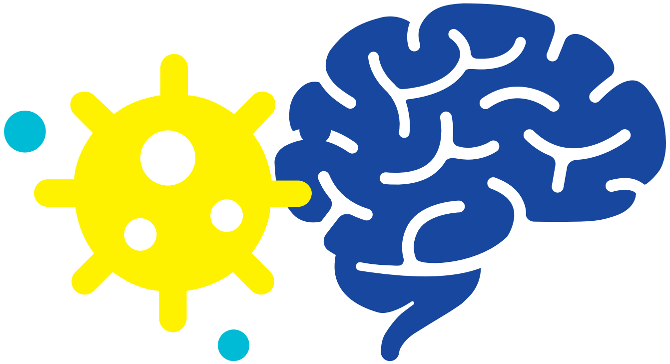
With support from the HRB and MSD Action Foundation through the Health Research Charities Ireland-HRB joint-funding scheme, researchers at the Fraunhofer ITMP scaled up their screening from 800 compounds to 5,600 compounds, using automated high-throughput screening.

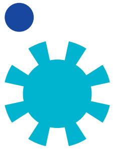
The outcomes:

- The researchers identified 56 more compounds with the potential to be developed as therapies for MSD.
- The project facilitated a collaboration with an Irish researcher, Professor Matthew Campbell at Trinity College Dublin, to explore how potential therapies for MSD could access the brain, one of the key organs affected by the disease.
- The project findings are enabling researchers in Ireland and Germany to engage with wider European networks exploring rare diseases.

Professor Lars Schlotawa, Professor for Childhood Metabolic Diseases and Consultant for Paediatrics at University Medical Center Göttingen, says:

> “The support for this project came from the initiative of Alan Finglas, a father from Ireland whose child had MSD. Alan reached out to researchers worldwide to work on this ultra-rare disease that affects only around 100 patients globally. Through his charity, MSD Action Foundation, and the HRCI-HRB Joint Funding Scheme, we were able to vastly scale up our search for compounds that could potentially be developed to help people with MSD. This means we now have a pipeline of potential candidates that we can refine and further develop collaborations with patient organisations, patients, their families and researchers worldwide.”





Understanding the patient journey to accessing new high-tech treatments

Lead Researchers: Professor Martina Hennessy, Trinity College Dublin (TCD); Dr Gerry Hughes, St James's Hospital, Dublin.

The problem:

Clinical trials of advanced treatments can facilitate access to high-tech innovations like gene and cell therapies for people with rare diseases. Patients and clinicians need more knowledge about how to access and participate in a trial at a clinical research facility.

The project:

Using an evidence-based integrated knowledge translation approach, where researchers partner with knowledge users throughout the research process, researchers at the Wellcome-HRB Clinical Research Facility (CRF) at St James's Hospital worked with patients, clinicians, researchers and patient advocate groups (Spinal Muscular Atrophy Ireland and Rare Diseases Ireland) to map patient journeys for people with rare diseases in accessing advanced therapies in Ireland.

The outcomes:

- Patients, clinicians and researchers co-designed a patient journey guidance document to help people understand the clinical trials process and what to expect on their journey through the CRF.
- A committee was established at the CRF to oversee the project, which included patient representatives (one of these continues to work with the CRF on clinical research and policy projects).
- A podcast recorded in St James's Hospital was hosted by a former patient and focused on the clinical research cycle and clinical trials.
- A CRF showcase event and a clinical research 'summer school' enabled patients to feed back directly to researchers about their own story and their own priorities for clinical research.
- An artist was commissioned to build a Lego model depicting advanced therapy technology at the DNA level and various stages of the patient journey, which was displayed at the TCD Children's Health Research Festival.
- The project fed into the report 'Far Behind the Curve', which identifies a need for more infrastructure in Ireland's health system to make advanced therapies available and deliver them to patients.

Dr Gerry Hughes, Research Synergies Manager at St James's Hospital, says:

> "In the Clinical Research Facility we have an enormous amount of institutional and embedded knowledge about how to deliver advanced therapies, and through this piece of research and the integrated knowledge framework we were able to engage a wide audience to better understand the patient journey. From the outset, the patients helped us to understand what they need to know, and how to enable people to engage and have conversations about accessing therapies and research that can change lives."

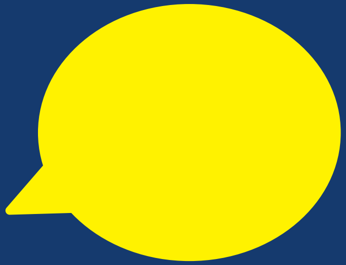
Theme 5: Evidence for Policy

Health and social care are ever changing, and with good quality evidence, those changes can be shaped for the better.

When the Department of Health is seeking to develop or update health and social care policies, it can ask the HRB to evaluate particular areas, to find the evidence in the literature and internationally so that Ireland can make informed steps forward.

Here we outline some of the areas where the HRB has carried out such evaluations, including looking at evidence for interventions to reduce sunbed use, the effectiveness of expanding pharmacist prescribing and identifying gaps in the evidence for interventions for women’s health.

We also showcase a recent project to develop an interactive map to help people find publicly funded addiction treatment and family support services across Ireland and highlight a study by the HRB examining recent trends in eating disorder diagnosis.



Sunbeds and skin cancer – educate and regulate to reduce exposure to risk

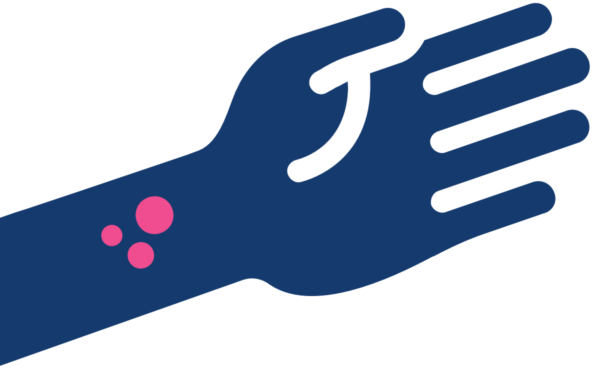
HRB Evidence Centre

The Problem:

Ultraviolet radiation from sunbeds is a known cause of skin cancer, and the use of sunbeds for cosmetic purposes increased in Ireland between 1980 and 2010. The Department of Health asked the HRB to review evidence about the effectiveness of public health interventions to reduce sunbed use.

The project:

The HRB carried out a systematic review of 34 studies of interventions to reduce sunbed use – 25 studies evaluated education interventions, and nine studies evaluated regulation.



The outcomes:

- The analysis showed that programmes using social media, websites, pamphlets and face-to-face education convinced adolescents and young women that sunbeds are dangerous.
- The data also showed that increased knowledge did not result in reduced use of sunbeds.
- The review found that regulations restricting access to sunbeds saw trends toward less sunbed use by teens, but the overall effect was not significant.
- The study highlights the need for a combination of education and regulation interventions to reduce sunbed use.
- The Minister for Public Health, Wellbeing and the National Drugs Strategy, Jennifer Murnane O'Connor TD, launched the HRB report of the findings at a national stakeholder workshop on developing future policy on sunbed use in Ireland.
- The report's findings were discussed on Drivetime on RTÉ Radio 1.

Tonya Moloney, Research Officer with the HRB Evidence Centre, says:

> "Skin cancer is now Ireland's most common cancer, with over 11,000 new cases being diagnosed annually, and sunbed use remains a significant preventable risk factor. The evidence from this review can now help to inform a dual approach for policy development in Ireland, focusing on legislation around restriction as well as targeted education campaigns. This has the potential to prevent thousands of cancer diagnoses and to save lives."

Mind the gap: finding what’s missing in women’s health research

HRB Evidence Centre

The problem:

Many women’s health conditions are under-represented in health research, which means that people with these conditions do not benefit from evidence-based treatments. The Department of Health asked the HRB to identify the gaps in evidence, to support Action 6 of Ireland’s Women’s Health Action Plan, which aims to strengthen the evidence base for women’s health.

The project:

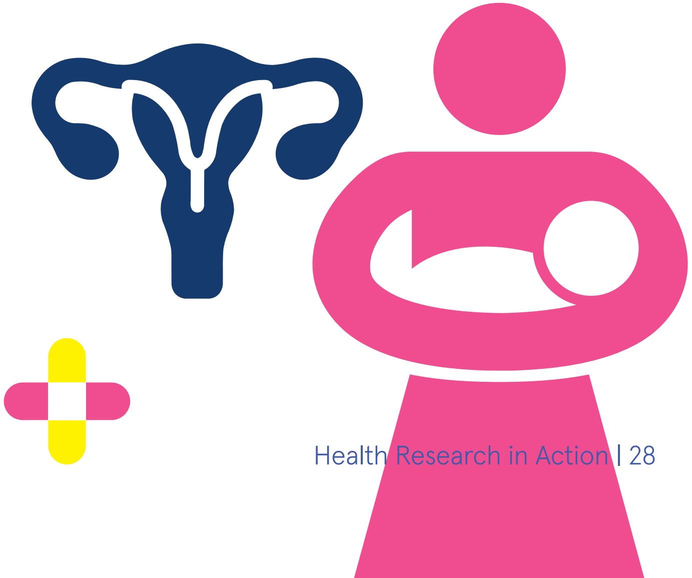
The HRB carried out a review that examined more than 2,200 studies across Organisation for Economic Cooperation and Development (OECD) countries on interventions for conditions exclusively or mainly affecting biological females.

The outcomes:

- The evidence and gap map found four major categories of conditions with significant evidence gaps in research relating to treatment: pelvic and vulvar vaginosis, pelvic organ prolapse, early pregnancy loss and mental health after giving birth.
- We now know there is insufficient research evidence about treating these conditions, both in Ireland and more broadly across OECD countries.
- The review found other categories with a more substantial evidence base, such as gynaecological conditions, reproductive tract cancers, female infertility, pelvic floor disorders and menopausal symptoms.
- Endometriosis was found to have limited completed research. Of approximately 200 studies identified, about three quarters are protocols for ongoing research.
- The findings were communicated to policymakers, researchers and the public through presentations at conferences, a podcast, a press release and media interviews.
- The review now serves as a resource for identifying priority areas in women’s health in Ireland and OECD countries, guiding policy and research.
- The findings highlighted more generally how study design, including core outcome sets, could strengthen the evidence base for women’s health conditions.

Dr Jane Murphy, Research Officer at the HRB Evidence Centre, says:

> “The review was one of the most comprehensive evidence and gap maps carried out in this area, and highlighted the lack of evidence in women’s health, particularly in interventions for pelvic and vulvar vaginosis, pelvic organ prolapse, early pregnancy loss and postpartum mental health. The insights from the review can now inform research, funding and policy strategies to benefit women who have conditions that have been traditionally underserved by research.”



Pharmacists who prescribe: insights to inform expansion

HRB Evidence Centre

The problem:

The Department of Health (DoH) is currently investigating expanding the role of pharmacists, to allow them to prescribe medications across a range of healthcare settings. To inform their policy-making, the DoH asked the HRB to review international studies on the safety, effectiveness and cost-effectiveness of pharmacist prescribing.

The project:

The HRB carried out an evidence review of 52 studies – 39 on effectiveness/safety and 13 on cost-effectiveness – and looked at 15 different health conditions in various healthcare settings. The focus was on the effectiveness, safety and cost-effectiveness of pharmacist prescribing compared to medical prescribing.

The outcomes:

- The review reported methodological limitations in the identified research, which is common in this type of real-world public health research compared to more controlled drug trials.
- The review found evidence for effectiveness and safety for 15 healthcare populations including people with diabetes, heart failure, high blood pressure, urinary tract infection and female contraceptive users.
- The majority of the findings showed that for effectiveness and safety, pharmacist prescribing was either significantly better or equivalent to medical prescribing across a range of healthcare settings.
- For cost-effectiveness, 12 out of the 13 studies in the review found pharmacist prescribing to be cost-effective.
- The review highlighted areas to help address methodological limitations in future studies.

Dr Áine Teahan, Research Officer at the HRB Evidence Centre, says:

> “Ireland now is looking at expanding pharmacist prescribing from the community setting into secondary and tertiary healthcare settings such as outpatient clinics and hospitals. This evidence review can help to inform policymakers on this further expansion of the role of pharmacists in prescribing medication.”

Putting addiction treatment and family support services on the map

HRB National Health Information Systems

The problem:

The need for publicly available information on addiction treatment and family support services was flagged in the National Drugs Strategy 2017-2025, and was included in the Department of Health's Strategic Action Plan in 2023-2024. The Minister for Public Health, Wellbeing and the National Drugs Strategy requested that the HRB produce a publicly accessible, interactive online map of these services.

The project:

The HRB National Health Information Systems developed its existing database into a free online tool where people can search by address or zoom in on their location to see all nearby addiction treatment and family support services in receipt of public funding. The work was carried out in collaboration with the Department of Health, the HSE, treatment and support services, the HRB National Drug Treatment Reporting System and the HRB's National Drugs Library, who host the map on their website.

The outcomes:

- Ireland now has an interactive online map showing a comprehensive listing of addiction treatment and family support services in Ireland that anyone can use to identify the most suitable provider of a treatment for them.
- Ireland is the first European country to present comprehensive information on its drug treatment services in this way.
- More than 460 community-based services are now included on the map.
- The map has acted as a one-stop information point for the public for over a year.
- By showing what services are accessible in an area and highlighting gaps and where services are less accessible, the map can aid the planning of addiction treatment services in the newly established HSE Health Regions.

Michael O'Sullivan, Research Officer with HRB National Health Information Systems, says:

> "The map allows everyone to easily look for drug, alcohol or other addiction support in their community in line with goals of Slaintecare. We hope this map will make support more accessible and at the same time encourage people to seek the help or support they may need."

Charting the rise of eating disorders in Ireland

HRB National Health Information Systems

The problem:

International studies have shown an increase in eating-disorder diagnoses in the last decade. However, there was a lack of analysis about the numbers of people being diagnosed and treated for eating disorders in Ireland due to the absence of unique identifiers in the data.

The project:

The HRB examined data for under 18-year-olds from the Hospital In-Patient Enquiry (HIPE) system, the HRB's National Psychiatric Inpatient Reporting System (NPIRS) and the Child and Adolescent Mental Health Services (CAMHS) community Eating Disorder teams from 2018 to 2022.

The outcomes:

- We now know that between 2018 and 2022 in Ireland, hospital admissions for eating disorders in under-18s more than doubled, an increase of 121%.
- The analysis found 1573 inpatient admissions due to eating disorders between 2018 and 2022, with more than three in four of these to acute medical hospitals.
- The data showed that anorexia nervosa was the most common eating disorder diagnosis in psychiatric hospitals, accounting for nine in ten admissions.
- During the same time, the data showed 902 referrals to Ireland's two specialist community eating disorder teams, and almost one in five of these went on to receive inpatient hospital care.
- The HRB report means Ireland now has a baseline of evidence about referrals and admissions for eating disorders in under-18s, providing insights for future resourcing, policies and stepped care between community and hospitals.

Harriet Lovett, Research Analyst with HRB National Health Information Systems, says:

> "The first step for policy change is to know the figures, and from our analysis we can see that over the study period, eating disorder diagnoses and inpatient admissions increased in Ireland, in line with international trends. Our study highlights the need for more resources and support for eating disorder services in hospitals and in the community, and also the need to be able to identify patients as they move through care pathways, in order to ensure the resources they need are available to help them."

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