

The College of Medicine and Health
Research & Innovation Conference 2026



Advancing Health: Translating Discovery to Care

09:00 to 17:00, Wednesday 2nd September,
Western Gateway Building, University College Cork



Book of Abstracts

Wednesday 2nd September 2026

09:00 – 17:00

Western Gateway Building, UCC

Talks: Room WGB 1.07 (first floor)
Poster Viewing: Rooms WGB G13, WGB G14, WGB G15
(ground floor)

Welcome

Dear Friends and Colleagues,

We are delighted to welcome you to this year's annual [College of Medicine and Health Research and Innovation Conference](#). The theme for 2026, ***“Advancing Health: Translating Discovery to Care”***, showcases research across the full translational spectrum, from fundamental discovery, clinical research and innovation, through to implementation in practice and improvements in health outcomes and patient care.

This theme also reflects the College's ambition to strengthen the connections across this translational spectrum and to create the environments in which discovery, research, innovation and clinical practice can inform and advance one another. Central to this is the ongoing development of an [Academic Health Sciences System](#) (AHSS) in the South-West region, bringing University College Cork and the HSE South-West together to strengthen integration across research, education, innovation and healthcare. The research being presented today, from discovery through to clinical, health services and implementation science, is central to this ambition and to translating new knowledge into impact.

We are delighted by the enthusiastic response to this year's conference, with almost 300 registrations and more than 100 abstracts submitted by researchers from across the College and our wider research and clinical community. The breadth of work represented reflects both the strength and diversity of our research community, spanning [UCC Futures](#) areas that include Future Medicines; Future Ageing and Brain Sciences; Children; Food, Microbiome & Health; and our new Future Strategic Research Centres, *Cancer Research @UCC* and *Future of Health*, all working in partnership with the the HRB-Clinical Research Facility. Together, these contributions demonstrate the depth and breadth of research taking place across the translational spectrum and the opportunities for collaboration across disciplines, Departments, Schools, Research institutes, and our clinical and external partners.

The programme features presentations from three distinguished invited speakers, alongside a rich selection of oral presentations. These are delivered in two engaging formats: eight-minute “Latest Advances” talks, and three-minute “Elevator Pitches”.

All presentations have been selected from submitted abstracts and showcase the breadth and depth of research and innovation taking place across College and in partnership with the health service and community organisations.

A day of this scale and significance would not be possible without the dedication and support of many individuals. We extend our heartfelt thanks to the College of Medicine and Health staff for their exceptional work, particularly in organising the abstracts and poster sessions: Jill O'Callaghan, Caroline Seacy, Jane Hurley, Kate Murphy, Dr Ken O'Riordan and Dr Susan Rafferty-McArdle.

We are deeply grateful to our Schools, Institutes and Centres, and to our students and staff, whose contributions make this conference possible. Special thanks go to the members of the College of Medicine and Health Research and Innovation Committee for their commitment and work throughout the year. We are also delighted to welcome colleagues from the HSE South-West Research Office and the Cork University Hospital Research Committee, whose participation reflects the growing connections across our academic, research and clinical communities.

We extend our sincere appreciation to everyone who has contributed to the organisation and delivery of today's conference. The collective effort involved is considerable, and we are enormously grateful to all those who have given their time and expertise to make the event a success.

We hope you enjoy the conference and that it provides an opportunity not only to share and discover excellent research, but to make new connections, strengthen collaborations, and generate new ideas across disciplines and across the translational spectrum.

Professor Gerard O'Keeffe
Vice Head for Research & Innovation
College of Medicine & Health, UCC

Professor Helen Whelton
Head of the College of Medicine & Health, UCC
& Chief Academic Officer to the HSE South West Region

Table of Contents

Welcome	1
Programme of Events	3
Oral Presentations	7
Session 1: Latest Advances	7
Session 1: Elevator Pitches	11
Session 2: Latest Advances	15
Session 2: Elevator Pitches	20
Session 3: Latest Advances	24
Session 3: Elevator Pitches	28
Poster Presentations.....	32
Population Health Sciences.....	32
Clinical and Healthcare Sciences	65
Biomedical and Pharmaceutical Sciences.....	97
Poster Numbers and Room Locations.....	114

Programme of Events

09:00 – 09:10 OPENING REMARKS

Professor John O'Halloran
President, University College Cork

09:10 – 10:30 Session 1

Chaired by Dr Aoife Fleming and Prof Elaine Lehane

09:10 – 09:35

Professor Yvonne Nolan

*Department of Anatomy & Neuroscience, School of Medicine, and
APC Microbiome Ireland
UCC Futures: Food Microbiome & Health and Future Ageing & Brain Science
Lifestyle factors and the gut-brain axis: relevance to Alzheimer's disease*



09:35 – 10:15

LATEST ADVANCES 1

(8-minute research talks, 2 questions)

Dr Morgane E. Le Dréan

APC Microbiome Ireland

Exploring Microbiota-Derived p-Cresol as a Possible Contributor to Gastrointestinal Symptoms in Autism Spectrum Disorder

Dr Valentine Turpin

APC Microbiome Ireland and School of Medicine

Caesarean section remodels neonatal brain barriers and associated neuroimmune pathways

Dr Andrew Willis

School of Public Health

PRECIS-3: A tool to help trialists design more informative trials

Dr Fionnuala Wilson

Department of Anatomy & Neuroscience, School of Medicine

AAV- GDF5 and combination of AAV-GDF5 and GDNF are neurorestorative in an α -synuclein rat model of Parkinson's disease

10:15 – 10:30

ELEVATOR PITCHES 1

(3-minute elevator pitch style talks, 1 question)

Ms Méabh Finucane

Department of Pathology, School of Medicine

Spatial profiling reveals that high IL-36R expression defines an immunosuppressed tumour microenvironment in colorectal cancer

Ms Koushika Chandrasekaran

School of Pharmacy, School of Medicine, and APC Microbiome Ireland

Early-life microbiota sculpts neuro-glia-vascular interactions underlying hypothalamic circuit and behavioural maturation in zebrafish

Mr Anthony Marullo

Department of Physiology, School of Medicine

Muscle, microbiome and metabolism: a feedback loop in Duchenne muscular dystrophy

Ms Ashley Benge

Department of Anatomy & Neuroscience, School of Medicine, and APC Microbiome Ireland

Vaginal Microbiome Dysbiosis Is Associated with Stress, Pain Burden, and Systemic Inflammatory Signatures in Endometriosis: Translational Insights from a Pilot Multisystem Analysis

10:30 – 12:00 **COFFEE BREAK + POSTER SESSION + NETWORKING**
Catering - Ground Floor Atrium WGB
Poster Viewing 10:50 - 11:50 in WGB G13, WGB G14 & WGB G15

12:00 – 13:30 **Session 2**
Chaired by Prof John Browne and Prof Anna Olsson-Brown

12:05 – 12:30 **Professor Finbarr Allen**
Dental School & Hospital
UCC Futures: Future of Health
Why preventing oral disease is essential for general health



12:30 – 13:10 **LATEST ADVANCES 2**
(8-minute research talks, 2 questions)

Prof Janas Harrington
School of Public Health
From Vision to Delivery: Developing a Resilient, Community-Driven Food Policy for Cork

Dr Maria Inês Clara
School of Nursing & Midwifery
Co-creating an extended reality intervention to increase adolescent and young adult testicular cancer survivors' knowledge of treatment late effects (TRANSCEND-XR): A qualitative co-design study

Ms Madison Curran
School of Public Health
Socioeconomic inequalities in childhood overweight and obesity: A secondary analysis of the Growing Up in Ireland cohort study

Prof Helen Whelton (on behalf of Dr Jodi Cronin)
Dental School & Hospital
Long-Term Associations between Water Fluoridation and Adult Dental Caries

13:10 – 13:25 **ELEVATOR PITCHES 2**
(3-minute elevator pitch style talks, 1 question)

Dr Sinead O'Riordan
School of Public Health
Preterm delivery and long-term risk of maternal stroke: systematic review and meta-analysis

Dr Barbara Burke
INFANT Research Centre and Department of Obstetrics & Gynaecology, School of Medicine
Mapping Perinatal Sentinel Events in the Literature to Improve Patient Safety: A Scoping Review of Definitions, Risk Factors, and Predictive Models

Ms Muireann Vaughan

School of Pharmacy

Mapping Workflows in Outpatient Psychiatry to Guide Pharmacist Integration: A Qualitative Study

Ms Sarah Fenton

INFANT Research Centre

Barriers and facilitators to the national scale-up of a preterm standardised parenteral nutrition system: a mixed-methods process evaluation

13:30 – 14:45

LUNCH WITH POSTER VIEWING AND NETWORKING SESSION

14:45 – 16:30

Session 3

Chaired by Prof Gene Dempsey and Prof Josephine Hegarty

14:45 – 15:10

Professor Geraldine Boylan

*Department of Paediatrics & Child Health, School of Medicine and
INFANT Research Centre*

UCC Futures: Children

AI-Enabled Neuromonitoring for Early Detection of Neonatal Brain Injury



15:10 – 15:50

LATEST ADVANCES 3

(8-minute research talks, 2 questions)

Dr Mark Feighery (on behalf of Dr Ludolf de Kock)

Department of Medicine, School of Medicine

AI-Based Screening for Reduced Bone Mineral Density on Chest Radiographs: Irish and Multinational Validation

Ms Katie E. Johnston

Cancer Research @UCC

From Insight to Impact: Advancing Patient-Centred Supportive Oncology Care through the Linking You to Support and Advice (LYSA) Research Programme

Dr Maria O'Malley

School of Nursing & Midwifery

Exploring the perceived effectiveness, impact, and benefits of a work-based cancer survivorship peer support programme: A mixed-methods study

Mr Aidan O'Shea

School of Clinical Therapies

Recommendations for facilitating engagement with a self-managed exercise programme for people with shoulder pain: A nominal group technique with key stakeholders

15:50 – 16:05

ELEVATOR PITCHES 3

(3-minute elevator pitch style talks, 1 question)

Ms Rehab Elhiny

School of Pharmacy

LDL-Cholesterol goal achievements and medication adherence among multimorbid older adults with polypharmacy: an analysis of data from the OPERAM trial

Ms Ciara Hanrahan

School of Clinical Therapies

Physical activity behaviour in people with chronic obstructive pulmonary disease; a qualitative study

Ms Julie Arnott

School of Public Health

Gender-differences in COVID-19 risk perception and psychological distress in Ireland: a nationally representative cross-sectional study

Dr Aoife Corcoran

Department of Obstetrics & Gynaecology, School of Medicine

The CODING Study: An International Service Evaluation of Data Recording Practices in Gestational Trophoblastic Disease

16:05 – 16:30

In Conversation with Professor Helen Whelton

The Five Ps:

Persistence • People • Possibility • Push Yourself • Perspective

Interviewed by Dr Louise Collins, School of Medicine



16:30 – 17:00

Professor Gerard O’Keeffe, Vice Head for Research & Innovation

Final remarks, Prize Giving and Photos.

Close of the conference.

Exploring Microbiota-Derived p-Cresol as a Possible Contributor to Gastrointestinal Symptoms in Autism Spectrum Disorder

Morgane E. Le Dréan^{*} ; Carla Viñola-Renart^{*†} ; Jennifer Sartori^{*} ; Andrew Edwards^{*} ; Friederike Uhlig^{*†} ; Niall Hyland^{* ‡}

^{*}APC Microbiome Ireland (Cork, Ireland)

[†]Department of Pharmacology and Therapeutics, University College Cork (Cork, Ireland)

[‡]Department of Physiology, University College Cork (Cork, Ireland)

The gastrointestinal (GI) tract and its intrinsic enteric nervous system are continuously exposed to microbial-derived metabolites present in the gut lumen and circulation, which can modulate GI physiology. The bacterial metabolite p-Cresol has been reported at elevated levels in individuals with autism spectrum disorder (ASD), a condition frequently associated with gastrointestinal symptoms. However, whether p-cresol directly affects GI physiology and contributes to ASD-associated gastrointestinal dysfunction remains unknown.

This study aims to investigate the acute and chronic effects of p-Cresol on gut physiology in mice. The effects of p-Cresol were assessed *ex vivo* in isolated mouse small intestine using Ussing chambers and organ baths to evaluate enteric nerve activity, epithelial ion transport, and gut contractility. *In vitro*, calcium responses were measured in primary enteric neuron cultures following p-Cresol exposure. All experiments were approved by the University College Cork Animal Experimentation Ethics Committee (#25-004).

In Ussing chamber experiments, p-Cresol (50 μ M) significantly reduced basal and neuronally mediated epithelial secretory responses, as evidenced by decreased ion transport following veratridine (30 μ M; $p=0.0004$; $n=18$) and carbachol (100 μ M; $p=0.0054$; $n=18$) stimulation, without altering epithelial integrity.

In organ bath experiments, p-Cresol significantly reduced intestinal tone (50–500 μ M; $p=0.0065$; $n=10$) and cholinergic-induced contractile response (100 μ M, $p=0.0147$; $n=10$).

In primary enteric neuron cultures, prolonged exposure to p-Cresol (50 μ M, 4 days) significantly reduced cholinergic-induced calcium responses (100 μ M, $p=0.023$; $n=11$). This suggests that sustained exposure to p-Cresol may be associated with enteric neuronal remodelling.

Together, these findings implicate p-Cresol in GI regulation, with potential relevance to ASD-associated gastrointestinal symptoms.

Cesarean section remodels neonatal brain barriers and associated neuroimmune pathways

Valentine Turpin (1,2), Emmanuelle Nebout (1,2), Jennifer Morael (1,2), Alexandre J.C. Cergneux (1,2), Hugo Blair (1,2), Lorena Morales (1,2), John F. Cryan (1,2), Maria R. Aburto (1,2).

1. APC Microbiome Ireland, University College Cork, Cork, Ireland.

2. Department of Anatomy and Neuroscience, University College Cork, Cork, Ireland.

Early life represents a critical window during which gut microbiota-derived signals shape brain development. Caesarean section (C-section) disrupts maternal microbial transmission at birth and is associated with altered immune signalling and behaviours, with potential impacts on neurodevelopmental trajectories. We recently identified early brain barrier dysfunction following C-section, particularly at the blood-cerebrospinal fluid (CSF) barrier of the lateral and third ventricle choroid plexuses (ChP), and to a lesser extent at the blood-brain barrier in the prefrontal cortex. The ChP is a key regulator of CSF composition and neurodevelopmental signalling. However, the fourth ventricle ChP remains largely unexplored, despite its proximity to the cerebellum, a brain region that undergoes extensive postnatal growth, displays marked sexual dimorphism, and contributes to motor, cognitive, and social behaviours. Here, we investigated whether alterations at the fourth ventricle ChP influence postnatal cerebellar development. Using a mouse model of C-section delivery, we assessed brain barrier integrity, cerebellar development, and immune-glial interactions at postnatal day 8. Barrier permeability was evaluated using tracer extravasation assays. Cerebellar neuronal populations (Purkinje and granule cells), glial cells (microglia and astrocytes), and ChP-associated macrophages were quantified by immunofluorescence and confocal microscopy. C-section delivery increased brain barrier permeability, with higher tracer fluorescence in the cerebellar region. This was associated with disrupted cerebellar cellular organisation and immune populations within the ChP. These findings identify the fourth ventricle ChP as a critical interface linking peripheral signals modulated by birth mode to cerebellar development and suggest that early barrier disruption may contribute to altered neurodevelopmental trajectories.

PRECIS-3: A tool to help trialists design more informative trials

Andrew Willis (1,2), Shaun Treweek (3,4), Monica Taljard (5,6), Merrick Zwarenstein (7), Clarinda Cerejo (8), Lynn Laidlaw (8), Frances Shiely (1,2)

1. *School of Public Health, University College Cork, Cork, Ireland*

2. *HRB Clinical Research Facility, Cork Ireland*

3. *University of Aberdeen, Aberdeen, UK*

4. *Uppsala University, Uppsala, Sweden*

5. *Ottawa Hospital Research Institute, Clinical Epidemiology Program, Centre for Practice-Changing Research, The Ottawa Hospital, Ottawa, Canada*

6. *School of Epidemiology and Public Health, University of Ottawa, Ottawa, Canada*

7. *Schulich School of Dentistry and Medicine, Western University, London, Canada*

8. *Public Contributor*

Designing a randomised trial is complicated, and often consists of numerous decisions and trade offs between the ‘perfect’ design to suit the primary objective, and real world constraints including cost, time, equipment, and other priorities. The wrong decisions can limit the usefulness of a trial’s results.

PRECIS-3 is a tool which helps trialists design a trial which is aligned with their primary intention, either explanatory or pragmatic. PRECIS-3 has been developed following extensive review of relevant literature, with insight from a multidisciplinary, international working group of trialists and public contributors.

PRECIS-3 has 10 domains, with an additional domain added from the previous PRECIS-2 tool, which prompts trialists to consider the choice of comparator arm in their trial. The updated scoring guidance highlights the importance of defining and accurately describing both; the trial’s primary intention, and the context (who, where, how) in which the trial results will be applied.

PRECIS-3 retains the wheel which displays scores across all 10 domains. This visual presentation aids the assessment of alignment between primary intention and key trial design decisions. Misalignment can help trialists refine decision making at the design stage, and can also aid interpretation by those who may want to judge applicability, within their own setting and context.

We will describe the tool and explain how to use the scoring guidance, using previous trials to illustrate different design decisions across the pragmatic to explanatory continuum to design trials more likely to produce informative, useful results to improve patient care and health outcomes.

AAV- GDF5 and combination of AAV-GDF5 and GDNF are neurorestorative in an α -synuclein rat model of Parkinson's disease

Fionnuala E Wilson^{1,2}, Joan Osayande^{1,2}, Rebekah Bevans^{1,2}, Adam O'Mahony^{1,2}, Martina Mazzocchi^{1,2}, Louise M Collins^{2,3}, Gerard W O'Keeffe^{2,3,4}, Aideen M Sullivan^{1,3,4*}

1 Department of Pharmacology & Therapeutics, University College Cork, Cork, Ireland

2 Department of Anatomy & Neuroscience, University College Cork, Cork, Ireland.

3 Parkinson's Disease Research Cluster (PDRC), University College Cork, Cork, Ireland

4 APC Microbiome Ireland, University College Cork, Cork, Ireland

Parkinson's disease (PD) is characterised by midbrain dopaminergic neuron degeneration associated with α -synuclein (aSyn) accumulation. Adeno-associated viral vector (AAV)-mediated delivery to the brain of neurotrophic factors (NTFs), including GDNF, has disease-modifying potential in PD. However, clinical trials to date have failed to meet their primary endpoints. One hypothesised reason for this is that aSyn downregulates GDNF's receptor, RET. Growth/differentiation factor 5 (GDF5) is an NTF that operates through Bone Morphogenic Protein receptors (BMPRs), and has neuroprotective effects in in vivo PD models.

This study investigated effects of delayed administration of GDF5, and of combined GDF5 and GDNF therapy, in the AAV-aSyn rat model of PD. Following baseline behavioural testing, Sprague-Dawley rats received unilateral intranigral injection of AAV-aSyn, followed after 13 weeks by unilateral intranigral injection of either AAV-Null, AAV-GDF5, or AAV-GDF5 + AAV-GDNF. Behavioural testing was carried out at weeks 12, 16, 20 and 24. Treatment with either AAV-GDF5 or combination of AAV-GDF5 + AAV-GDNF partially rescued motor impairments associated with AAV-aSyn. Animals were perfused after 25 weeks for immunohistochemistry, which showed that both AAV-GDF5 and AAV-GDF5 + AAV-GDNF rescued nigral dopaminergic neurons and striatal terminals from AAV-aSyn-induced degeneration. These data show that intranigral administration of AAV-GDF5, or combination of AAV-GDF5 and AAV-GDNF, has neurorestorative effects in the AAV-aSyn PD model.

We also examined the expression of NTF receptors in paraffin-embedded sections of substantia nigra from PD patients and age-matched controls. RET receptor expression was lower in PD than in healthy controls, but BMPR expression was unaltered in PD. This preservation of GDF5 receptors in the PD brain supports its potential therapeutic application.

Spatial profiling reveals that high IL-36R expression defines an immunosuppressed tumour microenvironment in colorectal cancer

Méabh Finucane (1,2,3), Éanna Fennell (5,6), Paul Murray (5,6), Elizabeth Ryan (7,8), Aileen Houston (1,3,4), Elizabeth Brint (1,2,4)

1. School of Medicine, UCC

2. Department of Pathology, UCC

3. Department of Medicine, UCC

4. Cancer Research @ UCC

5. School of Medicine, UL

6. Health Research Institute, UL

7. Faculty of Science and Engineering, UL

8. Department of Biological Sciences, UL

The interleukin (IL)-36 family (members of the IL-1 family) comprises three pro-inflammatory agonists, IL-36 α , IL-36 β , and IL-36 γ ; two antagonists, IL-36Ra and IL-38; and the IL-36 receptor (IL-36R). In colorectal cancer (CRC), IL-36 signalling has context-dependent pro- and anti-tumour functions. While IL-36R signalling in immune cells promotes type 1 immune responses and tumour infiltration, tumour-intrinsic IL-36R signalling enhances proliferation, migration, invasion and extracellular matrix remodelling. Understanding the spatial organisation of IL-36 signalling within the tumour microenvironment (TME) may therefore help identify cellular niches that govern these opposing effects.

To characterise IL-36 family member expression in CRC, multiplex proteomic profiling was performed using the PhenoCycler-Fusion platform (Akoya Biosciences) on over 200 paired tumour and adjacent normal regions from 23 patients using a validated antibody panel targeting IL-36 α , IL-36 β , IL-36 γ , and IL-36R, along with 47 immune, stromal, and functional markers. Cell phenotyping was used to assess protein expression, immune infiltration, proximity-based interactions and cellular neighbourhood organisation.

Expression of IL-36 family members differed markedly between normal and tumour tissues. IL-36 α shifted from T cells to endothelial cells, IL-36 β from B cells to tumour cells, and IL-36R from B cells to tumour cells, while IL-36 γ remained predominantly epithelial but lost strong M2 macrophage and CD8⁺ T-cell expression. Low tumoral IL-36R expression was associated with increased M1 macrophage and CD8⁺ T-cell infiltration, greater CD8⁺ T cell–tumour proximity, and immune-enriched tumour borders. In contrast, IL-36R-high regions showed reduced PD-1/PD-L1 expression. These findings suggest that elevated IL-36R expression in CRC is associated with a less immune-infiltrated TME.

Early-life microbiota sculpts neuro-glia-vascular interactions underlying hypothalamic circuit and behavioural maturation in zebrafish

Koushika Chandrasekaran 1,2, Sauranil Guha 1,2, Alexandre Cergneux 1,3, Lorena Morales 1,3, Maria R Aburto 1,3, John F Cryan 1,3, Jatin Nagpal 1,2

1. APC Microbiome Ireland.

2. Dept of Pharmacology & Therapeutics, and School of Pharmacy, UCC.

3. Dept. of Anatomy & Neuroscience, UCC.

Early-life microbiota is increasingly recognised as key regulator of stress- and social-behavioural development, but the cellular mechanisms through which microbial signals sculpt developing brain circuits remain poorly understood. The hypothalamus is a central hub for integrating neuroendocrine, stress and social signals, and its maturation depends on coordinated interactions between neural, glial and vascular compartments. Using germ-free zebrafish, we investigated whether microbiota depletion disrupts neuro-glia-vascular interactions that shape hypothalamic circuit development and behavioural outcomes.

Germ-free larvae showed reduced vascular reporter fluorescence and altered cerebrovascular organisation, accompanied by disrupted GFAP-positive glial architecture and reduced neurovascular interactions. Phospho-histone H3 staining revealed decreased proliferative activity in the developing hypothalamus, while analysis of neuroendocrine and inhibitory neuronal populations identified microbiota-dependent alterations in oxytocinergic and GABAergic systems. These cellular phenotypes were accompanied by altered expression of genes associated with neurodevelopment, hypothalamic maturation and stress regulation. Preliminary blood-brain barrier analyses further suggest impaired barrier maturation in the absence of microbial signals.

Functionally, germ-free larvae displayed altered acoustic startle and light-dark transition responses. Together, these findings indicate that early-life microbiota help sculpt neuro-glia-vascular architecture, hypothalamic circuitry and barrier integrity, highlighting a developmental pathway through which microbial signals may shape stress- and social-related brain health.

Muscle, microbiome and metabolism: a feedback loop in Duchenne muscular dystrophy

Anthony Marullo (1), Friederike Uhlig (2), Ken D. O'Halloran (1)

1. Department of Physiology, University College Cork, Cork, Ireland

2. APC Microbiome Ireland, University College cork, Cork, Ireland

We have previously shown that male mice raised without a gut microbiome show sex-specific impairment of skeletal muscle force-generating capacity, indicating that the metabolic output of resident bacteria reaches and affects muscle. This led us to characterise gut-muscle interactions in Duchenne muscular dystrophy (DMD), where the muscle itself becomes the primary source of metabolic disturbance.

In the mdx mouse, loss of dystrophin drives ongoing muscle breakdown, releasing catabolic byproducts and immune mediators that alter the nutrients and signals reaching the gut. The microbial community adapts to this altered supply by shifting its composition and functional capacity to match the now available substrates. To follow how the reshaped microbial metabolism modulates the host, we combined metagenomics, metabolomics (plasma, faecal, diaphragm), and transcriptomics (ileum, colon, diaphragm). Microbial functional capacity (KEGG Orthologs) was related to faecal and plasma metabolites, with host transcription confirming the metabolic consequences locally (gut) and systemically (diaphragm).

The adapted community featured lower short-chain fatty acid and bile-salt hydrolase capacity and elevated lipopolysaccharide levels, leaving a systemic SCFA deficit, accumulated luminal bile acids, and depleted indoles, impairing AhR signalling. Elevated 3-methylhistidine tracked muscle breakdown across all compartments. Circulating lipopolysaccharide accompanied TLR4-associated inflammation in the diaphragm, alongside a suppressed ileal immune profile with a structurally intact barrier. Together these data place the microbiome within the dystrophic disease process as a metabolic intermediary, its output reshaped by the metabolic stress of muscle breakdown and regenerative demand, ultimately contributing to further exacerbate the disease. Our work reveals targets for adjunct therapies for DMD.

Vaginal Microbiome Dysbiosis Is Associated with Stress, Pain Burden, and Systemic Inflammatory Signatures in Endometriosis: Translational Insights from a Pilot Multisystem Analysis

Ashley Benge^{1,2#}, Mariarosaria Cuzzo^{1,2#}, Ellie Power^{1,2}, Maria Buckley³, Louise Collins², Christine Fitzgibbons¹, Philippa Saunders⁵, Andrew Horne⁵, Cathy Burke⁶, Fergus P McCarthy⁶, Elizabeth Brint⁷, Siobhain M O'Mahony^{1,2}

1. APC Microbiome Ireland, University College Cork, Cork, Ireland

2. Department of Anatomy and Neuroscience, School of Medicine, University College Cork, Cork, Ireland

3. Department of Pharmacology, School of Medicine, University College Cork, Cork, Ireland

4. Department of Obstetrics and Gynaecology, School of Medicine, University College Cork, Cork, Ireland

5. Centre for Reproductive Health, Institute of Regeneration and Repair, University of Edinburgh, UK

6. Cork University Maternity Hospital, Cork, Ireland

7. Department of Pathology, School of Medicine, University College Cork, Cork, Ireland

Background:

Endometriosis is a chronic inflammatory disease associated with pelvic pain, psychological burden, and reduced quality of life. Despite affecting approximately 1 in 10 women of reproductive age, diagnosis remains delayed and treatment options are often inadequate. Emerging evidence suggests that alterations in the vaginal microbiome may contribute to disease mechanisms and offer novel opportunities for biomarker development and personalised care. This study investigated relationships between vaginal microbiota composition, inflammatory signalling, stress, and symptom burden in women with endometriosis.

Methods:

Women with laparoscopically confirmed endometriosis (n=18) and healthy controls (n=13) underwent assessment of pain (Brief Pain Inventory), psychological stress (PSS-10, GHQ-12), salivary α -amylase, circulating inflammatory cytokines, and vaginal microbiome profiling using quantitative PCR-based microbial analysis.

Results:

Women with endometriosis exhibited a distinct vaginal microbiome profile compared with controls, characterised by a significant reduction in *Lactobacillus crispatus* abundance ($q=0.000232$) and a shift toward more diverse, non-*Lactobacillus*-dominated communities. While global alpha diversity did not differ significantly between groups, taxonomic profiling revealed depletion of key protective taxa alongside increased representation of anaerobic and opportunistic bacteria in the endometriosis cohort. Consistently, community state type (CST) analysis showed a lower prevalence of *Lactobacillus*-dominant CSTs in the endometriosis group, indicating reduced microbial stability and loss of protective vaginal community structures. Importantly, integrated correlation analyses demonstrated significant associations between vaginal microbial composition and host-related parameters. Within the endometriosis cohort, lower *L. crispatus* abundance was associated with higher perceived stress score ($r = -0.5309$, $p = 0.0391$) and increased IL-12p70 concentrations ($r = -0.4896$, $p = 0.0458$). Opportunistic taxa including *Streptococcus anginosus* and *Enterococcus faecalis* positively correlated with pain intensity ($r = 0.6509$, $p = 0.0058$; $r = 0.6534$, $p = 0.0056$).

Conclusions:

This study identifies concurrent alterations in the vaginal microbiome, immune function, stress, and pain burden in endometriosis. These findings support the potential of vaginal microbiome profiling as a non-invasive approach for disease stratification and monitoring, while highlighting microbiome-targeted therapies as a promising avenue for future personalised care. By linking biological discovery with clinically relevant symptoms, this work contributes to advancing translational approaches for improving outcomes in women with endometriosis.

From Vision to Delivery: Developing a Resilient, Community-Driven Food Policy for Cork

Janas M Harrington (1), Denise Cahill (2), Sandrine Bertin (3), M O'Reilly (4), S Murphy (3)

1. *School of Public Health, University College Cork*

2. *Cork Healthy Cities*

3. *Cork City Council*

4. *Dept Health Promotion and Improvement, HSE*

Background: Ireland's food system is currently dependent on long supply chains, with the country importing 83% of its fruit and vegetables while domestic horticultural production has declined. This vulnerability is compounded by rising food poverty. To address these issues, the Cork Food Policy Council (CFPC) has conducted an extensive public consultation to inform the development of a food policy for Cork.

Methods: The consultation included over 400 individual participants, with representation from citizens, community groups, HSE, City Council, food growers and producers, food businesses, retail, and farmers. Engagement methods included 25 workshops and focus groups, 4 world café sessions, a youth forum, a semi-quantitative questionnaire (N=120), semi-structured interviews with food growers and business owners, and 19 substantive online submissions.

Results: The consultation revealed a desire for a system that is local, accessible, and skill-based. Actions were identified under five core goals: Nourishing Food for All, a Sustainable Food System, a Thriving Local Economy, Resilient Community-Centred Environments, and Lifelong Learning. Key challenges identified include the dominance of fast-food outlets, poor transport links to supermarkets, intergenerational loss of food knowledge and skill and critical barriers for producers such as land access.

Discussion/Conclusion: The strategy advocates for a shift from calorie security to nutritional resilience. This work has highlighted that food policy is economic development and urban planning policy, requiring coordinated implementation and sustained investment to move from vision to delivery.

Co-creating an extended reality intervention to increase adolescent and young adult testicular cancer survivors' knowledge of treatment late effects (TRANSCEND-XR): A qualitative co-design study

Maria I. Clara (1†), Josephine Hegarty (1†), David Murphy (2), Aishah Hussain (3), Jack Gleeson (4,5), Ismail Toygar (1), Ida J. Korfage (6), Sophie Terhaard (6,7), Agnes van der Heide (7), Sheena McHugh (8), Frances Shiely (8,9), Aileen Murphy (10), Ann Kirby (10), Patrice Kearney Sheehan (11), Lynda Corrigan (11), Daniele Raggi (12), Alison Reid (12), Michal Chovanec (13,14), Patrizia Gianntempo (15), Jourik A. Gietema (16), Ana Roca-Umbert (17), Joanne Reid (18), Julie McMullan (18), Paulo Alves (19,20), Carla Vieira (19), Joana Soares (21), Karen Galvin (21), Michal Kubo (22), Davor Ježek (23), Adeline Salasc (24), Anna Patrikidou (25), Maria O'Malley (1‡), Mohamad M. Saab (1‡)

†Joint First Author

‡Joint Last Author

1. Catherine McAuley School of Nursing and Midwifery, University College Cork, Cork, Ireland.

2. School of Computer Science and Information Technology, University College Cork, Cork, Ireland.

3. Khor, Copenhagen, Denmark.

4. Cancer Research @UCC, College of Medicine and Health, University College Cork, Cork, Ireland.

5. Cork University Hospital/University College Cork Cancer Centre, Cork University Hospital, Cork, Ireland.

6. Department of Public Health, Erasmus MC, University Medical Center Rotterdam, Rotterdam, the Netherlands.

7. Department of Medical Oncology, Antoni van Leeuwenhoek – Netherlands Cancer Institute, the Netherlands.

8. School of Public Health, University College Cork, Cork, Ireland.

9. Health Research Board Clinical Research Facility, University College Cork, Cork, Ireland.

10. Department of Economics, Cork University Business School, University College Cork, Cork, Ireland.

11. Tallaght University Hospital, Dublin, Ireland.

12. The Royal Marsden NHS Foundation Trust, London, United Kingdom.

13. 2nd Department of Oncology, Faculty of Medicine, Comenius University and National Cancer Institute, Bratislava, Slovakia.

14. Cancer Research Institute, Biomedical Research Center, Slovak Academy of Sciences, Bratislava, Slovakia.

15. Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy.

16. Academisch Ziekenhuis Groningen, Groningen, the Netherlands.

17. PredictBy Research and Consulting, Barcelona, Spain.

18. School of Nursing and Midwifery, Queen's University Belfast, Belfast, United Kingdom.

19. Center for Interdisciplinary Research in Health, Faculty of Health Sciences and Nursing, Catholic University of Portugal, Porto, Portugal.

20. School of Nursing, Catholic University of Portugal, Porto, Portugal.

21. FundtoInnovate Limited, Cork, Ireland.

22. Association of European Cancer Leagues, Brussels, Belgium.

23. Centre of Excellence for Reproductive and Regenerative Medicine, School of Medicine, University of Zagreb, Zagreb, Croatia.

24. Sponsorship Office, Gustave Roussy, Villejuif, France.

25. Genito-urinary Oncology Team, Department of Medical Oncology and Drug Development Department, Gustave Roussy, Villejuif, France.

Introduction: Testicular cancer (TC) is the most common cancer in young individuals assigned male at birth in Europe. Over 95% of patients are cured yet many experience late effects and have unmet needs. The TRANSCEND-XR Horizon Europe project is co-developing an immersive educational intervention with clinicians, researchers, and TC survivors. This study examined stakeholders' perspectives on the intervention's design, content, and format.

Methods: A deep-dive workshop using the World Café methodology was conducted. Participants (N=22 academics, clinicians, IT/XR design experts, and one TC survivor) engaged in four discussion tables addressing preferred technologies, content, delivery, and blue-sky thinking. Discussions were audio-recorded, transcribed, and de-identified. Transcriptions were content analysed and preliminary findings were shared with participants to ensure confirmability.

Results: Four themes were derived deductively, with subthemes generated inductively. Participants emphasised emotional safety and user-driven, supportive design, with content considered most effective when actionable, evidence-based, and relatable. A modular structure was preferred, addressing TC late effects, their prevention, health-seeking behaviours, and wellbeing. Immersive elements were recommended to facilitate experiential learning, with tailored content, intuitive interfaces, and adaptive onboarding deemed as essential to meeting users' diverse needs. Regarding delivery, participants recommended initiating the intervention in clinical settings before proceeding to home-based use, with post-treatment discharge milestones identified as key opportunities to reintroduce additional supports. Ten foundational principles emerged to guide human-centred digital interventions.

Discussion: The results highlight the importance of user-centred content and personalised learning pathways, offering a practical foundation for designing and implementing XR interventions for TC survivors.

Socioeconomic inequalities in childhood overweight and obesity: A secondary analysis of the Growing Up in Ireland cohort study

Madison Curran (1), Linda O’Keeffe (1), Patricia Kearney (1), Kate O’Neill (1)

1. School of Public Health, University College Cork, Cork, Ireland

Background: Childhood overweight and obesity (OWOB) is a global public health issue that often persists into adulthood, increasing the risk for chronic diseases at all life stages. We aimed to explore the socioeconomic gradient of childhood OWOB in Ireland from early childhood into later adolescence.

Methods: A secondary analysis of the Growing up in Ireland child cohort was conducted using measures collected at 9, 13, and 18 years. Maternal education was the primary indicator of socioeconomic position (SEP). Body mass index was calculated at each timepoint using height and weight measurements by trained researchers. Descriptive statistics were used to determine the prevalence of OWOB at each wave overall and by SEP. Multilevel models were used to explore the association between SEP and OWOB from 9-18 years.

Results: 6043 participants had available exposure and outcome data across all three waves. The prevalence of childhood obesity remained stable, at 6.02% (CI:5.53%-6.56%) at 9 years, 5.15% (CI:4.66%-5.67%) at 13 years and 6.01% (CI:5.43%-6.53%) at 18 years. A consistent inverse association was observed between SEP and OWOB. At 9 years, obesity prevalence was 2.57% (CI:1.42-4.62) in the highest maternal education category and 9.97% (CI:8.37%-11.83%) in the lowest, 1.75% (CI:1.10-2.77) and 11.37% (CI:9.02%-14.24%) at 13 years, respectively, and 1.54% (CI:0.85%-2.77%) and 13.49% (CI:10.64%-16.96%) at 18 years, respectively. The gradient was stronger for obesity than overweight and widened over time.

Conclusions: Early interventions targeting social inequalities in OWOB are needed as inequalities are evident by 9 years and persist into early adulthood.

Long-Term Associations between Water Fluoridation and Adult Dental Caries

Jodi Cronin (1), Stephen Moore (1), Noel Woods (1), Helen Whelton (2), Máiréad Harding (3)

1. *Cork University Business School, University College Cork*

2. *College of Medicine and Health, University College Cork*

3. *Oral Health Services Research Centre, University College Cork*

Dental caries in permanent teeth affects more than 2 billion people globally and, despite declines among children, its cumulative burden across adulthood remains substantial. The World Health Organization supports community water fluoridation (CWF) as part of caries-prevention strategies, while recent reviews call for further evidence on long-term exposure and adult dental caries. The island of Ireland provides a natural comparison. The Republic of Ireland (ROI) has fluoridated public water supplies since 1964, whereas Northern Ireland (NI) has not implemented CWF.

This study examined associations between near-lifetime CWF exposure and dental caries experience in adults, including differences by tooth surface.

Epidemiological, demographic and sociological data from a previous adult survey were analysed. Caries experience was measured using decayed, missing and filled teeth (D3CMFT) and surfaces (D3CMFS). Region was used as a proxy for long-term CWF exposure. Negative binomial regression models, appropriate for overdispersed count data, estimated incidence rate ratios for CWF exposure and other explanatory variables.

Adults in the ROI had significantly lower caries experience than those in NI. In adjusted analyses, ROI adults had 10.6% lower D3CMFT and 15.6% lower D3CMFS scores. The greatest reduction was observed on approximal surfaces (18.6%), followed by smooth (14.9%) and occlusal surfaces (11.9%). These findings support an association between long-term CWF exposure and reduced adult caries experience. They provide life-course evidence using clinical measures of disease and may inform ongoing public health decision-making on CWF and adult oral health.

Preterm delivery and long-term risk of maternal stroke: systematic review and meta-analysis

Sinead O’Riordan (1), Fionn Patrick Daly (1,2), Andrea Bowe (3), Fergus P. McCarthy (4,5), Karolina Kublickiene (6,7), Ali S. Khashan (1,5), Peter M. Barrett¹, (5,8)

1. School of Public Health, University College Cork, Ireland, T12CY82
2. School of Medicine, University College Cork, Ireland T12CY82
3. Department of Public Health HSE Dublin and North East, Dr Steeven’s Hospital, Dublin 8, Ireland.
4. Cork University Maternity Hospital, Cork, Ireland, T12YE02
5. INFANT Research Centre, University College Cork, Cork, Ireland, T12YE02
6. Karolinska Institute Department of Clinical Science, Intervention & Technology, Sweden
7. Department of Renal medicine; Karolinska University hospital, 14186 Stockholm Sweden
8. Department of Public Health HSE South West, St Finbarr’s Hospital, Cork, T12XH60

Background:

Adverse pregnancy outcomes are linked to increased risk of maternal cardiovascular disease. However, the association between preterm delivery (PTD) and long-term risk of stroke in the mother remains uncertain.

Methods:

A systematic review and meta-analysis was performed to synthesise the evidence examining the association between PTD and long-term maternal stroke. PubMed, CINAHL and Web of Science were searched for cohort and case-control studies examining populations of parous women published between January 1st 2000 to May 6th 2025. Primary exposure was any PTD; secondary exposures were spontaneous PTD (SPTD) and medically indicated PTD. Primary outcome was any stroke; secondary outcomes were ischaemic and haemorrhagic stroke. Two reviewers performed screening, data extraction and quality assessment. Pooled unadjusted and adjusted effect estimates were calculated using random effects inverse variance models.

Results:

11,025 studies were screened. Across 21 studies including a total of 8.7 million participants, PTD was consistently associated with increased stroke risk. A positive association was observed between any PTD and any stroke (adjusted risk ratio (aRR) 1.66; 95% CI 1.34-2.05). A high level of heterogeneity was observed ($I^2=97\%$, $\tau^2=0.15$). SPTD (aRR of 1.37; 95% CI 1.15- 1.64) and medically indicated PTD (aRR 2.08; 95% CI 1.70-2.54) were associated with any stroke. PTD was associated with ischaemic (aRR 1.59; 95% CI 1.45-1.75) and haemorrhagic stroke (aRR 1.44 95% CI 1.06-1.94).

Conclusion:

Women who have experienced a PTD, including SPTD, may be at increased risk of stroke in later life and may benefit from targeted cardio-metabolic preventive interventions.

Mapping Perinatal Sentinel Events in the Literature to Improve Patient Safety: A Scoping Review of Definitions, Risk Factors, and Predictive Models

Barbara Burke (1,2*), Clare Crowley (1,2), Eugene Dempsey (2,3), Maeve Eogan (4,5), Keelin O'Donoghue (1,2)

1. *Pregnancy Loss Research Group, Department of Obstetrics and Gynaecology, University College Cork, Cork, Ireland*

2. *INFANT Research Centre, University College Cork, Ireland*

3. *Department of Paediatrics and Child Health, Neonatal Intensive Care Unit, Wilton, Cork, Ireland*

4. *Department of Obstetrics & Gynaecology, Royal College of Surgeons in Ireland, Rotunda Hospital Dublin, Parnell Square, Dublin 1, Ireland*

5. *School of Medicine, University College Dublin, Dublin 4, Ireland*

Introduction

Perinatal mortality, early brain injury and cerebral palsy remain global patient safety challenges, with profound personal, professional and economic consequences. A significant proportion arise from perinatal sentinel events (PSEs) - acute events causing sudden fetal compromise. Despite often being considered unpredictable, some PSEs may be preventable. Inconsistent reporting has limited the development of robust prediction and prevention strategies. This scoping review maps the literature on PSE definitions, risk factors, outcomes and predictive models; its findings will inform the development of evidence-based predictive tools. It forms part of the ELEVATE programme, which aims to improve prevention, detection and treatment of early brain injury and cerebral palsy.

Methods

This review was conducted in line with JBI and PRISMA-ScR guidance. It focuses on PSEs of fetoplacental origin, excluding maternal-only events. Searches were conducted across peer-reviewed databases, grey literature and organisational websites. Evidence selection involved two-stage independent screening and structured data extraction.

Results

Considerable variation existed in events classified as PSEs, although placental abruption, uterine rupture, cord prolapse and shoulder dystocia were more frequently identified. Common associations included abnormal fetal heart rate patterns, meconium-stained liquor, low Apgar scores, severe metabolic acidosis and need for neonatal resuscitation. Related outcomes included perinatal mortality, neonatal encephalopathy and long-term neurological sequelae. Research has focused on predicting hypoxic ischaemic encephalopathy, and no validated PSE prediction tools were identified.

Conclusion

There is a lack of consensus on PSE definitions, which limits comparison across studies. There is an absence of validated tools to identify pregnancies at risk for PSEs.

Mapping Workflows in Outpatient Psychiatry to Guide Pharmacist Integration: A Qualitative Study

Muireann Vaughan*(1, 2), Maria Donovan(1), Stephen Byrne(1), Fulvio Bedani(3), Ciara Heavin(4), Sheena McHugh(5), Sinéad O'Brien(6), Ciaran Halleran(2), Laura J Sahm(1, 2, 7)

1. School of Pharmacy, University College Cork,

2. Pharmacy Department, Mercy University Hospital,

3. Health Service Executive, North Lee Mental Health Services,

4. Department of Business Information Systems, Cork University Business School,

5. School of Public Health, University College Cork,

6. Health Service Executive, Cork Mental Health Services, Cork,

7. Pharmacy Department, St. Patrick's Mental Health Services, Dublin, Ireland

Background: Pharmacists, as medication experts, are increasingly recognised as critical members of psychiatric multidisciplinary teams (MDT); however, they are not routinely part of public outpatient psychiatric teams within the Irish health service. Limited evidence exists regarding how pharmacists may be effectively integrated into these services in Ireland.

Aim: To use process mapping to describe an outpatient psychiatry service, to identify how and where pharmacists may be integrated

Method: A process mapping study was conducted in an outpatient psychiatry service in Cork, Ireland. All MDT members were invited to participate. Semi-structured interviews were undertaken (Dec 25-Mar 26). Interviews explored referral streams, service-user journeys, MDT roles and responsibilities and interactions within the service. Interviews underwent Template Analysis, informed by Work Systems Theory, to explore the relationships between people, tasks and processes. Findings were used to develop a swim-lane process map of the current workflow.

Results: A total of 10 participants (70% female) representing nine roles were represented. The average duration of the interview was 34 minutes (13-47 min). Preliminary analysis highlighted (i) workflow complexity, (ii) role interdependency, and (iii) variation in service delivery across the service user journey. Potential areas for pharmacist integration identified included medication reconciliation, drug interaction screening and medication review. Important considerations for the successful integration of the pharmacist included clear role definition and effective communication with the MDT.

Conclusion: Process mapping provided a structured approach to describe the current service and identified areas for pharmacist integration. Findings from this work will inform the co-design and development of an intervention to integrate a pharmacist into the service.

Barriers and facilitators to the national scale-up of a preterm standardised parenteral nutrition system: a mixed-methods process evaluation

Sarah Fenton^{1,2}, Ann-Marie Brennan^{1,3}, Aoife Fleming⁴, Brendan Paul Murphy^{1,5}, Vicki Livingstone^{1,6}, Aileen Murphy⁷, Eugene Dempsey^{* 1,6,8}, Ciara Heavin^{* 9}

1. INFANT Research Centre, University College Cork

2. Pharmacy Department, Cork University Hospital

3. Department of Clinical Nutrition & Dietetics, Cork University Maternity Hospital

4. School of Pharmacy, University College Cork

5. Department of Paediatrics, University Hospital Waterford

6. Department of Paediatrics & Child Health, University College Cork

7. Department of Economics, Cork University Business School, University College Cork

8. Department of Neonatology, Cork University Maternity Hospital

9. Business Information Systems, Cork University Business School, University College Cork

**These authors contributed equally to the supervision of the study*

Objective: Standardising parenteral nutrition (PN) care for preterm infants is recommended to enhance safety, outcomes and efficiency, yet remains challenging globally. Ireland recently scaled-up a standardised parenteral nutrition (SPN) system comprising SPN formulations and protocol from the development site in Cork. We evaluate the national scale-up to identify barriers and facilitators to optimal implementation.

Methods: A sequential explanatory mixed-methods process evaluation was conducted. Phase 1 comprised a cross-sectional survey of neonatal healthcare professionals (HCPs) across nine sites, alongside PN purchasing data analysis. Phase 2 included a focus group with the national implementation team and semi-structured interviews with HCPs from three purposefully sampled sites. Qualitative data were analysed using framework analysis with the Consolidated Framework for Implementation Research.

Results: Phase 1 analysed 158 survey responses. All units had adopted the SPN system; 95% of HCPs reported always or often using the protocol, and SPN accounted for 95% of PN purchased nationally, increasing from 56%. Usability and sustainment scores were significantly higher among trained HCPs ($p=0.026$; $p<0.001$). Protocol adaptations were reported by 21%, and 16% received no training. Phase 2 (one focus group; 16 interviews) generated seven themes. Key facilitators included perceived system advantage and strong national networks; barriers included local policy misalignment, limited evidence in specific populations, and hierarchical decision-making.

Conclusion: Scale-up of preterm SPN is achievable but contextual factors influenced practice beyond the development site. System-level infrastructure including training and ongoing monitoring is required for equitable sustainment. Future work will map identified determinants to evidence-based sustainment strategies and assess budget impact.

AI-Based Screening for Reduced Bone Mineral Density on Chest Radiographs: Irish and Multinational Validation

Ludolf de Kock (1,2), Ronan Lee (1,2), Anushree Burade (3), Tess Derksen (1,2), Sahil Shet (1,2), Rishi Popuri (1), Dennis Kiely(2), Eid Kakish (1,2), David Ryan (1,2), Mannudeep Kalra (3), Michael Maher (1,2)

1. School of Medicine, University College Cork, Cork, Ireland

2. Department of Radiology, Cork University Hospital, Wilton, Cork, Ireland

3. Department of Radiology, Massachusetts General Hospital, Boston, USA

Purpose

To evaluate a chest radiograph (CXR)–based AI model for screening reduced bone mineral density (BMD) and to compare Irish validation performance within a multinational validation programme.

Methods & Materials

Adults with posterior–anterior CXR and dual-energy X-ray absorptiometry (DXA) within 6 months were included from a multinational validation cohort (USA, India, Brazil; n=1,371), including an Irish validation cohort (n=242). CXRs with devices or prostheses, moderate–severe scoliosis, or anteroposterior projection were excluded. The Promedius AI model outputs continuous probability scores for normal BMD, osteopenia, and osteoporosis. DXA served as the reference standard. Model discrimination was assessed using ROC AUC. Given the intended screening and triage role, sensitivity-prioritised thresholds were selected, with emphasis on sensitivity and negative predictive value (NPV).

Results

In the Irish cohort (n=242; mean age 73.1 years; 77.3% female; reduced BMD prevalence 51.2%), discrimination for osteoporosis versus non-osteoporosis was good (AUC 0.816, 95% CI 0.748–0.884). At the selected threshold, sensitivity was 71.4%, specificity 79.0%, PPV 41.7%, NPV 92.9%, and accuracy 77.7%. Osteopenia versus normal demonstrated an AUC of 0.815 (95% CI 0.698–0.932). In the remaining international cohort (n=1,039; US 65.9%, India 24.1%, Brazil 9.0%), mean age was 65.5 ± 14.8 years (781 female, 258 male). For osteoporosis versus non-osteoporosis, the model achieved an AUC of 0.836 (95% CI 0.799–0.873), sensitivity 85.7% (95% CI 79.0–92.4%), specificity 68.8% (95% CI 65.8–71.8%), PPV 23.6% (95% CI 19.3–27.8%), NPV 97.7% (95% CI 96.5–98.8%), and accuracy 70.5% (95% CI 67.7–73.3%). For osteopenia versus normal, AUC was 0.719 (95% CI 0.681–0.758). There was no significant difference in model performance across countries.

Conclusion

Using routine chest radiographs, AI can sensitively identify patients with reduced bone mineral density across Irish and international cohorts. This approach may support opportunistic screening and triage for DXA, extending osteoporosis case-finding in routine clinical practice.

From Insight to Impact: Advancing Patient-Centred Supportive Oncology Care through the Linking You to Support and Advice (LYSA) Research Programme

Katie E Johnston 1-3*, Kate O'Connell 4*, Laia Raigal-Aran 1, Samantha J Cushen 2, Brendan Palmer 5,6, Darren Dahly 5,6, Josephine Hegarty 3#, Roisin M Connolly 1,4#

1. Cancer Research @UCC, College of Medicine and Health, University College Cork, Cork, Ireland

2. Clinical Nutrition and Oncology Research Group, School of Food and Nutritional Sciences, University College Cork, Cork, Ireland

3. School of Nursing and Midwifery, College of Medicine and Health, University College Cork, Cork, Ireland

4. CUH/UCC Cancer Centre, Cork University Hospital, Cork, Ireland

5. HRB Clinical Research Facility, University College Cork, Cork, Ireland

6. School of Public Health, University College Cork, Cork, Ireland

*Co-first authors

Co-senior authors

Background: Patient-centred approaches have the potential to address gaps in supportive oncology care; however, evidence of their feasibility, acceptability, and impact when embedded within routine clinical practice remains limited. The Linking You to Support and Advice (LYSA) research programme has been developed within University College Cork and the CUH/UCC Cancer Centre.

Methods: The programme involved the evaluation of a digitally enabled support model, underpinned by stakeholder and patient co-design. Data were collected to assess feasibility, inform ongoing refinement, and measure engagement with developed digital resources. Learning from the programme was prospectively applied to workforce development, service redesign, and the design of subsequent models of care.

Results: The LYSA programme demonstrated feasibility within routine oncology care. Findings enabled the integration of a dedicated nursing role, a service which has seen 250 new patients, and developed six-week cognitive-behavioural-therapy workshops in partnership with local cancer support centre, attended by over 50 women post-treatment. Co-designed nutrition support resources were developed and achieved substantial patient engagement nationally, with >12,500 interactions, and 6000 more books leveraged. Evidence from the LYSA Feasibility Trial was further leveraged to secure funding for the design of a digitally enabled patient-initiated follow-up model of care (LYSA2PIFU) and to advance the approach into the metastatic breast cancer (LYSA4MBC) setting through co-design methodologies.

Conclusion: The LYSA research programme demonstrates how research can generate learning that extends beyond feasibility. Together, these findings support the continued progression of digitally enabled, patient-centred approaches in supportive oncology care.

Exploring the perceived effectiveness, impact, and benefits of a work-based cancer survivorship peer support programme: A mixed-methods study.

Maria O'Malley¹, Teresa Wills¹, Sean Kelleher¹, Ciaran Evans¹, Caroline Kilty¹, Irem Koc¹, Olga Cleary², Helen Forristal³, Mohamad M. Saab^{1*} & Josephine Hegarty^{1*}

Affiliations:

1. Catherine McAuley School of Nursing and Midwifery, University College Cork, National University of Ireland, Cork, Ireland
2. School of Population Health, Royal College of Surgeons in Ireland (RCSI), Dublin, Ireland
3. Marie Keating Foundation, Dublin, Ireland

Background:

The cancer journey remains physically, socially, and psychologically challenging for survivors. Peer support is important in cancer survivorship, providing emotional validation and understanding, practical advice, and a sense of belonging. A peer support programme was developed to assist healthcare staff in Ireland who have experienced or are experiencing cancer. The study aimed to explore the perceived effectiveness, impact, and benefits of this programme from the perspective of peer supporters, those being supported, line managers, and the programme's oversight group.

Methodology:

A mixed method approach was utilised, incorporating a cross-sectional survey (n=43) and qualitative interviews (n=33), guided by the Logic Model and PRISM framework.

Results:

Nineteen peer supporters, fifteen peers, and nine line managers completed surveys examining perceptions and experience with the programme. Almost all participants (98%) would recommend the programme to a colleague. Findings from fourteen individual interviews and three focus groups provided further insights. Programme impact was evident through the provision of emotional and practical support, validation, and reassurance. The peer supporter approach was central to the programmes' success. Early access to the programme was emphasised and the need for enhanced service awareness.

Conclusion

Work-based peer support programmes can help cancer survivors reintegrate into the workforce more effectively, rebuilding confidence, fostering resilience, and navigating workplace expectations. Enhanced staff well-being may positively influence retention, performance, and health-related disruptions. Programme effectiveness is constrained by barriers including time limitations, departmental workloads, and programme awareness. Sustained recruitment and training of peer supporters, clear communication regarding the programme and referral pathways are essential.

Recommendations for facilitating engagement with a self-managed exercise programme for people with shoulder pain: A nominal group technique with key stakeholders

Aidan O'Shea (1), Jonathan Drennan (2), Helen Slater (3), Julius Sim (4), Chris Littlewood (5), Joseph G. McVeigh (1)

1. *School of Clinical Therapies, University College Cork, Cork, Ireland.*

2. *School of Nursing, Midwifery and Health Systems, College of Health and Agricultural Sciences, University College Dublin, Dublin, Ireland.*

3. *Curtin School of Allied Health, Curtin University, Perth, Australia.*

4. *School of Allied Health Professions, Faculty of Medicine and Health Sciences, Keele University, Keele, United Kingdom.*

5. *School of Health & Society, University of Salford, Salford, United Kingdom.*

Background: Self-managed exercise programmes are widely recommended for shoulder pain, yet engagement and adherence remain challenging. Previous research has identified multiple patient- and clinician-related barriers to self-management, but practical guidance on addressing these barriers is limited. This study aimed to develop and prioritise recommendations to enhance engagement with self-managed exercise among people with shoulder pain.

Methods: A Nominal Group Technique was conducted involving key stakeholders, including people with shoulder pain (n=5), physiotherapists (n=2), and physiotherapy managers (n=2). Participants reviewed findings from a prior systematic review and focus group study before generating recommendations in response to two questions: (1) how ongoing patient-centred support can be delivered within existing healthcare constraints, and (2) how clinicians can provide diagnostic explanations that facilitate engagement with self-managed exercise. Recommendations were discussed, anonymously voted on, and ranked according to perceived importance. Recommendations achieving $\geq 70\%$ agreement were retained.

Results: Nine recommendations relating to ongoing patient-centred support achieved consensus. The highest-ranked recommendations were education on pain and pathophysiology, individualised exercise programmes, and group-based multimodal rehabilitation. For diagnostic explanations, nine recommendations achieved consensus. The highest-ranked recommendations were managing patient expectations, providing high-quality assessment and reassurance, and contextualising imaging findings. Across both questions, stakeholders consistently prioritised clear communication, tailored rehabilitation, education, and supportive clinician–patient interactions.

Conclusions: Stakeholders identified education, expectation management, individualised exercise, and effective communication as key strategies for enhancing engagement with self-managed exercise for shoulder pain. These findings provide practical, consensus-driven recommendations that may support implementation of self-management approaches within existing healthcare systems and inform future service development and research.

LDL-Cholesterol goal achievements and medication adherence among multimorbid older adults with polypharmacy: an analysis of data from the OPERAM trial

Rehab Elhiny 1,2, Linda M. O'Keeffe 3,4,5, Kevin Murphy1, Maria Donovan1, Margaret Bermingham1, Stephen Byrne 1.

1. School of Pharmacy, University College Cork, Cork, Ireland

2. School of Pharmacy, Minia University, Minia, Egypt

3. School of Public Health, University College Cork, Cork, Ireland

4. MRC Integrative Epidemiology Unit at the University of Bristol, University of Bristol, Bristol, UK.

5. Population Health Sciences, Bristol Medical School, University of Bristol, Bristol, UK

Background

Dyslipidemia is a major risk factors for cardiovascular disease, however, its management is frequently suboptimal.

Aims

This study aims to assess low density lipoprotein cholesterol (LDL-C) goal achievement, adherence to lipid-lowering therapy (LLT), and to identify the predictors of LDL-C goal achievements and medication adherence among those who were prescribed LLT.

Methods

This study involves a cross-sectional analysis of baseline data from OPERAM multicenter clinical trial. Participants aged ≥70 years, with multimorbidity and polypharmacy, were recruited upon admissions to hospital. LDL-C goal achievement was assessed in accordance with the 2016 and 2019 European guidelines. Morisky Medication Adherence Scale 8 items (MMAS-8) used to assess adherence. Multiple imputation was used to impute missing data. Multivariable logistic regression analysis was conducted to identify the predictors of goal achievements and medication adherence using the imputed data.

Results

Among 650 people with complete demographic data, 337 (57.3%) were prescribed LLT. 66.5% of 337 achieved the 2016 guideline goals, while 38.8% achieved 2019 goals. Females were less likely to achieve their recommended 2016 goals (OR 0.5, 95% CI 0.3,0.8) and 2019 goals (OR 0.56, 95% CI 0.3,0.8) than males. Primary prevention group were more likely to achieve the goals compared to secondary prevention (OR 5.64, 95% CI 3.56,8.92) and (OR 2.7, 95% CI 1.89,3.88).The mean MMAS-8 score was 6.9 (±1.5), with 41.5% considered highly adherent. Utrecht cohort demonstrated a higher likelihood of adherence (OR 2.76, 95% CI 1.99, 3.84) compared to Bern.

Conclusion:

Suboptimal LDL-C control was identified, particularly in females and those treated for secondary prevention. Medication adherence showed geographical variation, but could be improved.

Physical activity behaviour in people with chronic obstructive pulmonary disease; a qualitative study

Ciara Hanrahan (1), Joseph G. McVeigh (1), Terence M. O'Connor (2, 3), Thierry Troosters (4), Julie Broderick (5)

1. *Discipline of Physiotherapy, School of Clinical Therapies, College of Medicine and Health, University College Cork, Cork, Ireland T12 X70A.*

2. *Department of Respiratory Medicine, Mercy University Hospital, Cork, Ireland.*

3. *School of Medicine, College of Medicine and Health, University College Cork, Ireland.*

4. *Department of Rehabilitation Sciences, KU Leuven, Belgium.*

5. *School of Public Health, Physiotherapy & Sports Science, University College Dublin, Ireland.*

Rationale and aims

The aim of this focus group study was to explore participants' perceptions of their own physical activity engagement, including their knowledge and use of behaviour change interventions for physical activity. Identifying and translating behavioural factors associated with physical activity in people with chronic obstructive pulmonary disease (COPD) may be useful in supporting a more active lifestyle.

Methods

Purposive sampling methods were undertaken, where participants who responded to a survey exploring physical activity behaviour in COPD were asked to volunteer for a follow-up focus group study, which took place February- April 2025. All participants had COPD, were over 18 years and lived in the Republic of Ireland.

Analysis

Reflexive thematic analysis was utilised to interpret focus group data. Findings were mapped to the theoretical domain's framework helping to identify behavioural influences.

Findings

Twenty-two participants took part in four focus groups. Three major themes were identified in the data in relation to knowledge and use of behaviour change interventions for physical activity: connection and meaningfulness, environmental and social context and the body as a limiting factor. Peer support and routine appear to positively influence behaviour. Limitations caused by disease were identified as negatively impacting physical activity. Theoretical domains including emotion, social influences and reinforcement were prevalent among perceived effective interventions, reflecting complexity in behaviour.

Conclusion

Physical activity behaviour is complex, particularly in the context of COPD. Understanding and utilising influences such as personal connection and environmental factors may help to advance the care of people with COPD.

Gender-differences in COVID-19 risk perception and psychological distress in Ireland: a nationally representative cross-sectional study

Julie Arnott (1), Paul Corcoran (1, 2), Ivan J. Perry (1)

1. School of Public Health, College of Medicine and Health, University College Cork

2. National Suicide Research Foundation, Ireland

Background

Ireland's COVID-19 Intra-Action Review identified risk communication as a priority area for improvement; it can aid the public's accurate risk perception (RP) which is associated with psychological distress (PD, anxiety and/or depression). As females consistently report higher RP and PD, we conducted a gender-stratified investigation.

Methods

Nationally representative cross-sectional survey of Irish adult residents, recruited online by professional market researchers (March-May 2020). The Patient Health Questionnaire Anxiety Depression Scale identified PD (a score of 10 or higher). Survey questions assessed: COVID-19 RP, clinical risk (major underlying health conditions), locus of control (LOC) (brief Levenson's scale), previous/current mental health treatment (medication/talking therapies), and impacts of pandemic restrictions (unemployment and/or living alone). Descriptive statistics and multivariate logistic regression (MVA) stratified by gender.

Results

Of the 1,556 participants recruited, 811 (52%) were female, 745 (48%) male, median age 42 years (IQR 31-57). Females were significantly more likely to experience PD than males, 53% (n=430) compared to 38% (n=284) ($p<0.001$), and be currently receiving treatment, 11% (n=92) compared to 6% (n=44) ($p=0.001$). For both genders, PD was positively associated with higher COVID-19 RP, higher internal and external LOC (both chance and powerful others) in MVA. The only gender-specific exposure associated with PD was identified, females with an underlying health condition.

Conclusions

This study identified an association between PD and higher RP. Understanding public RP can inform risk communication strategies to ensure a holistic emergency response, protecting public mental health. Applying a gender lens to strategies can protect females and those with underlying conditions.

The CODING Study: An International Service Evaluation of Data Recording Practices in Gestational Trophoblastic Disease

A. Corcoran¹, CM. Joyce^{1, 2}, C. Lok³, J. Coulter⁴, K. O'Donoghue¹

1. Pregnancy Loss Research Group, Department of Obstetrics and Gynaecology, University College Cork, Cork, Ireland

2. Department of Clinical Biochemistry, Cork University Hospital, Cork, Ireland

3. Department of Gynaecologic Oncology, Centre for Gynaecological Oncology Amsterdam, location Antoni van Leeuwenhoek, Amsterdam, the Netherlands

4. Department of Obstetrics and Gynaecology, University College Cork, Cork University Maternity Hospital, Cork, Ireland

Gestational trophoblastic disease (GTD) is a group of rare pregnancy-related disorders, characterised by abnormal proliferation of trophoblastic tissue. These disorders range from the premalignant partial and complete hydatidiform moles to malignant forms known as gestational trophoblastic neoplasia (GTN). The rarity of GTD has led to variation in clinical practice across countries. Variability in outcome definitions, data collection practices, and database infrastructure limits comparability between centres, reducing the value of combined data sets and posing challenges for quality improvement and research. Through the CODING Study we aim to address this by developing Core Outcome Sets (COS) for GTD. A COS is an agreed standardised set of outcomes that should be measured and reported, as a minimum, in all studies of a specific health condition or intervention. The first step of the study is an evaluation of data recording practices across international GTD centres.

A service evaluation questionnaire was developed using Qualtrics and distributed to GTD centres worldwide via email invitation link. Responses were recorded in Microsoft Excel, analysed using descriptive statistics for quantitative data and free-text responses were analysed thematically.

A total of 111 responses, 76 fully completed, from 51 GTD centres across 30 countries and 5 continents, reflecting a diverse range of healthcare systems and resource settings. Most centres (92%) maintain a patient database. There was considerable variation in the timing and processing of patient registration, variables and outcomes recorded. Centres utilise a diverse range of data management systems, supporting data collection at local, regional and national levels. Key challenges identified include data completeness & accessibility, limited resources for data entry, and difficulty capturing long term GTD outcomes.

Preventing suicide in public places: A Systematic Review and Meta-analysis

Niall McTernan (1), [Emilie Aloeristok](#) (1,2), Audrey Murphy Meehan (1), Paul Corcoran, Greg Martin (3), Doug Hamilton (3), Eve Griffin (1)

1. *National Suicide Research Foundation, University College Cork, Ireland.*

2. *School of Medicine, University College Cork, Cork, Ireland*

3. *National Health Improvement, Health Service Executive, Ireland*

Introduction: There is consistent evidence indicating that restricting access to means, encouraging help seeking, increasing the likelihood of intervention by third parties and encouraging responsible media reporting may be effective in reducing suicide in public spaces. However, the impact of interventions varies across studies due to differences in population characteristics and geographical regions. This study aims to establish the effectiveness of different interventions in preventing suicide in public places.

Methods: 8,643 records were identified through searches of four databases; PubMed, Embase, PsycINFO and Scopus from April 2015-July 2025. The Joanna Briggs Institute (JBI) Critical Appraisal Checklists was used to critically appraise included studies. A meta-analysis was conducted to assess the effectiveness of interventions.

Results: 20 articles were included in the review. 19 papers include restricting access to means, 4 include encouraging help seeking and 4 include increasing the likelihood of interventions by a third party. All papers saw a reduction in average yearly suicide rates following installation of interventions, with the strongest evidence for restricting access to means.

Application: The results of this systematic review and meta-analysis will help inform multi-agency groups that aim to prevent deaths by suicide. In Ireland's new 10-year strategy to reduce suicide and self-harm, Domain 2 pertains to reducing access to means. The HSE National Office for Suicide Prevention (NOSP), in collaboration with a multi-agency advisory group, developed a toolkit that supports this objective. It outlines a practical framework for preventing suicide in public places, which can help inform the implementation of various interventions.

Hospital presenting self-harm among older adults 2019-2023: time series analysis from a national registry study

Troya, M. Isabela (1, 2), Corcoran, Paul (1, 2), Arensman, Ella (1, 2)

1. School of Public Health, University College Cork

2. National Suicide Research Foundation

Background: Social isolation and loneliness amongst older adults are an increasing challenge in recent years. Older adults have one of the highest suicide rates globally. Following the COVID-19 pandemic, inequalities in health outcomes including self-harm are likely to have widened amongst older adults. We aimed to examine trends in self-harm incidence among older adults aged 60 years and older between January 2019 and December 2023.

Methods: Time series analysis of all episodes of hospital presenting self-harm among older adults aged 60 years and older using data from the National Self-Harm Registry of Ireland (NSHRI). The NSHRI has full national coverage and has been recording emergency department hospital presentations of self-harm in Ireland for over 15 years. Four time periods were selected: pre-pandemic phase (January 2019-February 2020), pandemic phase 1 (March 2020-December 2021), pandemic phase 2 (January-December 2022), post-pandemic (January-December 2023). Incident rate ratios (IRRs) by sex and age group were calculated using negative binomial regression.

Results: There were 3497 hospital self-harm presentations, involving 2719 older adults from 2019-2023. Over the study period, females had 26% higher incidence rates (per 100,000) when compared to males and older adults aged 80+ had the lowest incidence rates in both males and females. Rates of self-harm increased significantly by 20% in the pandemic phase 2 and by 14% in the post-pandemic period when compared to the pre pandemic phase. Greatest increases were observed in females and older adults aged 60-69 years.

Conclusions: Hospital-presenting self-harm among older adults increased in 2022 and 2023, with the most pronounced rise in 2022. Findings suggest possible delayed and sustained impacts of the pandemic on older adults' mental health, particularly among older women, though this would need to be confirmed with research examining further years. Continued monitoring and targeted prevention strategies, including improved access to appropriate care and support services, are needed to address potential inequalities in later-life self-harm. Further research is needed to understand these changes in self-harm presentations, and whether these reflect self-harm rates within community settings.

Burden of maternal and neonatal Parvovirus B19 infections, morbidity and mortality, a national retrospective cohort study

Julie Arnott (1), Paul Corcoran (1,2)

1. School of Public Health, College of Medicine and Health, University College Cork, Ireland

2. National Perinatal Epidemiology Centre, Department of Obstetrics and Gynaecology, College of Medicine and Health, University College Cork

Background

The European Centre for Disease Prevention and Control called for public health investigations into Parvovirus B19 (PV19) in 2024 due to a rise in incidence. As a mild, self-limiting respiratory illness, PV19 is not a notifiable infectious disease. However, for non-immune pregnant women exposed, infection can result in adverse foetal complications 8-12 weeks later. Even asymptomatic infection can result in spontaneous abortion, stillbirth, or early neonatal death.

Methods

A retrospective cohort study into the maternal and neonatal burden of PV19 infection, assessed by morbidity (hospital admissions), and mortality between 2009 and 2025, recorded in Ireland's national health information system for acute public hospitals. To establish time trends, annual median (average) and inter-quartile range (IQR) are reported.

Results

Since 2009, 92 maternal admissions and 39 neonatal admissions due to PV19 were recorded (2009-2025). Mortality due to PV19 was 0% for maternal admissions and 15% for neonatal admissions (n=6). Investigating time trends in morbidity, the burden of infection was above the annual average for 2024/2025; maternal admissions (2024 n=15, 2025 n=9; average 2, IQR:1-11), neonatal admissions (2024 n=6, 2025 n=8; average 2, IQR:0-5).

Conclusions

In 2024, the National Virus Reference Laboratory reported extremely high community circulation of PV19, 65.5% infections confirmed in females (n=427/652). This increase correlates with an increase in maternal and neonatal admissions due to PV19 in 2024, with a sustained increase in 2025. Adverse foetal outcomes are more common with younger gestational age, therefore further investigation into early foetal outcomes is required (i.e. miscarriage/stillbirth).

Burden of non-immune Hydrops Fatalis, morbidity and mortality, an indicator of adverse foetal outcomes due to Parvovirus B19 infection: a national retrospective cohort study

Julie Arnott (1), Paul Corcoran (1, 2)

1. School of Public Health, College of Medicine and Health, University College Cork

2. National Perinatal Epidemiology Centre, Department of Obstetrics and Gynaecology, College of Medicine and Health, University College Cork

Background

Due to a rise in incidence in 2024, the European Centre for Disease Prevention and Control called for public health investigations into Parvovirus B19 (PV19). This self-limiting respiratory infection is not notifiable. However, for non-immune pregnant women exposed, even asymptomatic infection can result in foetal non-immune Hydrops Fatalis (NIHF) and perinatal mortality (stillbirth/early neonatal death) 8-12 weeks later.

Methods

Retrospective cohort study into the burden of NIHF using two national reporting systems; Hospital In-Patient Enquiry (HIPE) system neonatal admissions (2009-2025); and National Perinatal Epidemiology Centre (NPEC) perinatal deaths with/without maternal viral infection (>24 weeks gestation and/or weighing >500 grammes; stillbirth/early neonatal death (<7 days of age) (2011-2024). Annual median (average, A) and inter-quartile range (IQR) are reported.

Results

HIPE: Since 2009, 186 NIHF neonatal admissions were recorded (2009-2025), 31% mortality due to NIHF (n=58). Above average burden in 2024/2025 (n=19, n=12 respectively; A=11, IQR:9-13).

NPEC: Since 2011, 137 NIHF-associated perinatal deaths were reported (2011-2024), 24% associated with maternal viral infection (n=33/137). NIHF was the primary cause of death in 28.5% (n=39) 9% due to maternal viral infection (n=12). Above average burden in 2024, 11 NIHF-associated perinatal deaths (A=10.5, IQR:7-11.5), 45% associated with maternal viral infection (n=5, A=1.5, IQR:1-3.75).

Conclusions

In 2024, high community circulation of PV19 may correlate with the increased burden of NIHF, neonatal admissions (HIPE), and perinatal deaths associated with maternal viral infection (NPEC). The risk of adverse foetal outcomes is higher with younger gestational age, therefore further investigation into miscarriage is required (i.e. <24 weeks gestation).

Current Public and Patient Involvement (PPI) practices in oral health research: a scoping review protocol

Ms. Julia Banasiak¹, Prof. Máiréad Harding², Dr. Emmy Racine¹

1. School of Public Health, University College Cork, Ireland;

2. Oral Health Services Research Centre, Cork University Dental School and Hospital, University College Cork, Ireland

Background

Public and Patient Involvement (PPI), i.e., research ‘with’ or ‘by’ members of the public, rather than ‘to’, ‘about’ or ‘for’ them, grows in prominence in health research. Its proven research impact, such as increasing output relevance and acceptability, shows promise in relation to addressing ongoing population oral health challenges. However, little is known about if and how PPI is utilised within oral health research. Understanding current practices in employing PPI within this discipline can identify potential areas for action and inform future practice.

Objective

To map where, when, and how PPI is reported in oral health research through a scoping review, including the research subfields involved, stages of the research process, types of contributors, and levels of involvement.

Methods

A scoping review methodology will be employed, in accordance with JBI scoping review guidance. A systematic search will be performed across PubMed/MEDLINE, CINAHL, Embase, Web of Science and grey literature sources. Empirical oral health research including/mentioning PPI, as well as commentaries about PPI in the field will be included. Primary outcomes include stages of the research cycle where PPI was reported, levels of involvement, types of contributors, research discipline, GRIPP-2 reporting checklist use. Secondary outcomes include terms used to describe PPI, and reporting of factors affecting researcher engagement in PPI. An established PPI panel is and will be continuously consulted throughout.

Conclusion

We anticipate that this review will identify the breadth of evidence, and outline current practice, on PPI within oral health research.

Antimicrobial stewardship in Ireland-a descriptive study.

Fiona Barry¹, Olive Murphy², Anthony P Fitzgerald¹, Eilis J O' Reilly¹, Maura P Smiddy¹

1. School of Public Health, University College Cork, Cork, Ireland

2. Bons Secours Health System, Cork, Ireland

Introduction:

Antimicrobial Stewardship (AMS) programmes optimise antimicrobial use, reduce resistance, and improve patient outcomes. In Ireland, the SARI Hospital Antimicrobial Stewardship Working Group published national AMS guidance in 2009, providing a framework for stewardship activity across acute hospitals.

Aim: To document the implementation of the SARI (2009) guidelines from the perspective of hospital-based antimicrobial stewardship pharmacists.

Methods

A descriptive cross sectional online survey was conducted in January 2023. Eligible participants were AMS pharmacists working in public sector hospitals in the Republic of Ireland. Survey items were derived from gaps highlighted in our scoping review of progress in ASP in Ireland. Further questions were adapted from: SARI (2009) guidelines; the 2016 national AMS survey; the first national AMR action plan (iNAP1; 2017).

The survey was distributed to all AMS pharmacists nationally (n=49). Two reminders were issued. Ethical approval was granted by UCC (Log 2022 162A1).

Results:

Fifteen AMS pharmacists responded. Respondents represented eight model three hospitals and three model four or specialist hospitals; one did not specify hospital type. Appointment dates for AMS pharmacists ranged from 2003 to 2017. Three hospitals (20%) had no patient or public information on prudent antibiotic usage.

Two hospitals (13%) reported a defined AMS budget. Eleven hospitals (77%) had an annually assessed AMS programme, an AMS committee, and prescriber education.

Compliance with iNAP1 indicators varied: 14 hospitals (93%) reported IV to oral switch compliance, 12 (80%) complied with surgical prophylaxis guidelines, and six (40%) reported uptakes of antimicrobial decision support applications.

Conclusion: Implementation of national AMS guidance is improving, but gaps in governance, budgeting, and information technology persist.

Pregnancy loss and perinatal death bereavement care: A scoping review of staff education and training interventions

Ramya Baskaran (1,2), Keelin O'Donoghue (1,3), Marita Hennessy (1,3)

1. *Pregnancy Loss Research Group, Department of Obstetrics and Gynaecology, University College Cork, Cork, Ireland*

2. *University of Galway, Galway, Ireland*

3. *INFANT Research Centre, University College Cork, Cork, Ireland*

Pregnancy loss and perinatal death are distressing and often traumatic events, with poor care experiences often reported. Education and training are needed and desired by healthcare staff. The nature, extent and range of perinatal bereavement education and training programmes that have been developed and/or are available for staff is unclear. This scoping review aims to address this gap, establish if existing interventions have been evaluated/tested and identify any deficits in the evidence base.

We conducted a scoping review following JBI guidelines and a pre-registered protocol. We searched eight academic databases/platforms and specific organisational websites and undertook citation chaining. We included peer-reviewed and grey literature sources relating to education and training interventions on perinatal bereavement care for healthcare staff/trainees, available in English, and published 2010-2025. Qualitative, quantitative, and mixed method studies were considered alongside online training programmes. Screening, full-text review and data extraction were undertaken by two independent reviewers.

We included over 150 records. Most interventions are from the US, UK and Australia. 'Education/didactic' and 'workshop/training programme' are the most common intervention categories; 'simulation' to a lesser extent. Intervention duration varies, most commonly from >1 hour to ≤1 day. Of interventions that have been evaluated, positive impacts are reported. Most studies use self-designed surveys and assess impact immediately post-intervention.

Our scoping review highlights the variety of perinatal bereavement care education and training interventions that have been developed. Future work should examine intervention effectiveness, including better study designs with longer follow-up, a broader range of outcomes and the use of validated tools.

Risk and protective factors associated with adolescent gambling in Ireland: findings from the Planet Youth West 2024 survey

Matthew Cronin (1), Elena Gonzalez Tinoco (2), Emmett Major (3), Peter Barrett (2, 4, 5).

1. *UCC Intern Training Programme (MINT), University College Cork, Cork, Ireland.*

2. *INFANT Research Centre, University College Cork, Cork, Ireland*

3. *Western Region Drug and Alcohol Task Force, Galway, Ireland*

4. *School of Public Health, University College Cork, Cork, Ireland*

5. *Department of Public Health HSE South West, Cork, Ireland*

Introduction: Gambling is a recognised global public health issue. Rates of gambling among adolescents are often reported to be higher than in adult populations. There is limited existing research that provides an Irish context to factors associated with adolescent gambling.

Methods: A secondary analysis of the 2024 Planet Youth Ireland questionnaire data was conducted. The questionnaire was distributed to adolescents aged 14-19 years & above in Galway, Mayo, and Roscommon in the West of Ireland in November 2024. Binary logistic regression models were used to determine factors associated with adolescent gambling. Outcome variables included gambling of any frequency in the previous 12 months using an app and/or using a bookmaker's shop. Results were further analysed by participant gender.

Results: A total of 6,500 questionnaire responses were received. The overall prevalence of gambling of any modality was 15.02% (N = 871/5799). The prevalence of gambling using a phone was 6.74% (N = 391/5804) & the prevalence of gambling using a bookmaker's shop was 11.95% (N = 699/5850). Male gender was consistently associated with an increased odds of all gambling outcomes. Similarly, drunkenness in the last 30 days and team sport participation were associated with an increased odds of many of the gambling outcomes.

Conclusion: This study has identified several population level social and lifestyle factors that were associated with adolescent gambling & which may be amenable to targeted interventions.

Beyond the Virus: Media Framing, Misinformation and Public Health Communication During the 2026 Hantavirus Cruise Outbreak

Colette Cunningham (1), Ariane Bauernfeind (2)

1. School of Public Health, University College Cork

2. Andalusian School of Public Health, Spain

In May 2026, a Hantavirus outbreak occurred on the MV Hondius cruise ship, resulting in 3 deaths. Despite the World Health Organisation (WHO) assessing the public risk as extremely low, the event received intense media attention. This document highlights key patterns, examples, and lessons learned about how the media framed the outbreak, shaping public perception. It has broader implications for public health communication amid a sudden outbreak.

The role of social media in rapidly spreading conspiracy theories and misinformation is worrying for future public health communication, and the Hantavirus cruise outbreak highlighted the significant role of AI-generated disinformation (fake images, maps) in shaping public perception.

The brief analysis minimises the global context, overlooking broader issues such as fractured international cooperation and geopolitical tensions, including the absence of key institutions like the CDC.

In summary, the document argues that the 2026 Hantavirus cruise outbreak serves as a case study in how media framing, misinformation, and societal anxieties can distort public understanding of health risks. It underscores the need for improved public health communication, global cooperation, and proactive education to address future health crises.

Developing a termination of Pregnancy National Audit Database in Ireland

Colleen Curran (1), Tamara Escañuela Sánchez (1), Joye Mc Kernan (1), Deirdre Hayes Ryan (1), Paul Corcoran (1),

1. National Perinatal Epidemiology Centre, Department of Obstetrics and Gynaecology, University College Cork, Ireland

Following implementation of the Health (Regulation of Termination of Pregnancy) Act 2018, termination of pregnancy (TOP) services were established across Ireland. A 2022 review identified major variation in data collection, gaps in national oversight, and the absence of a standardised audit structure. In response, the National Perinatal Epidemiology Centre (NPEC), in partnership with the National Women and Infants Health Programme (NWIHP), began developing a national digital audit system to address these deficiencies.

The aim was to implement a standardised national TOP audit database to improve data quality, strengthen service oversight, and enhance the evidence base informing clinical practice and policy. Objectives included creating a GDPR-compliant digital database with standardised data definitions, supporting staff training, and enabling national reporting capability.

A national electronic audit tool was developed using REDCap. Key innovations included five structured data collection forms aligned with the Health Act 2018, anonymised data handling, a comprehensive Clinical Reference Manual, and user-centred features such as real-time reporting dashboards and feedback mechanisms to support quality assurance.

A phased national rollout began in May 2024, starting with pilot sites to refine functionality. Implementation supports included group and individual training, monthly operational meetings, ongoing technical assistance, and continuous feedback loops. Adoption was monitored through training metrics, data entry volumes, user feedback, and REDCap data quality indicators.

By January 2026, most maternity units were contributing data, with clear improvements in completeness, consistency, and clinical oversight. The database has delivered significant gains in national standardisation, transparency, and quality monitoring for TOP services, providing a scalable model for future national clinical audit infrastructure.

Whose knowledge is it anyway? Community-engaged perspectives on co-design

Margaret Curtin (1), Heather Morgan (1), Marita Hennessey (2)

1. School of Nursing and Midwifery, University College Cork

2. Infant Research Centre, University College Cork

Knowledge co-production is key to effective application of research to real-world contexts. Community engagement is a core component. While many examples of high-quality community partnerships exist, ambiguity remains around issues of voice, power and resourcing. Lived experience is seen as informing and validating research with institutional perspectives valued over experiential knowledge. As a result, knowledge translation is impeded.

The Civic and Community Engagement Committee in COMH works with community partners to champion and support quality engaged practice and meaningful dialogue through Case Study development and Collective Intelligence workshops. By exploring partners perceptions of engagement with the university we seek to better understand what promotes and impedes effective knowledge co-creation.

The value of mutually beneficial partnerships is agreed. However, the need for collaborative autonomy in co-creation is emphasised with a clear expectation of two-way communication and shared decision making at all stages. Long-standing academic traditions rooted in elite and historically exclusionary institutions which intrinsically value traditional knowledge production and dissemination are seen as a challenge.

While engaged research has the potential to democratise knowledge, partners acknowledged that it may encounter resistance and requires sustained support to achieve meaningful change. A cultural shift that views engagement as a core value supported by institutional resources, dedicated structures and realistic timelines is required. Longterm partnerships are preferred. Clear partnership agreements with outputs that reflect and articulate experiential knowledge should be supported through funding applications and research KPIs. Real world outputs need to be agreed and the burden without benefit on external partners explored.

The association between number of pregnancy complications and depression or anxiety in offspring in late adolescence

Rachel Dunlea* 1,2 , Emily Gallogley* 1,2 , Elizabeth O Bodunde 1,2 , David O'Driscoll 1,3 , Fergus P. McCarthy 2,4 , Ali S Khashan 1,2 , Gillian M. Maher 1,2

1. School of Public Health, University College Cork, Cork Ireland.

2. INFANT Research Centre, University College Cork, Cork Ireland.

3. Specialist Neurodevelopmental ADHD Pathway (SNAP), Cork Kerry Mental Health Service, Cork, Ireland.

4. Department of Obstetrics and Gynaecology, Cork University Maternity Hospital, Cork, Ireland.

*Joint first authors

Background and Aim:

Pregnancy complications are increasingly recognised as important early-life exposures that may influence long-term mental health outcomes in offspring. This study investigated the association between the number of pregnancy complications and depression and/or anxiety in offspring at age 17 years using data from the Millennium Cohort Study.

Methods:

Pregnancy complications were self-reported by mothers at 9-months postpartum and included a range of maternal/fetal complications experienced during pregnancy. These were categorised into 0, 1, 2, and 3+ complications. The outcome of interest was offspring self-reported doctor-diagnosed depression and/or anxiety at age 17 years. Logistic regression analyses examined associations between number of pregnancy complications and depression and/or anxiety in offspring, adjusting for sociodemographic, maternal and lifestyle factors.

Results:

N=9514 mother-child pairs were included in the analysis. An increasing number of pregnancy complications was associated with higher odds of depression and/or anxiety in offspring at age 17 years. In the fully adjusted model, offspring exposed to one pregnancy complication had 25% higher odds of depression and/or anxiety (aOR 1.25, 95% CI 1.07–1.46), while exposure to three or more complications was associated with 51% higher odds (aOR 1.51, 95% CI 1.08–2.10).

Conclusion:

A greater number of pregnancy complications was associated with increased odds of depression and/or anxiety in offspring during late adolescence. These findings indicate a dose-response relationship between the cumulative number of pregnancy complications and offspring mental health outcomes, warranting further investigation into the underlying mechanisms and potential pathways involved.

Hospital-presenting self-harm: reconsidering the categorization of intentional drug overdose presentations

David Fitzpatrick (1,2), Mary Joyce (2), Edel Burton (1-3)

1. *Pharmaceutical Care Research Group, School of Pharmacy, University College Cork, Cork, Ireland.*

2. *School of Public Health, University College Cork, Cork, Ireland.*

3. *Pharmacy Department, Bon Secours Hospital, Cork, Ireland.*

Background:

Approximately 12,500 people present to Irish Emergency Departments following self-harm each year. Intentional drug overdose (IDO) is the most common method, accounting for 60–65% of presentations annually. Multiple medications are involved, including over-the-counter analgesics and prescription medicines such as antidepressants, antipsychotics, and anxiolytics. Currently, the National Self-Harm Registry Ireland (NSHRI) reports drugs involved in IDO according to their primary active ingredient. This study aims to recategorise these drugs using the World Health Organization (WHO) Anatomical Therapeutic Chemical (ATC) Classification System.

Methods:

Secondary data from the NSHRI will be utilised. Hospital presentations involving IDO from 2015–2024 will be reviewed to generate a comprehensive list of drugs implicated in self-harm presentations. Drugs will be categorised according to the WHO ATC system at the third classification level (anatomical main group, therapeutic subgroup, and pharmacological subgroup). Coding will be undertaken by DF and independently validated by EB, both pharmaceutical subject matter experts.

Results:

Approximately 72,000 IDO presentations will be reviewed. A codebook mapping existing drug categories to the ATC classification system will be developed. Statistical code will be provided alongside the codebook for application to future datasets. Descriptive statistics will summarise presentations according to third-level ATC codes, with findings presented in tabular and graphical formats.

Conclusions:

Recategorising drugs using ATC codes may facilitate improved understanding of the sources and classes of medications involved in IDO. The findings may support future research, inform prescribing practices, and contribute to policy discussions regarding medication availability and dispensing quantities for individuals at risk of self-harm.

Let's Talk About Suicide: Evaluation of a brief introductory online suicide prevention training programme

Zara Harnett (1), Daniel O'Callaghan (1), Noreen Kearns (1), Paul Corcoran (1), Ailish O'Neill (2), Kerrie Gallagher (1), Eve Griffin (1,3)

1. *National Suicide Research Foundation, Cork*

2. *National Office for Suicide Prevention*

3. *School of Public Health, University College Cork*

This study evaluated a newly developed, free, brief gatekeeper introductory online suicide prevention training programme in Ireland, Let's Talk About Suicide (LTAS), available for the general population (aged 18+). The programme's aim is to help participants identify people who may be at risk of suicide, to feel confident in their ability to ask about suicide, to keep an individual expressing suicidal ideation safe, and to inform participants about services and resources that can help during a crisis. Using prospective repeated measures study design, surveys were administered between September 2024 and March 2025 at pre, post and three months after completion of the programme. Exploratory analyses on baseline scores were conducted with a multi-level mixed-effects linear regression used to assess the effectiveness of the intervention across timepoints. In total, 444 individuals completed the survey at pre-training. The majority of participants were female (70%) with 47.5% aged 18-29. Most participants had not undertaken previous suicide prevention training (80.6%). GKT was found to be effective in increasing competency around suicide prevention efforts. There was also a significant effect on attitude change posttraining. This was not sustained at the three-month follow-up period. Overall, LTAS was rated as being moderately to highly acceptable by participants. The findings demonstrate that universal suicide prevention approaches such as GKT, can be effective in increasing self-reported efficacy and short-term attitude change. Policy and practice recommendations based on findings include the implementation and scaling up of suicide prevention community efforts. Limitations of the study and future research directions are discussed.

Global evaluation of food-based dietary guidelines for older adults: A grey literature scoping review

Ronan Hayes (1), Gráinne Kent (2), Annalisa Setti (3), Amy Shannon (1), Miriam Murphy (1) and Miriam Clegg (1)

1. School of Food & Nutritional Sciences, University College Cork, Cork, Ireland.

2. School of Population Health, RCSI University of Medicine and Health Sciences, Dublin, Ireland.

3. School of Applied Psychology, University College Cork, Cork, Ireland.

Older adults (≥ 60 years) require fewer calories but more nutrient-dense diets than younger adults. Specific policy guidance, as food-based dietary guidelines (FBDGs), is needed to promote this for optimal health while being easily accessible. This scoping review aimed to evaluate the availability, accessibility, and nutritional quality of country-specific FBDGs for older adults. FBDGs were identified from Food and Agriculture Organization and European Commission repositories. For accessibility, FBDGs available in English underwent readability testing using three formulae, applying a readability level standard of 'easy' to 'very easy' (9-12 years old). FBDG food group serving size/number were descriptively assessed. Two-day diet plans were constructed for each FBDG for older and younger (18-59 years) adults for nutrient composition analysis. Eleven countries with older adult-specific FBDGs were identified: China, Ethiopia, Greece, India, Ireland, Israel, Luxembourg, Malaysia, Malta, New Zealand, and The Philippines. None met the readability standard using all formulae. For the descriptive analysis, fruits and vegetables recommendations were relatively equivalent (8/11) for older and younger adults. For older adults, both dairy and protein food servings increased in 4/11 countries, but two countries decreased dairy servings. Comparing diet plan nutrient compositions, only energy, fibre, and free sugars were significantly different ($p < 0.05$), lower for older adults, owing to decreased grains recommendations among 5/11 countries. There are limited older adult-specific FBDGs globally and those identified are insufficiently accessible to properly inform healthy dietary choices. Key strategies used by countries to nutritionally adapt FBDGs include increasing protein foods and dairy while decreasing grains but are not universal.

Healthcare professionals Experiences of Implementing the Structured Chronic Disease Management Programme for COPD in Irish General Practice: A Qualitative Study

Lydia Iladiva (1), Aisling Walsh(2), John Browne (3), Anthony Fitzgerald (3), Emma Wallace (1).

1. School of Medicine, University College Cork, Cork, Ireland

2. RCSI University of Medicine and Health Sciences, Dublin, Ireland.

3. School of Public Health, University College Cork, Cork, Ireland

Background

Chronic respiratory health conditions such as chronic obstructive pulmonary disease (COPD) remain leading causes of morbidity and mortality worldwide. COPD also has a substantial impact on patients' quality of life and healthcare use. In 2020, the Health Service Executive (HSE) in Ireland introduced the Chronic Disease Management (CDM) programme to strengthen proactive, structured care in general practice. It provides biannual reviews, personalised care planning, medication reviews, and referral pathways for selected conditions. While uptake from patients and GP practices and patients has been high, little is known about how healthcare professionals experience the implementation of this programme for managing COPD.

Aim

To explore general practitioners', GP nurses', and practice managers' experiences of implementing a CDM programme for COPD, focusing on facilitators, challenges, and future needs.

Methods

A qualitative descriptive study was conducted using semi-structured interviews with GPs, practice nurses, and practice managers across the south of Ireland. Purposive sampling was used. Data was coded on NVivo 15 and analysed using Practical Robust Implementation Sustainability model.

Findings

A total of 22 participants were interviewed. Enablers included stable funding, standardised management templates, and protected consultation time, which enhanced continuity and supported self-management. Barriers included increased workload, limited diagnostic tests access (notably spirometry), weak IT integration, unmet training needs and inconsistent communication with integrated care hubs.

Conclusions

The CDM programme represents a significant advance in proactive, patient-centred COPD primary care in Ireland. For sustainability, the programme's success requires consideration of workload pressures, improving diagnostics access, integrating IT and interdisciplinary supports.

Experiences of Patients and Carers Receiving Care Under the Structured Chronic Disease Management Programme for COPD in Irish General Practice: A Qualitative Study

Lydia Iladiva (1), Aisling Walsh (2), John Browne (3), Anthony Fitzgerald (3), Emma Wallace (1).

1. School of Medicine, University College Cork, Cork, Ireland

2. RCSI University of Medicine and Health Sciences, Dublin, Ireland.

3. School of Public Health, University College Cork, Cork, Ireland

Chronic obstructive pulmonary disease (COPD) is associated with significant symptom burden, reduced quality of life, and high healthcare utilisation. In 2020, the Health Service Executive (HSE) introduced the Structured Chronic Disease Management (CDM) programme in Irish general practice to deliver proactive, standardised care, including biannual reviews, medication review, and personalised care planning. Despite the programme's widespread uptake, there is limited research on patient and carer experiences in Ireland.

Aim

To explore patients' and carers' experiences of receiving COPD care under the Structured CDM programme in Irish general practice.

Methods

A qualitative descriptive study using semi-structured interviews with 26 participants participating in the CDM programme. Participants were purposively sampled. Interviews were transcribed verbatim and analysed using Braun and Clarke thematic analysis.

Results

Participants described COPD as physically limiting and emotionally burdensome. Regular reviews including clinical assessment and medication reviews provided reassurance, improved inhaler technique and adherence, and enhanced confidence in recognising and managing flare-ups. Continuity of care and communication were central to positive experiences. Some reported reduced exacerbations and hospital attendance. Exercise programmes and peer support groups improved breathing and social connection.

Some of the key challenges reported included Communication gaps and limited understanding of COPD, with participants expressing need for clear, lay-language explanations. Some participants were unaware they were enrolled in a formal programme, described limited education during stable phases, or experienced fragmented care across settings. Travel burdens and access challenges limited engagement.

Conclusions

From patient and carer perspectives, the CDM programme enhances monitoring, reassurance, and self-management for COPD. Strengthening communication, education, continuity, and multidisciplinary integration may further optimise its impact.

Miss(ed) Diagnosis: A Literature Review on the Impact of Delayed ADHD Identification in Females

Midhah Irfan Khan (1)

1. School of Medicine, University College Cork, Cork, Ireland

Background: Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental condition characterized by patterns of inattention, hyperactivity, and impulsivity that impact functioning across the lifespan. Although historically considered a predominantly male disorder, increasing evidence indicates that ADHD is equally prevalent in females but is frequently underdiagnosed or diagnosed later in life. This literature review aimed to examine the impact of delayed or undiagnosed ADHD in girls and women.

Methods: A structured search was conducted using PubMed and Google Scholar, yielding 52 initial studies. Following title, abstract, and full-text screening, 10 studies met the inclusion criteria. The final sample included cohort, qualitative, and mixed-methods designs. Across studies, three main themes were identified: mental health outcomes associated with delayed diagnosis, educational and socioeconomic consequences, and gender-related diagnostic differences.

Results: Findings demonstrated that later diagnosis in females is associated with increased rates of anxiety, depression, self-harm, and internalized distress. Educationally, delayed diagnosis was linked to reduced attainment and limited access to school-based support, while socioeconomic outcomes included lower income and reduced occupational stability. Functional impairment was reflected in higher rates of relationship instability, residential mobility, and job changes. Despite these negative outcomes, diagnosis in adulthood was also associated with improved self-understanding and validation.

Conclusion: Delayed ADHD diagnosis in females is associated with widespread adverse outcomes across multiple life domains. However, findings also suggest that these effects are shaped by broader diagnostic, gendered, and systemic factors rather than timing alone. Further research is needed to understand the underlying mechanisms and improve early identification in females.

Tracking iGAS in Ireland: Molecular Epidemiology and Trends, 2011–2023

Louise Kelly(1,2), Mary Meehan(3), Robert Cunney(3), Louise Cullen(4), Phil Downes(4), Stephen Murchan(4), Paul McKeown(4), Sinead O'Donnell(1), Peter Barrett(2,5), Fidelma Fitzpatrick(1)

1. *Department of Clinical Microbiology, Royal College of Surgeons in Ireland, Dublin, Ireland*

2. *INFANT Research Centre, University College Cork, Cork, Ireland*

3. *Irish Meningitis and Sepsis Reference Laboratory, Temple Street Hospital, Dublin, Ireland*

4. *Health Protection Surveillance Centre, Dublin, Ireland*

5. *Department of Public Health, HSE South West, Cork, Ireland*

Background: Invasive Group A Streptococcus (iGAS) causes significant morbidity and mortality. Following the COVID 19 pandemic, Ireland experienced a marked resurgence of iGAS mirroring international trends. Alongside this, emerging resistance to macrolides and other antimicrobials across Europe presents an additional public health challenge. We describe the changes in epidemiology, clinical characteristics, and molecular profile of iGAS in Ireland across pre pandemic, pandemic, and post pandemic years.

Methods: A retrospective national surveillance analysis using linked clinical notification and reference laboratory isolate data from 2011 to 2023. Annual incidence rates, clinical presentations, and microbiological characteristics were compared across the three periods.

Results: Among 1,399 notified cases, the mean age-standardised incidence rate increased from 2.27 per 100,000 pre-pandemic (2011 – 2020) to 4.32 per 100,000 post-pandemic (2022 – 2023) following a decline to 0.88 per 100,000 during the pandemic. Significant temporal shifts in clinical characteristics were observed: bacteraemia predominated pre-pandemic, whilst surgical intervention was more frequently required post-pandemic. Across the study period wounds were the most common identifiable risk factor (28%), intensive care unit (ICU) admission was required in 26.9% of cases, with a median stay of 3 days (IQR 1–6), and all-cause mortality at one week was 11%. Fifty-two emm types were detected; emm1 and emm12 emerged as co-dominant strains post-pandemic. Antimicrobial resistance became increasingly prevalent since 2019, with resistance identified in 12.5% of isolates to erythromycin and 7.3% to clindamycin.

Conclusions: Ireland's post-pandemic iGAS resurgence involved substantial shifts in clinical presentation, risk factors, and circulating emm types. Rising antimicrobial resistance highlights the need for sustained surveillance, antimicrobial susceptibility monitoring, and underscores the importance of expanded genomic characterisation to guide clinical management and public health actions.

‘Contexts of Animal-Assisted Therapy Delivery: A Scoping Review of Practice and Reporting’

Martha Kelly¹, Rory Dalton¹, Michelle Broderick^{1 2}, Yvonne Pennisi¹

1. *Department of Occupational Science and Occupational Therapy, University College Cork*

2. *Department of Brain Science, Faculty of Medicine, Imperial College London*

Introduction: Animal-assisted therapy (AAT) is increasingly used in healthcare, yet existing research reflects considerable diversity in how it is defined, delivered and evaluated. This heterogeneity can make it difficult to understand AAT as a coherent therapeutic approach.

Objective: This scoping review aimed to identify and map the contexts of AAT implementation, as reported in the existing literature, in order to outline current practice and identify gaps in reporting and areas for future research.

Methods: Following Joanna Briggs Institute (JBI) methodology and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR), this review included published research from 2015 to January 2026. Searches were conducted across Scopus, CINAHL, MEDLINE, PsycINFO, Cochrane and ProQuest Dissertations & Theses A&I databases. Data extraction was completed to capture contextual characteristics of AAT delivery across studies.

Results: A total of 248 studies met the inclusion criteria. A wide range of study characteristics were reported, with psychosocial contexts most frequently represented. Across included studies, interventions were most commonly delivered on an individual basis, implemented once weekly, standardised in format, and canine-assisted. However, many studies were inadequately reported, and standardised outcome measures were used in relatively few studies.

Conclusion: AAT is a growing field, but inconsistent reporting continues to limit replicability and impede knowledge translation into clinical practice. There is a clear need for methodological rigor and standardised reporting to strengthen the evidence-base and guide practice in AAT.

Key Words: animal-assisted therapy (AAT), contexts, healthcare, intervention delivery, scoping review, literature review

Implementing a Community-based Mental Health Training Programme for Community Facilitators and Mental Health Professionals

Almas Khan (1,2), Darragh O'Shea (1,2), Aileen Callanan (1,2), Ella Arensman (1,2)

1. National Suicide Research Foundation, University College Cork, Ireland

2. School of Public Health, University College Cork, Ireland

Background:

The EU Horizon Europe MENTBEST (Protecting Mental Health in Times of Change) project aims to address psychological distress, depression and suicide through the implementation of the COMBINA trial: a multifaceted community intervention programme in the community using the European Alliance Against Depression's evidence-based model.

Method:

The COMBINA model works at four levels to reach the community: 1) training for health professionals; 2) awareness campaigns for the public; 3) trainings for community gatekeepers; and 4) resources for people with depression and/or at risk of suicide and their families. The COMBINA intervention will take place over a 24-month period and is being implemented in five new regions across Albania, Estonia, Greece, Ireland (Limerick), and Spain. Level 1 consists of training for primary care physicians and mental health care professionals on how to recognize and treat depression and comorbid anxiety and explore suicidal tendencies in the primary care setting. Level 3 consists of training for community facilitators who serve as gatekeepers to disseminate knowledge about depressive disorders.

Results:

The training and the data collection for the trainings is currently ongoing and so far, trainings for over 200 community-based gatekeepers and mental health professionals have been completed. Implementation outcomes will be presented at the Learning & Teaching Showcase.

Conclusion:

Through this intervention, the COMBINA trial aims to demonstrate in the general population the following: 1) a reduced number of suicides and self-harm related presentations, 2) improvements in knowledge and attitudes towards depression and help-seeking, 3) an improvement in wellbeing and mental health symptoms.

Enhanced cognitive behavioural therapy for suicidality among people with comorbid mental and physical health conditions: a pragmatic randomised controlled trial

Almas Khan (1,2), Prof Olivia F. O’Leary (3), Dr Paul Corcoran (1,2), Dr Muhammad Fahmi Ismail (4), Dr Eric Kelleher (4,5), Prof Ella Arensman (1,2)

1. School of Public Health

2. National Suicide Research Foundation

3. Department of Anatomy and Neuroscience

4. Cork University Hospital

5. Mercy University Hospital

Background:

The presence of co-existing mental and physical health conditions (MPHCs) increases the risk of suicidal behaviours (SBs). Cognitive Behavioural Therapy has been considered as first line of treatment for several health conditions. However, research into CBT tailored for people at risk of SBs and self-harm while living with MPHCs, is lacking. This pragmatic trial aims to examine the effectiveness of an enhanced CBT and standard of care on suicidal ideation, psychological, and biological markers previously linked with SBs.

Methods:

The study follows a pragmatic randomised controlled trial (PrRCT) design. The primary outcome is severity of suicidal ideation and secondary outcomes include effects on self-harm; depression/anxiety, mental wellbeing and biomarkers of HPA-axis, neuroplasticity, BDNF. 128 participants are being randomised into the intervention (15-week enhanced CBT+ TaU) and control arm (TaU only) and the data will be collected at baseline, post-intervention and a 3-month follow-up.

Expected results:

This trial aims to provide insights into both the clinical and methodological aspects of conducting inclusive and ethical trials in high-risk populations in the Irish context. Recruitment is ongoing, and the results are expected at the end of 2027.

Discussion:

People living with MPHCs are at increased risk of SBs. High-risk populations are frequently underrepresented in exploratory trials. Using a PrRCT methodology, this study aims to improve our knowledge of implementing an evidence-based CBT intervention on suicidal ideation including self-harm behaviours, psychological state and biological factors. Additionally, the novelty of integrating biomarker research may lead to more objective, integrative, and targeted interventions to support individuals in this population.

The importance of authentic caregiver involvement through Patient and Public Involvement (PPI) to improve measurement in early childhood obesity prevention research

Eibhlín Looney¹, Dimity Dutch^{1,2}, Moira Duffy¹, and Karen Matvienko-Sikar¹ on behalf of the SCOPE team

1. School of Public Health, University College Cork, Cork, Ireland

2. Flinders University, College of Health and Enablement, Caring Futures Institute, Adelaide, South Australia, Australia

Background: Caregivers are central to early childhood obesity prevention research, providing health behaviour information about themselves and their child(ren). However, little is known about how caregivers interpret and respond to outcome measurement instruments (OMIs).

Aims: To explore caregivers' perspectives and understanding of infant feeding and weight-related OMIs through a Patient and Public Involvement (PPI) panel.

Methods: Group qualitative cognitive interviews were conducted online and in-person with caregivers of infants ≤ 1 year. Facilitated by trained researchers, caregivers verbalised their thought process as they completed OMIs including survey questions, food frequency questionnaires, dietary recalls, and food diaries. Meetings were audio-recorded, transcribed, and supplemented with field notes. Data were analysed using a deductive-inductive approach with a pre-specified framework related to the concepts of comprehension, comprehensibility, feasibility, and ease of use, while simultaneously allowing for inductive, data-driven development of themes.

Results: Ten meetings were conducted with eight female caregivers over seven months. Caregivers reported challenges interpreting OMIs, including unclear terminology for breastfeeding, formula feeding, and introduction of solid foods. Caregivers expressed varied preferences for OMI design and recall period to support accurate measurement, and highlighted the need for OMIs to capture varied caregiver contexts. Caregivers valued the opportunity to share their perspectives and lived experiences, and contribute to improving research conduct.

Conclusions: This research demonstrates the importance of involving caregivers through PPI to support the development and selection of OMIs to enhance data collection and contextual relevance. Further, these findings will advance the design, evaluation, and impact of early childhood obesity prevention research.

Adherence to ISPAD-Recommended Screening for Vascular Complications in Paediatric Type 1 Diabetes: A Retrospective Audit at CUH

Megan MacArthur (1), Dr. Stephen O’Riordan (2), Conor Cronin (2)

1. School of Medicine, University College Cork, Cork, Ireland

2. Department of Paediatrics, Cork University Hospital, Cork, Ireland

Background: Type 1 diabetes (T1D) is associated with long-term microvascular and macrovascular complications. Early detection through routine screening is essential to reduce morbidity. The International Society for Paediatric and Adolescent Diabetes (ISPAD) provides evidence-based recommendations for complication screening in paediatric populations; however, adherence in clinical practice is variable.

Methods: A retrospective clinical audit was conducted at CUH including patients aged 11–18 years with T1D duration ≥ 2 years attending between 1 January 2023 and 31 December 2025 ($n = 313$). Data were extracted from clinic documentation and the TPro electronic medical record using a standardised proforma. Adherence to ISPAD-recommended screening was assessed across four domains: nephropathy, retinopathy, lipid profile, and blood pressure monitoring. Screening was defined as completion within guideline-recommended timeframes. Associations between adherence and patient characteristics were analysed using IBM SPSS Statistics.

Results: Adherence varied across domains. Blood pressure monitoring demonstrated the highest compliance (86.3%), followed by lipid screening (67.7%). Retinopathy screening was documented in 41.2% of patients, while nephropathy screening was lowest at 18.5%. No screening domain achieved full compliance. Increasing age was significantly associated with higher screening rates for retinopathy ($p = 0.006$), lipid screening ($p = 0.002$), and blood pressure monitoring ($p < 0.001$), although absolute differences were modest.

Conclusions: Adherence to ISPAD-recommended screening was suboptimal, particularly for retinopathy and nephropathy. These findings identify modifiable gaps in routine care and support the implementation of structured, system-level screening pathways to improve adherence and reduce long-term complication burden in paediatric T1D populations.

From Demonstration Sites to National Reform: Scaling Early Intervention in Psychosis in Ireland

Karen O'Connor (1, 2), Jo Smith (3)

1. Department of Psychiatry and Neurobehavioural Science, University College Cork, Cork, Ireland

2. National Clinical Lead, Early Intervention in Psychosis Clinical Programme, Health Service Executive, Ireland

3. Emeritus Professor of Early Intervention and Psychosis, University of Worcester, Worcester, UK

Background:

EIP services improve clinical, functional, and vocational outcomes, reduce hospital admissions, and support recovery following first-episode psychosis. Ireland has expanded from three demonstration EIP teams in 2020 to ten funded teams in 2026 (six operational, four in recruitment). 45% of people presenting with first episode psychosis are not in employment, education, or training at first contact.

Aims:

To evaluate the national implementation and scaling of EIP in Ireland using evaluation, audit, and KPI data. To examine how core components of the EIP model maintain or challenge routine care within resource-constrained health systems.

Methods:

This longitudinal implementation review used data from the national evaluation of three demonstration sites, Ireland's participation in the international National Clinical Audit of Psychosis, and EIP KPI monitoring from 2020 to 2025. Domains included access, psychosocial and family interventions, supported employment, and physical healthcare, integrated with implementation insights from national programme leadership.

Results:

By 2025, the duration of untreated psychosis had reduced from 20 to five weeks, timely access had reached 82.4%, and more than half had taken up psychological interventions. Fifty people from an active caseload of 320 (15.6%) were supported into employment. Mean Global Assessment of Functioning scores increased by 27% from baseline across discharged cohorts. Inter-team variation reflected differences in staffing, implementation maturity, and capacity.

Conclusions:

Ireland's experience shows that EIP can be scaled nationally while preserving the mechanisms that drive outcomes. Fidelity at scale depends less on strict protocol adherence than on protecting core functions while allowing adaptation to context. Relational continuity, multidisciplinary capacity, and timely access may serve as "hidden fidelity" factors, while insufficient staffing or caseload protection are early warning signs of model drift. These findings demonstrate that evidence-based reform is achievable within publicly funded systems under real-world constraints.

Exploring Implementation of a National Curriculum for Chronic Disease Prevention and Management in Higher Education Institutes in Ireland

Clodagh Earley¹, Hayley Connolly¹, Anna M. O’Leary⁹ Margaret Bermingham⁹, Sinead Flaherty³, Michelle Flood⁴ James Green⁵, Denise Healy⁶, Patsy McSharry⁶, Celine Murrin⁷, Maria O’Brien⁸, , Deirdre Connolly¹.

1. *Department of Occupational Therapy, Trinity College Dublin, Ireland.*

2. *School of Pharmacy, University College Cork, Ireland.*

3. *Department of Nursing and Healthcare Sciences, Munster Technological University Tralee, Ireland.*

4. *School of Pharmacy and Biomolecular Sciences, Royal College of Surgeons in Ireland,*

5. *School of Allied Health, University of Limerick, Ireland.*

6. *School of Nursing, Health Sciences and Disability Studies, Atlantic Technological University (ATU) St Angela’s, Sligo, Ireland.*

7. *School of Public Health, Physiotherapy and Sports Science, University College Dublin, Ireland.*

8. *Health Service Executive, Ireland.*

9. *School of Nursing & Midwifery, University College Cork, Ireland.*

Chronic diseases place a substantial burden on individuals, health services, and society, highlighting the need for healthcare professionals to be equipped with knowledge and skills to the support prevention and long-term management. In Ireland, a National Undergraduate Curriculum for Chronic Disease Prevention and Management (CDPM) was developed through collaboration between the Health Service Executive (HSE) and higher education institutions (HEIs). The curriculum comprises two components: Make Every Contact Count (MECC), which focuses on health behaviour change, and Self-Management Support (SMS), which focuses on supporting people with chronic conditions to manage their health. This study aimed to explore the implementation of the CDPM curriculum across HEIs in Ireland. A mixed-methods approach recruited academics from Irish HEIs in health professional programmes. Data were collected through an online survey and individual interviews. Fifty-six HEI academic staff completed the survey and 20 participated in semi-structured interviews. Focus groups were also carried out. MECC (98.2%) was more widely delivered than SMS (43.6%). The curriculum was predominately delivered through integration into existing modules (MECC, 85.2%; SMS, 100%), with variation across HEIs. Suitability for Developing Knowledge, Skills and Confidence highlighted gaps in mental health, intellectual disability and integrated care and current lifestyle behaviours. Opportunity to apply MECC and SMS during clinical placement was limited (MECC, 62.8%; SMS, 68.4%) and there was limited engagement with students during clinical placements. Interviewees also highlighted the importance of practical learning opportunities for students, alignment of the curriculum with professional standards, good quality and up-to-date resources, and strong links between HEIs–HSE to support sustained implementation. Delivery and implementation of the CDPM curriculum varied across HEIs and programmes. Successful implementation requires stronger HEI–HSE collaboration, institutional prioritisation, and closer alignment with professional standards. Limited opportunities for students to apply MECC and SMS in practice highlight an important implementation gap. Addressing this gap is important to ensure that curriculum delivery translates into professional practice.

Screening practices and subsequent prevalence of perinatal Post-Traumatic Stress Disorder: a systematic review and meta-analysis

Grace Phillips (1, 2), Tamara Escanuela Sanchez (1), Christopher James De Luca (1), Eve Griffin (2, 3), Paul Corcoran (1,2)

1. School of Medicine, University College Cork, Cork, Ireland

2. National Suicide Research Foundation, Cork, Ireland

3 School of Public Health, University College Cork, Cork, Ireland

Introduction

Post-Traumatic Stress Disorder (PTSD) can occur during the perinatal period, with a reported prevalence between 3-6% after childbirth, although many more women are thought to experience PTSD related symptoms. The aim of this systematic review is to explore the current screening practice for PTSD and record how this affects prevalence.

Methods

A systematic search across four databases (PubMed, CINAHL, Scopus and PsycINFO) identified primary studies examining screening practices and prevalence of PTSD, there were no language or date restrictions applied. Data will be narratively synthesized, and a meta-analysis of prevalence will be conducted where possible. Study quality will be assessed using the Joanna Briggs Institute Checklists. The protocol was preregistered with PROSPERO (CRD420261295605).

Results

The search identified 5,783 records. After removal of duplicates, 3,217 titles and abstracts were screened, and 150 articles progressed to full-text review. Preliminary findings indicate that the most commonly used screening tools for PTSD are the City Birth Trauma Scale, the Traumatic Event Scale, and the Perinatal PTSD Questionnaire.

Conclusions

As this systematic review is ongoing, final conclusions cannot yet be drawn. However, the study is anticipated to enhance understanding of current screening practices for PTSD and to examine how differences in assessment tools may impact reported prevalence estimates.

Evaluation of Cork city food policy through an equity lens

Margaret M Steele (1), Nora O'Connor (1), Janas M Harrington (1).

1. School of Public Health, University College Cork, Cork, Ireland.

A comprehensive evaluation of Cork city food policies, with a particular focus on equity, was conducted as part of the ERA4Health FOODPATH project in 2025-2026. This was the first local level Food-EPI style evaluation conducted in Ireland.

The evaluation process was adapted from the national Food Environment Policy Index (Food-EPI), and the Local Food Systems Policy Index (Local Food-EPI+), and included indicators relating to food policy as well as to broader supporting infrastructure. An expert panel was convened. Evidence of policy implementation was gathered for each indicator and sent to the panel, who completed an online survey rating policy implementation and suggesting policy actions. This was followed by a meeting to discuss the evaluations and add further suggestions. Finally, the panel completed a survey ranking the proposed actions in terms of importance, achievability, and impact on equity.

Policy domains were mostly rated as low or medium, but some areas were rated high, for example, local food production and urban agriculture; food waste; and food aid and community. The majority of infrastructure indicators were evaluated as medium. Collaboration between municipality departments and active participation in relevant networks, two indicators in the governance domain, had a very high level of implementation. Expert recommendations included municipality-funded research, especially on the food environment, increasing longer-term funding for more staff in relevant positions and planning to ensure the coordinator role in the city council has extended funding.

Exploring Public and Patient Involvement in Research in the Irish Health Services: A Scoping Review Protocol

Rachel Tobin (1,2), Carol Kelleher (2), Emmy Racine (2), Patricia Kearney (3)

1. *National Research and Development Office, HSE*

2. *University College Cork,*

3. *National Quality and Patient Safety, HSE*

The role of patients and public in health and social care research has grown significantly in the past decade, alongside increased recognition in the value of Patient and Public Involvement (PPI) in improving research quality. While the awareness and practice PPI in health and social care research is expanding exponentially over the past decade in Ireland and is a mandatory requirement for the funding of all health and social care research by the Health Research Board, there is no comprehensive overview of how PPI is conducted within Irish health services research and how this has progressed alongside the increased policy and research emphasis. This is a significant gap given the scale of research activity within the Irish health service. This research will address this gap and provide an understanding of how PPI is being conducted within research in the Irish health services, providing a foundation to explore potential gaps in institutional supports in subsequent studies. The objective of this scoping review is to explore and understand how Patient and Public Involvement (PPI) is reported and conducted in health and social care research conducted within the Irish Health Services. This review will include all research publications reporting PPI within the Irish health service, ie. HSE organisations and Section 38s. The review will be conducted according to the Joanna Briggs Institute (JBI) framework for conducting scoping reviews and reporting will be guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Extension for scoping reviews (PRISMA-ScR).

How to deliver digital health literacy training to PwCF, families, and caregivers: results of an Irish survey

T. Vagg 1, 2, 3, M.J. O'Sullivan 4, A.-M. Shier 4, C. Byrne 4, C.-A. O'Rielly 4, C. Fleming 1, M. McCarthy 1, J. Dorgan 1, K. Cronin 1, F. Holmes 1, E. Madden 1, S. Twohig 1, V. Matthews 1, C. Quigney 1, H.I. Ibrahim 1, 2, 3, B.J. Plant 1, 2, 3

1. *Cork University Hospital, University College Cork, Cork Centre for Cystic Fibrosis (3CF), Cork, Ireland,*
2. *University College Cork, The HRB Funded Clinical Research Facility, Cork, Ireland,*
3. *University College Cork, Department of Medicine, Cork, Ireland,*
4. *Cork University Hospital, University College Cork, Digital Health Literacy (DHL) Public Patient Involvement (PPI) Team, 3CF, Cork, Ireland*

Background: Digital Health Literacy (DHL) combines health literacy and digital skills to safely and confidently use digital health tools. CF Digital Health Tools (DHT) such as telehealth, AI searches, remote monitoring, and online forums are increasingly common in CF care, creating a need to build DHL knowledge.

Aim & objective: To identify effective modes for delivering DHL training and resources to PwCF and their caregivers in Ireland.

Methods: A Public Patient Involvement (PPI) team of 8 members (5 PwCF, 3 parents of PwCF) developed a survey for the Irish CF community to explore their understanding of DHL and how best to deliver this training and resources. This survey was digitised and made available online using Qualtrics. Ethical approval was granted from the Clinical Research Ethics Committee at Cork. The survey was advertised via social media through the national patient association, Cystic Fibrosis Ireland. The survey was made available for 8 months.

Results: 37 participants responded to the survey. 21 were PwCF, 16 were family/carers of a pwCF (Age range 16-60, mean age-range 36-40, 25 Female). 8 had knowledge of health literacy, 10 of digital skills, and 6 of DHL. 37 actively sought out CF health information through known CF medical websites. 21 used social media to locate information (mainly Instagram). Preferred training resources included the development of an online multimodal platform (website/app) using text, video, and images for each topic. Topics should be grouped for easier understanding and social media sharing. Additionally, paper-based and email resources are recommended to support users with lower digital skills.

Conclusion: Within Ireland, DHL does not appear to be well known and needs to be an area for future educational focus. When delivering resources to PwCF and family/carers, online multimedia with accompanying paper resources is preferable.

Funding: Supported by a Vertex CF-RIA award.

Competencies and proficiencies needed for a Digital Health Literacy (DHL) framework for CF Telehealth

T. Vagg 1, 2, 3, M.J. O’Sullivan 4, A.-M. Shier 4, C. Byrne 4, C.-A. O’Rielly 4, C. Fleming 1, M. McCarthy 1, J. Dorgan 1, K. Cronin 1, F. Holmes 1, E. Madden 1, S. Twohig 1, V. Matthews 1, C. Quigney 1, H.I. Ibrahim 1, 2, 3, B.J. Plant 1, 2, 3

1. *Cork University Hospital, University College Cork, Cork Centre for Cystic Fibrosis (3CF), Cork, Ireland,*
2. *University College Cork, The HRB funded Clinical Research Facility, Cork, Ireland,*
3. *University College Cork, Department of Medicine, Cork, Ireland,*
4. *Cork University Hospital, University College Cork, Digital Health Literacy (DHL) Public Patient Involvement (PPI) Team, 3CF,, Cork, Ireland*

Background: DHL is the combination of health literacy and digital competency skills needed to allow patients/care teams to engage with care through digital health tools and online environments. Within CF Telehealth, there is no clear framework for what skills and proficiencies are needed for both care teams and patients to engage properly with telehealth. The EU DigComp 2.2 (EU-DC) Framework outlines the digital competencies needed for EU citizens.

Objective: Using the EU-DC, this research sought to identify what proficiency levels are needed for each competency for both CF teams and PwCF.

Methods: The EU-DC competency and proficiency tables were converted into an online survey. This survey was then distributed to the ECFS Telehealth Working Group to determine the required proficiency level for PwCF and CF teams using telehealth (54 members with expertise in CF telehealth).

Results: 27 experts completed the survey [Table1 summarises the average proficiency level score for each competency]. All 5 EU-DC competencies were seen as necessary for CF telehealth. Generally, CF care teams should have advanced proficiency levels (so that they could also support PwCF & carers), while PwCF/Carers were expected to have a foundational knowledge in most competency areas.

Conclusion: The EU-DC framework provides a useful foundation for what DHL competencies and proficiencies are needed to support CF telehealth. Overall, all competencies were seen as necessary, with greater emphasis on CF care teams having a higher proficiency level in these areas.

Funding: Supported by a Vertex CF-RIA award

The Influence of the Food Industry on Advocacy for Policy Change by Civil Society Focused on Vulnerable Population Groups: Perspectives and Experiences from Non-Governmental Organizations

Kendall Visco (1), Nora O'Connor (1), Janas Harrington (1), Margaret Steele (1)

1. School of Public Health, University College Cork, Cork, Ireland

Background: Large food companies often use corporate political activities (CPA), such as partnerships, donations, or reputation-building strategies, to present themselves as socially responsible actors. NGOs are important and trusted contributors to public policy debates and may therefore be viewed as strategic partners by the food industry. The study will help clarify how relationships between NGOs and the food industry operate in practice and whether these relationships support or hinder advocacy for policies that improve healthy food environments for vulnerable communities.

Objective: The objective of the study is to map existing partnerships, identify any corporate political activities directed at NGOs, and understand how these interactions may shape NGOs' work to reduce health and food-related inequalities.

Methods: A document analysis of publicly available NGO materials (such as websites, reports, and media coverage) was conducted alongside semi-structured interviews with NGO representatives. Representatives from 43 health-based NGOs were invited to interview, and 12 accepted. Interviews were anonymised and analysed thematically.

Results: NGO perceptions of food industry influence were mixed. NGOs experienced benefits in the range of programmes and services they could provide due to industry support but expressed concern over industry motivations and potential influence on public health policy making and messaging. Overall, interactions between NGOs and the food industry may simultaneously support and constrain public health advocacy, suggesting careful management is necessary to maximize benefit and reduce risk to public health goals.

Hypertensive disorders of Pregnancy and the long-term risk of maternal peripheral vascular disease –a systematic review and meta-analysis

Hio Weng Chu (1), Shane McCarthy (2), Louise Kelly (3), Fergus McCarthy (1), Ali Khashan (1), Karolina Kublickiene (4), Peter Barrett (1)

1. School of Medicine, University College Cork, Ireland

2. Cork University Hospital, Ireland

3. Royal College of Surgeon Ireland, Dublin, Ireland

4. Karolinska Institution, Sweden

Hypertensive disorders of pregnancy (HDP) are among the most common pregnancy complications globally such as pre-eclampsia (PE) and gestational hypertension (GH). While HDP are associated with long-term cardiovascular, renal, and cerebrovascular disease, the risk that HDP may present to the peripheral vascular circulation among parous women is less understood. We aimed to synthesize the available literature on the association between HDP and long-term maternal risk of peripheral vascular disease (PVD) in women.

PubMed, Web of Science, and Embase were searched from inception to 15 June 2025. Eligible studies included case-control or cohort studies involving human participants, measuring the exposure of a HDP (preeclampsia, gestational hypertension, or chronic hypertension) and the outcome of maternal peripheral artery disease (PAD) or undifferentiated peripheral vascular disease (PVD). Two reviewers independently screened abstracts, extracted data, and assessed study quality. Random-effects meta-analyses were conducted.

Fourteen eligible studies were included (13,951,352 participants), most were of high quality ($n=12$). Eleven studies focused on PAD, whereas three studies focused on any PVD. HDP was significantly associated with increased PAD risk (RR 1.40, 95% CI 1.23–1.60; $I^2=10\%$). PE and GH were both significantly associated with long-term PAD (aRR 2.20, 95% CI 1.58–3.06; $I^2=80\%$, and aRR 1.63, 95% CI 1.25–2.13; $I^2=51\%$, respectively).

HDP appear to be associated with an increased risk of PAD among parous women in later life. Preventive interventions may be beneficial for patients who experience HDP to reduce the long-term risk of PAD.

A Service Evaluation of a Pharmacist-Led Penicillin Allergy Reconciliation and Assessment Service in an Irish Hospital

Niamh Mulcahy (1,2), Emma Skelton (2), Arthur Jackson (3), Teresa M Barbosa (1)

1. *Pharmaceutical Care Research Group, School of Pharmacy, University College Cork, Cork, Ireland*

2. *Pharmacy Department, Cork University Hospital, Cork, Ireland*

3. *Infectious Disease Department, Cork University Hospital, Cork, Ireland*

Introduction:

Fewer than 10% of patients with a documented penicillin allergy are truly allergic, with spurious labels arising from inaccurate documentation and misunderstanding of allergy types. Inappropriate allergy labels negatively impact patient care. Penicillin allergy reconciliation and de-labelling are vital components of antimicrobial stewardship.

Aim:

To investigate the impact of a pharmacist-led penicillin allergy reconciliation and assessment service in Cork University Hospital.

Methods:

A prospective observational service evaluation study was conducted between February-April 2025. Adult inpatients with a documented penicillin allergy on the Medicines Prescription Administration Record (MPAR) were referred to the pharmacist and penicillin allergy reconciliation was performed. The patient's allergy status was classified using the CUH penicillin allergy de-labelling and PEN-FAST tools, and patients who were potentially inappropriately labelled were identified. Study approval was granted by CUH Quality and Patient Safety Committee.

Results:

Of 184 referred patients, 96 participated, 75% of which were prescribed an antimicrobial with 33.3% prescribed a fluoroquinolone. Only 19.8% of MPARs allergy boxes were fully complete. A total of 17.8% of patients could not recall the nature of their reaction, while this was documented by 25% of GP records and only 2.1% of community pharmacies. Due to limited documentation, 53.1% of patients could not have their allergy status classified. Of the 45 patients who could be classified with the CUH tool, 26.7% were identified as potentially inappropriately labelled.

Conclusion:

The study demonstrates the positive impact of a pharmacist-led penicillin allergy reconciliation service highlighting the need for improved documentation and enhanced education for patients and healthcare professionals to reduce spurious allergy labels and support antimicrobial stewardship.

Features of intrapartum fetal heart rate monitoring associated with moderate to severe hypoxic ischaemic encephalopathy: A systematic review

Clare M. Crowley^{1 2}, Barbara Burke^{1 2}, Vicki Livingstone^{2 3}, Mairead O’Riordan^{1 2}, Geraldine Boylan^{2 3}, Keelin O’Donoghue^{1 2}

1. Department of Obstetrics and Gynaecology, University College Cork, Cork, Ireland

2. INFANT Research Centre, University College Cork, Cork, Ireland

3. Department of Paediatrics and Child Health, University College Cork, Ireland

Background

Hypoxic ischaemic encephalopathy (HIE) represents a subset of neonatal encephalopathy and often occurs as a result of acute peripartum asphyxia. The presence of a pathological intrapartum cardiotocograph (CTG) has been identified as a recurring potential predictor but is acknowledged to have poor specificity.

Objective

To evaluate the predictive ability of suspicious or pathological changes in fetal heart rate baseline and variability on intrapartum CTG for moderate to severe HIE in term and near-term infants.

Methods

A comprehensive search of PubMed, EMBASE, CINDHL, The Cochrane Library, Web of Science, Clinicaltrials.gov and WHO ICTRP was conducted from January 2005 through to March 2026. Studies involving women in labour at ≥ 35 weeks gestation with singleton pregnancies who had continuous intrapartum CTG monitoring were included. Two independent reviewers screened studies, extracted data, and assessed quality using the Newcastle-Ottawa Scale. This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

Results

Five observational studies, consisting of 275 women-infant dyads were included. Four studies found reduced variability was significantly associated with, or predictive of, moderate-to-severe HIE. Two studies reported that fetal tachycardia and bradycardia were associated with increased risk of moderate-to-severe HIE. Increased variability was not assessed in any of the included studies. The overall strength of evidence was limited by the small number of studies and methodological heterogeneity, precluding meta-analysis and direct comparison between studies.

Conclusion

Limited and heterogeneous observational data suggests that reduced variability, fetal tachycardia and bradycardia may be associated with moderate-to-severe HIE.

Oral health and care practices in an Irish long term residential care facility - a mixed methods study

Claire Curtin (1), Danielle McGeown (2), Elizabeth Moloney (3), Francis M. Burke (1), Gerald McKenna (4), Martina Hayes (1)

1. School of Dentistry, University College Cork, Ireland

2. Health Service Executive, Cork, Ireland

3. Mercy University Hospital, Cork, Ireland

4. Centre for Public Health, Queen's University Belfast, Northern Ireland

Aims:

1. To assess the prevalence and severity of oral disease among residents in long-stay residential care wards at St. Finbarr's Hospital, Cork.
2. To explore attitudes and perceptions toward oral health among healthcare professionals, residents, and family members.

Methods:

A mixed-methods study using an explanatory sequential design was conducted. Quantitative data were obtained via a standardized oral health needs assessment. These findings informed a topic guide for semi-structured interviews with healthcare staff, residents, and family members to explore experiences and perspectives regarding oral healthcare delivery within the institutional setting.

Results

Sixty-five residents participated (71% female; mean age = 85 years). Edentulism affected 36.9%, and 83.1% had fewer than 20 teeth present (mean = 8). The mean DMFT was 26.1 (SD 5.0), and the mean Root Caries Index 45.6 (SD 44). Although staff reported confidence in delivering oral care, clinical examinations revealed moderate to heavy plaque in 68.3% of dentate residents and 45.7% of denture wearers.

Qualitative themes indicated that while staff recognized the importance of oral health, care was often deprioritized due to time pressures, staffing limitations, and reliance on informal training. Residents valued dental access and autonomy but hesitated to request assistance, fearing burdening staff. Family members emphasized comfort and pain control but had limited awareness of daily oral care practices on the ward.

Conclusion:

The oral health status of residents was poor and closely resembled oral health outcomes reported among community-dwelling older adults in Ireland more than two decades ago.

These findings emphasise the need for person-centred oral health models of care within long term residential care that recognise the broader dimensions of oral health, adapt to varying levels of dependency and address practical barriers to maintaining independence. Engaging directly with residents, alongside family members, is essential to ensure that services are responsive to lived experience and the wishes of older adults living in long term residential care. Future service planning and policy development should consider not only clinical need, but also the values, preferences, and adaptive strategies of older adults living in residential care.

Impact of Clonal Haematopoiesis of Indeterminate Potential (CHIP) on Prognosis and Treatment Outcomes in Breast Cancer

PJ Folan¹, E Boyle², HP Redmond¹, E Andrews¹, C Foley¹,

1. Department of Surgery, University College Cork

2. Royal College of Surgeons in Ireland

Introduction:

Clonal haematopoiesis (CH) is the abnormal expansion of clonally derived haematopoietic stem cells carrying somatic mutations and has been associated with adverse outcomes across multiple disease settings. Prognostic relevance in breast cancer remains unclear. This review aims to evaluate the association between CH and survival outcomes in breast cancer.

Methods:

This review was prospectively registered with PROSPERO (ID: CRD420261351543) and conducted in accordance with PRISMA guidelines. 1,459 records were identified from MEDLINE (PubMed), EMBASE (OvidSP) and Cochrane CENTRAL databases from 2014 to present. Search terms included "breast cancer", "clonal haematopoiesis", "clonal haematopoiesis of indeterminate potential" and "survival". Studies without survival data were excluded.

Results:

Seven studies were eligible for inclusion, reporting on 2,082 breast cancer patients; three reported on overall survival. Baseline CH status was the most common time point assessed. Two studies of baseline CH status found no significant association with OS (HR 0.93, 95% CI 0.58–1.51; HR 0.85, 95% CI 0.27–2.69). In contrast, the single study assessing dynamic CH status found a significant association with OS (HR 6.6, 95% CI 1.7–25.9). Risk of bias was variable across studies, with limitations including small cohort sizes and incomplete reporting of covariate adjustment in hazard ratios.

Conclusion:

Current evidence on the association between clonal haematopoiesis and outcomes in breast cancer remains limited and context-dependent. Baseline CH status shows no significant association with outcome, though included studies are underpowered. Dynamic CH status demonstrates the strongest association with survival; further prospective research is needed to clarify its prognostic value.

Urinary and Serum Biomarkers for Upper Urinary Tract Obstruction in Adults: A Systematic Review

Clare O'Connell (1), Youssef Garras (2), Donnacha Hogan (1), Daniah Alsaadi (1), Ned Kinnear (3), Derek Barry Hennessey (1,2)

1. Department of Urology, Mercy University Hospital, Cork, Ireland

2. University College Cork, School of Medicine, Cork, Ireland

3. Department of Urology, St Vincent's Hospital, Melbourne, Australia

Introduction: Acute upper urinary tract obstruction is a common urological emergency, most frequently caused by ureteric calculi. Current diagnostic and follow-up strategies rely heavily on imaging, particularly computed tomography (CT), which carries cost and radiation exposure. Biomarkers may offer a non-invasive adjunct. This study systematically urinary and serum biomarkers for upper urinary tract (UUT) obstruction in adults.

Methods: A systematic search of MEDLINE, Embase, and Cochrane CENTRAL was conducted in accordance with the PRISMA guidelines. Eligible studies evaluated urinary or serum biomarkers in adult patients with UUT obstruction, published between 1 January 2000 and 8 March 2026. The primary outcome was identification and characterisation of biomarkers associated with obstruction. Secondary outcomes included diagnostic performance measures. Data were synthesised qualitatively due to heterogeneity.

Results: Eighteen studies evaluating ten biomarkers met inclusion criteria, and no randomised controlled trials were identified. The biomarkers identified were NGAL, KIM-1, CA 19-9, cystatin C, procalcitonin, β 2-microglobulin, NAG, vanin-1, uEGF, and MCP-1. NGAL and KIM-1 were the most frequently studied. Several biomarkers were elevated in patients with obstruction and decreased following relief. Diagnostic performance varied, with some biomarkers demonstrating strong discrimination in individual studies (e.g., NGAL and MCP-1-related markers with AUC values >0.90).

Conclusion: Multiple urinary and serum biomarkers show potential for diagnosing and monitoring UUT obstruction. NGAL and KIM-1 demonstrated the most consistent associations, while emerging biomarkers such as MCP-1 and EGF showed high accuracy in individual studies. However, heterogeneity and study quality limit clinical applicability. Large prospective studies are required to validate their clinical utility.

Oral Health in Adults with Cystic Fibrosis. A Cross Sectional Study

Martina Hayes (1), Fiona O Leary (1), Niamh Coffey (2)

1. *Cork University Dental School and Hospital, University College Cork, Ireland*

2. *RCSI, Dublin, Ireland*

Objectives

To evaluate the oral health of adults with cystic fibrosis (CF) by assessing dental caries, developmental defects of enamel (DDE), periodontal disease, and oral hygiene, and comparing findings with a control group of adults without CF.

Methods

Three cross-sectional case-control studies were conducted using the same cohort of 92 adults with CF and 92 controls. Participants completed detailed questionnaires and underwent standardised clinical examinations. Dental caries was assessed using the Decayed, Missing and Filled Teeth (DMFT) index, enamel defects using the Developmental Defects of Enamel Index, and periodontal health and oral hygiene using the CPI-modified index and Greene-Vermillion Oral Hygiene Index.

Results

Adults with CF had significantly higher levels of untreated dental caries and overall caries experience than controls. Developmental defects of enamel were also more prevalent, affecting 64% of adults with CF compared with 30% of controls. Despite poorer oral hygiene practices and significantly higher plaque and calculus scores, adults with CF exhibited lower levels of gingivitis and periodontitis than controls.

Conclusions

Adults with CF demonstrate a distinctive oral health profile characterised by increased caries burden and enamel defects, but reduced periodontal disease despite poorer oral hygiene. These findings highlight the need for targeted preventive oral healthcare and suggest that biological factors associated with CF or its treatment may influence periodontal health. Further research is required to investigate the mechanisms underlying these observations.

Prehospital Broad-Spectrum Antibiotics in Suspected Sepsis: A Systematic Review and Meta-Analysis of In-Hospital Mortality

Judah Izsak (1), Adam Moscoe (1), Rayan Ben Letaifa (1)

1. School of Medicine, University College Cork, Cork, Ireland

Background and aims: Early antibiotic administration is a cornerstone of sepsis management, yet over half of sepsis patients first encounter emergency medical services before hospital arrival. Evidence on whether prehospital antibiotics improve outcomes remains conflicting, with prior systematic reviews limited by small pooled evidence bases. We aimed to evaluate the effect of prehospital broad-spectrum antibiotics on in-hospital mortality in adults with suspected sepsis.

Methods: MEDLINE via Ovid, Embase (Elsevier), and Cochrane CENTRAL were searched from inception to February 2026. Controlled studies with a concurrent comparator group comparing prehospital intravenous antibiotics to standard care were included. Risk of bias was assessed using RoB 2 and ROBINS-I. Pooled risk ratios were calculated by inverse-variance weighting.

Results: 650 records were identified; 10 studies were eligible for systematic review and 8 for meta-analysis. Across 4,315 patients, 303 of 2,116 who received prehospital antibiotics died compared with 490 of 2,199 who did not (RR 0.79, 95% CI 0.70 to 0.90, $p=0.0003$, $I^2=15.8\%$, NNT=13). Results were consistent across all sensitivity analyses including restriction to randomised trials only (RR 0.81, $p=0.028$). ICU length of stay could not be pooled due to heterogeneity; individual randomised trials reported significant reductions. Adverse events were rare with no serious anaphylaxis reported.

Conclusion: Prehospital broad-spectrum antibiotics are associated with a significant mortality reduction in adults with suspected sepsis, robust across study design and risk of bias restrictions. Larger multicentre trials with standardised sepsis definitions are needed.

ePRO-Triggered Virtual Dietetic Consultations in Breast and Gynaecologic Cancer Survivors: Results from the LYSA Randomized Controlled Trial

Katie E Johnston 1,2, Kate O'Connell 3, Laia Raigal-Aran 2, Fiona Byrne 5, Brendan Palmer 6,7, Darren Dahly 6,7, Josephine Hegarty 8, Roisin M Connolly 2,3, Samantha J Cushen 1

1. *Clinical Nutrition and Oncology Research Group, School of Food and Nutritional Sciences, University College Cork, Cork, Ireland*

2. *Cancer Research @UCC, College of Medicine and Health, University College Cork, Cork, Ireland*

3. *CUH/UCC Cancer Centre, Cork University Hospital, Cork, Ireland*

5. *Department of Nutrition and Dietetics, Cork University Hospital, Cork, Ireland*

6. *HRB-Clinical Research Facility, University College Cork, Cork, Ireland*

7. *School of Public Health, University College Cork, Cork, Ireland*

8. *Catherine McAuley School of Nursing and Midwifery, University College Cork, Cork, Ireland*

Background: Breast and gynaecologic cancer survivors experience weight gain, body composition changes, and unmet nutritional needs, with dietetic engagement limited by stigma and reactive services. Electronic patient-reported outcomes (ePROs) offer a novel approach to trigger timely dietetic support, but their use in survivorship care is largely under-explored.

Methods: The LYSA Trial recruited participants within 12 months post-primary treatment from two Irish cancer centres. Participants were randomised 1:1 to two-monthly ePRO surveys with trigger-initiated virtual dietetic consultations or routine care. The ePRO-system generated triggers based on body mass index (BMI), Malnutrition Screening Tool (MST) score and patient-reported weight-gain concern. Baseline and 12-month assessments included body composition, dietary quality, nutritional risk, and weight-gain concern.

Results: Among 200 enrolled participants (experimental n=102; comparator n=98), 86.5% completed both baseline and endpoint assessments. MST triggers were rare at baseline and endpoint (<10%). In contrast, BMI triggers were more common at baseline and endpoint (47%-60% across arms). In the experimental arm, 76.6% of consultations were symptom-triggered; 40.5% of participants initiated five consultations each; and non-attendance was recorded for 27.8% consultations. Body composition measures remained stable, with no significant differences at baseline to endpoint in either arm. Over 12 months, patient-reported weight-gain concern decreased in the experimental arm (58.8% to 46.7%), whereas it increased in the comparator arm (62.7% to 68.7%; $p=0.01$). Higher trigger counts were associated with lower overall dietary quality ($p<0.001$).

Conclusions: ePRO-triggered virtual dietetic consultations are feasible and reduce patient-reported weight gain concern in early-stage breast and gynecologic cancer survivors. These findings support personalised, symptom-responsive dietetic services and future trials to optimise long-term outcomes.

A Digital Health Approach to Cancer Survivorship: Practical Lessons From an Investigator-Initiated Patient-Reported Outcomes Trial in Ireland

Katie E Johnston 1-3*, Laia Raigal-Aran 1*, Kate O'Connell 4, Brendan Palmer 5,6, Darren Dahly 5,6, Josephine Hegarty 3#, Roisin M Connolly 1,4#

1. Cancer Research @UCC, College of Medicine and Health, University College Cork, Cork, Ireland

2. Clinical Nutrition and Oncology Research Group, School of Food and Nutritional Sciences, University College Cork, Cork, Ireland

3. School of Nursing and Midwifery, College of Medicine and Health, University College Cork, Cork, Ireland

4. CUH/UCC Cancer Centre, Cork University Hospital, Cork, Ireland

5. HRB Clinical Research Facility, University College Cork, Cork, Ireland

6. School of Public Health, University College Cork, Cork, Ireland

*Co-first authors

Co-senior authors

Aim and Scope: The aim was to provide a practical, evidence-based guidance for future investigator-initiated trials (IIT) aiming to incorporate electronic Patient-Reported Outcomes (ePROs) within Electronic Data Capture (EDC) systems. Drawing on experience from a digital health-enabled survivorship trial, this abstract focuses on the design, implementation, and operational considerations required to embed ePROs into clinical and research workflows efficiently and pragmatically.

Design: The findings are outlined by the design and implementation of the LYSA randomized controlled trial (NCT05035173), an investigator-initiated cancer survivorship study conducted in Ireland. The paper draws on real-world experience integrating ePROs within EDC systems and routine clinical and research workflows. Reflections from trial development, stakeholder engagement, system configuration and operational delivery were synthesized to identify practical principles relevant to future IITs.

Results: A total of four key practical principles for successful implementation of ePROs were identified. These include (1) Design with the end user in mind; (2) Embed ePROs into Clinical and Research Workflows; (3) Build systems to sustain ePRO engagement; (4) Enable action through ePRO system monitoring.

Conclusions: The findings translate real-world trial experience into practical guidance for implementing ePROs in cancer clinical research. By outlining four actionable principles, it demonstrates how ePROs can be effectively embedded within IITs in a way that supports patient engagement, data quality, and clinical relevance. These findings provide a transferable framework to guide future studies seeking to integrate digital health tools into survivorship research and routine clinical practice.

Incidence of Permanent Pacemaker Requirement in Patients with Bicuspid Aortic Valve Disease Undergoing Transcatheter Aortic Valve Implantation: A Systematic Review and Meta-Analysis

Maheen Junaid (1), Akshita Malhotra (1), Professor John Hinchion (2)

1. *University College Cork, Ireland*

2. *Cardiothoracic Surgery, Cork University Hospital, Cork, Ireland*

Introduction:

Transcatheter Aortic Valve Implantation (TAVI) has become an established treatment for severe aortic stenosis across a broad range of surgical risk profiles. Permanent pacemaker implantation (PPM) requirements remain a common procedural complication. While TAVI is increasingly performed in patients with bicuspid aortic valve (BAV) disease, comparative data on post-procedural PPM rates between bicuspid and tricuspid aortic valve (TAV) anatomies remain limited.

Aim:

To compare the incidence of PPM following TAVI in patients with bicuspid and tricuspid aortic valve disease

Methods:

A systematic review and meta-analysis were conducted according to PRISMA 2020 guidelines. PubMed, Embase, and Web of Science were searched from database inception to March 1, 2025. Observational studies comparing PPM incidence following TAVI in patients with BAV and TAV disease were included. A random-effects meta-analysis was performed using Review Manager 5.4, with pooled odds ratios (ORs) and 95% confidence intervals (CIs) calculated.

Results:

Seven studies comprising 28,725 patients were included, including 13,214 patients with BAV and 15,511 with TAV. Pooled analysis demonstrated a significantly higher incidence of PPM among patients with BAV compared with TAV following TAVI (OR 1.23, 95% CI 1.08–1.40, $p = 0.001$). Moderate heterogeneity was observed across studies ($I^2 = 57\%$).

Conclusion:

Patients with bicuspid aortic valve disease requiring TAVI have a significantly greater risk of requiring PPM compared with patients with tricuspid valve disease. These findings highlight the importance of careful procedural planning, patient counselling, and post-procedural monitoring in this population.

Evaluating Clinician Attitudes and Screening Practices for Adolescent E-Cigarette Use in the Paediatric Emergency Department

Emily Kavanagh (1), Eytan Haddad (1), Andrew Sharobim (1), Dr. Jonathon Costello (2)

1. School of Medicine, University College Cork, Cork, Ireland

2. Department of Emergency Medicine, Cork University Hospital, Cork, Ireland

Introduction: Adolescent e-cigarette use is common in Ireland and may contribute to acute paediatric presentations. Nearly 40% of Irish adolescents aged 15–16 report experimenting with e-cigarettes. Although routine screening is recommended in adolescent health assessments, its role in the paediatric emergency department (PED) is unclear. This study examined clinician attitudes, screening practices, barriers, confidence, and knowledge gaps related to adolescent e-cigarette screening in the Cork University Hospital PED.

Methods: A cross-sectional anonymous 12-item questionnaire was distributed to doctors and nurses working in the Cork University Hospital PED. The survey assessed perceived prevalence of adolescent e-cigarette use, screening practices, risk perception, clinical triggers for enquiry, barriers to screening, clinician confidence, awareness of Health Service Executive (HSE) resources, and prior training. Descriptive and inferential statistics were performed.

Results: Twenty-six clinicians responded (13 nurses and 13 physicians). Adolescent e-cigarette use was perceived as common, with a median estimated prevalence of 50–60%, and regular vaping was widely viewed as high risk. Screening was infrequent: over one-third reported never screening, and 76% screened adolescents two times or fewer in the previous month. Screening was most often prompted by respiratory, cardiovascular, or mental health presentations and typically began at age 14. Common barriers included parent or guardian reaction, limited time, uncertainty about how to ask, and lack of advice or resources. Awareness of HSE resources was low, 96% reported no prior education or training, and screening frequency was not associated with confidence, perceived risk, or estimated prevalence (all $p > 0.05$).

Conclusions: Adolescent e-cigarette screening is not routine in PED practice. Brief screening prompts, targeted clinician education, and improved visibility of vaping-specific resources may support more consistent screening. The PED may also represent an opportunistic setting for screening and brief intervention. Further research should evaluate the feasibility and clinical utility of routine screening in this context.

Mapping Menopause Education for Healthcare Professionals: A Scoping Review

Keye C. 1, Murphy M. 2, Saab MM. 2, O' Driscoll M.1

1. *Pharmaceutical Care Research Group, School of Pharmacy, University College Cork, Cork, Ireland*

2. *Catherine McAuley School of Nursing and Midwifery, University College Cork, Cork, Ireland*

Menopause is a natural life stage with substantial impacts on women's quality of life and long-term health. Education on menopause for healthcare professionals (HCPs) remains limited and inconsistently embedded across health disciplines. This scoping review mapped current evidence on menopause education, including available programmes, delivery approaches, and extent of curricular integration. Following the JBI methodology and PRISMA-ScR guidelines, a search of six databases and grey literature (last searched May 2025) identified original research evaluating menopause-specific education for undergraduate and postgraduate HCPs. Data were synthesised using deductive and inductive analyses. Of 5,034 records identified, 14 studies met the inclusion criteria: nine evaluated educational interventions and five examined curricular provision. Most studies originated from the United States and focused on medical residents. Education formats varied widely, including structured curricula, case-based learning, online modules, telemedicine encounters, and peer-supported platforms. Core content commonly addressed menopause physiology, symptom management, and hormone therapy, while long-term health implications and equity-focused content were infrequently included. Interventions consistently improved knowledge, confidence, and preparedness for menopause care. Despite widespread recognition of its importance, menopause education remains inadequately integrated across healthcare training. Standardised, multidisciplinary, and equity-focused menopause education frameworks are urgently required to strengthen clinical competence and improve care for midlife women.

Title: Future Care Planning for people with palliative care needs- the ENCIRCLE-PC pilot initiative from the HSE, Specialist Palliative Care Services and the National Ambulance Service: Insights from stakeholder focus groups

Dr Caroline Kilty (1,2), Dr Elizabeth O' Connell (2), Prof Nicola Cornally (2), Dr Martina O' Reilly (3), Dr Feargal Twomey (4), Dr. Siobhán Masterson (5), Prof Cathal O' Donnell (5), Ms Siobhán Murphy (6), Dr Sara Leitão (6), Mr Neil Fullerton (6)

1. *Centre for Gerontology & Rehabilitation, School of Medicine, UCC*
2. *School of Nursing & Midwifery, UCC*
3. *National Office for Palliative Care, HSE*
4. *National Clinical Programme for Palliative Care, HSE*
5. *National Ambulance Service, HSE*
6. *Irish Hospice Foundation, Dublin*

Facilitating patient preferences regarding place of care at the end of life is a key objective of high-quality palliative care. The National Clinical Programme for Palliative Care, in partnership with the National Ambulance Service, developed an innovative Future Care Plan (FCP) pilot programme to strengthen collaboration between ambulance services, primary care, out-of-hours general practice, and Specialist Palliative Care Services.

This study reports findings from a qualitative stakeholder evaluation of the FCP pilot, which aimed to improve care coordination, clinical decision-making, and service delivery, particularly in out-of-hours settings.

A qualitative design using focus group methodology was employed. The topic guide was informed by the RE-AIM framework, an implementation science framework examining Reach, Effectiveness, Adoption, Implementation, and Maintenance. Data were analysed using Framework Analysis.

Twenty-two participants took part in three online focus groups. The programme successfully reached individuals with both malignant and non-malignant conditions, including those at risk of acute deterioration. Participants highlighted the value of the FCP in facilitating early care planning discussions, supporting shared decision-making, and enhancing communication across healthcare disciplines. The programme reduced uncertainty for patients, families, and clinicians during episodes of deterioration and supported care aligned with patient preferences. Challenges included limitations in digital infrastructure, role clarity, and workforce pressures. The central role of ambulance services in palliative care delivery emerged as a key strength. Participants also reported reduced moral distress and greater professional satisfaction when delivering goal-concordant care.

Overall, the FCP pilot represents a promising and scalable intervention to support integrated, person-centred, preference-sensitive care. It has the potential to reduce avoidable hospital admissions and enable the delivery of the right care, in the right place, at the right time.

Investigating the Prevalence of Depression and Anxiety in Patients with Inflammatory Bowel Disease (IBD)

Rhea Kumar (1)

1. School of Medicine, University College Cork, Cork, Ireland

Objectives: To determine the prevalence of anxiety and depression in adults with a confirmed diagnosis of inflammatory bowel disease (IBD) and to identify clinical and demographic factors associated with anxiety and depression in this population.

Design: Cross-sectional study.

Setting: Secondary care, IBD biologics infusion clinic at Mercy University Hospital (MUH), Cork, Ireland.
Participants: One hundred adult patients with a confirmed diagnosis of IBD receiving intravenous biologic therapy at MUH were recruited. Inclusion criteria included age 18–59 years, current receipt of infusion therapy, and the ability to provide informed consent and complete questionnaires. Exclusion criteria included being outside the specified age range, not receiving infusion therapy, or inability to complete the study questionnaires.

Interventions: Not applicable.

Primary and Secondary Outcome Measures: The primary outcome was the prevalence of anxiety and depression measured using the Hospital Anxiety and Depression Scale (HADS) and the IBD-Disk questionnaire. Secondary outcomes included associations between questionnaire scores and clinical or demographic variables including sex, age, duration since diagnosis, symptom burden, fecal calprotectin levels, prior history of anxiety or depression, and number of comorbidities.

Results: HADS results indicated that 72% of participants reported at least one symptom of anxiety or depression, with 29% scoring the highest interval-scaled score (4/4). Higher HADS scores were significantly associated with female sex ($p=0.006$), a prior history of anxiety or depression ($p<0.001$), longer disease duration ($p=0.002$), and greater symptom burden ($p=0.047$). Higher IBD-Disk scores (0–10 scale) were significantly associated with elevated fecal calprotectin levels ($p<0.001$) and greater symptom burden ($p<0.001$).

Conclusion: Anxiety and depression are highly prevalent in this cohort of patients with IBD. Greater disease severity and symptom burden were associated with poorer mental health outcomes. Routine psychological screening and a multidisciplinary approach to care may improve patient outcomes. Future research should include larger, nationwide and longitudinal studies to further investigate these associations and improve quality of life and clinical outcomes in patients with IBD.

Trial in Progress Abstract: MELODY – Mapping the Enhanced Landscape of advanced breast cancer fOr DYnamic treatment approaches.

Emer Lynch (1,2), Reiltin Werner (3), Ruth Crosbie (3), Emilene S Morais (1), Erin Crowley (1,6), Elizabeth Considine (1), Toluwalogo Balyewun (2), Elizabeth Lenihan (1), Corina Girleanu (3), Sheena M McHugh (4), Ann Kirby (5), Seamus O'Reilly (1,2), Sinead Noonan (2), Michael William Bennett (3), Mark Tangney (1), Darren L Dahly (6), Roisin Connolly (1,2)

1. *Cancer Research @UCC, College of Medicine and Health, UCC, Cork.*

2. *Department of Medical Oncology, CUH / UCC Cancer Centre, Cork University Hospital, Wilton, Cork.*

3. *Pathology Department, CUH / UCC Cancer Centre, Cork University Hospital, Wilton, Cork.*

4. *School of Public Health, UCC, Cork.*

5. *Department of Economics, Cork University Business School, UCC*

6. *HRB Clinical Research Facility, University College Cork, Cork, Ireland*

Background: There are a growing number of licensed targeted therapeutics for advanced breast cancer and regulatory approval for some is based on liquid biopsy assessment. In-house capabilities for liquid biopsy are now available in Cork University Hospital, however liquid biopsy is not currently used in the setting of advanced breast cancer in Ireland.

Trial design: This phase II single arm prospective investigational study will recruit patients with advanced/unresectable breast cancer. The primary objective is to characterise the oncogenic-driver mutations and other co-variants in plasma and tissue of patients with advanced breast cancer in Ireland. Secondary objectives include to assess the concordance of liquid biopsy results compared to tissue genotyping, to evaluate the clinical relevance of genomic alterations detected by liquid biopsy in terms of actionability and potential impact on treatment selection, and to evaluate associations between genomic alterations and clinical outcomes in patients with advanced breast cancer. Exploratory objectives include to evaluate practical and operational parameters associated with implementing liquid biopsy in routine care, and to assess patient and clinician perception and acceptability of a multi-platform genomic profiling. Liquid biopsy samples will be taken at enrolment and any point of disease progression. Microbiome evaluation will include both blood and stool samples and will be compared with that of a paired household contact. Statistical analysis will be largely descriptive in nature. Fifty patients will be recruited over 2 years.

Current status: Ethical approval has been sought from the CREC for this University College Cork sponsored trial. Those interested can contact uccctg@ucc.ie

Risk of Myocardial Infarction Across Coronary Artery Disease Severity Assessed by Coronary CT Angiography: A Systematic Review and Meta-Analysis

Akshita Malhotra (1), Maheen Junaid (1), David Kerins (2,3)

1. School of Medicine, University College Cork, Cork, Ireland

2. Department of Pharmacology and Therapeutics, University College Cork, Cork, Ireland

3. Department of Cardiology, Mercy University Hospital, Cork, Ireland

Introduction: Coronary computed tomography angiography (CCTA) enables non-invasive assessment of coronary artery disease (CAD), including obstructive and non-obstructive plaque burden. While obstructive CAD is an established predictor of myocardial infarction (MI), the prognostic significance of non-obstructive disease remains incompletely defined.

Aim: To evaluate the association between CCTA-defined CAD severity and MI risk.

Methods: A systematic review and meta-analysis was conducted according to PRISMA 2020 guidelines. PubMed, Embase, and Web of Science were searched to 22 September 2025. Observational cohort studies reporting MI risk stratified by CCTA-defined CAD severity were included. Five studies reporting adjusted hazard ratios (HRs) were pooled using random-effects meta-analysis, while seven additional studies were synthesised narratively. Risk of bias was assessed using the Newcastle-Ottawa Scale.

Results: Twelve studies met the inclusion criteria. Compared with no CAD, non-obstructive CAD was associated with increased MI risk (pooled HR 2.36, 95% CI 1.97–2.82; $I^2=0\%$). Obstructive CAD conferred substantially higher risk (HR 4.00, 95% CI 2.34–6.83; $I^2=87\%$). Vessel-based analyses demonstrated elevated risk with increasing disease extent, with HRs of 5.57, 7.55, and 7.11 for one-vessel, two-vessel, and three-vessel/left main disease, respectively. Narrative synthesis showed consistent associations across studies. Study quality was high (Newcastle-Ottawa Scale 7–9/9).

Conclusions: Non-obstructive CAD detected by CCTA is associated with a twofold increase in MI risk, while obstructive and multivessel disease confer greater risk. These findings support a continuum model of CAD risk beyond binary stenosis thresholds.

Real-time Measurement of Bioaerosols in an Irish Community Dental Clinic

Danielle McGeown (1), Stig Hellebust (2), Mike Prentice (3,4), Cormac Gahan (3,4), David O Connor (5), Catherine Gallagher (6), Máiread Harding (1)

1. Oral Health Service Research Centre, Cork University Dental Hospital, University College Cork

2. School of Chemistry, University College Cork

3. School of Microbiology, University College Cork

4. APC Microbiome, University College Cork

5. School of Chemical Sciences, DCU

6. Cork University Dental Hospital, University College Cork

Background/Objective:

Many dental procedures are considered aerosol-generating procedures (AGPs) producing saliva contaminated bioaerosol with the potential for disease transmission. The objective of this observational study was to investigate the bioaerosols created during routine community-based dental care provision for a diverse patient demographic.

Methods:

Continuous real-time bioaerosol monitoring was conducted using a Waveband Integrated Bioaerosol Sensor (WIBS)-4a (Droplet Measurement Technologies, Colorado, USA) instrument placed 0.5metre to the right of the dental chair during routine dental care, over a 2-week period. This instrument identifies the fraction of aerosol particles that are of biological origin using laser-induced fluorescence technique. The study was conducted in a community dental clinic in Cork. The bioaerosol recording was accompanied by a clinical care record which recorded patient demographics and clinical procedure details.

Results:

Sixty-five patients received a range of dental treatments during the study period. Mean patient age was 26.8 years (SD 20.2, range 5-92 years). Fluorescent bioaerosols were a feature of all clinical care. Significant increases in fluorescent particle count, fluorescent intensity (biological content) and particle size were noted firstly during clinical consultations ($p<0.001$) and secondly during AGPs ($p<0.001$). Significantly higher fluorescent intensity was observed when low volume evacuation was used compared to high volume evacuation or rubber dam isolation during AGPs ($p<0.001$).

Conclusions:

Bioaerosols were associated with all clinical care including dental consultations which did not involve AGPs. Highest bioaerosol levels were noted when patients could not tolerate aerosol mitigation techniques due to age, anxiety or disabilities, highlighting the need to consider alternative methods to improve air quality.

Implementing a Knowledge Translation Impact and Dissemination plan to maximise breastfeeding with people and populations

Dr. Margaret Murphy (1), Dr. Aoife Long (1), Dr. Karen Matvienko-Sikar (2), Heather Morgan (1), Prof. Patricia Leahy-Warren (1)

1. School of Nursing and Midwifery, University College Cork, Ireland

2. School of Public Health, University College Cork, Ireland

The Max/Bf Research programme is investigating how breastfeeding can be normalised and supported in Ireland for sustainable population health and wellbeing. From the outset of the research, key stakeholders including health care professionals, policymakers and the Public & Patient Involvement (PPI) contributors have been involved with the aim of ensuring that the research findings are useful and implemented. A participatory action research (PAR) approach was used to co-produce a knowledge translation, dissemination, implementation (KTDI) and evaluation plan with 27 healthcare professionals, mothers, researchers, policymakers, and the Max/Bf team as part of a 7-step process. The KTDI planning template was developed based on the Evidence-Based Model for the Transfer & Exchange of Research Knowledge (EMTREK); the Barwick Knowledge Translation Planning Template; and the making Visible the ImpaCT Of Research (VICTOR) tool. Informal meetings were conducted with eight Work Package (WP) leads/co-leads to inform plan development; identify potential overlaps/synergies between WPs; and potential challenges in project KTDI. Development of the KTDI plan has enabled documenting opportunities for KTDI and tracking and monitoring of activities. The next step for this translational research is the mid-point participatory action meeting scheduled to take place in late 2026. This will be informed by a review of emerging project evidence that will examine who was engaged with, when and how. The presentation will outline the 7-step process for KTDI, and the emerging evidence of how the plan has been used to inform and monitor knowledge translation for impact.

Patient behaviour during conscious sedation with midazolam; an analysis of the gut and oral microbiome.

Síofra Murphy (1), Paul Brady (1), Caroline McCarthy (1) Catherine Stanton (2), R. Paul Ross (3)

1. Dental Surgery Department, Cork University Dental School and Hospital, University College Cork.

2. Teagasc Food Research Centre, Moorepark, Fermoy, Co. Cork.

3. APC Microbiome Ireland, University College Cork.

Background:

Conscious sedation in dentistry aids anxiolysis during challenging procedures. Midazolam is the preferred drug; however, administration can produce disinhibition where patients become talkative, emotional and move excessively. The cause is debated and unknown. The gut microbiome forms part of the unconscious system of behaviour regulation, and an alteration may affect brain function neurologically, impacting anxiety. This brain-gut-microbiota axis allows communication between gut and brain, whilst regulating neurotransmitters such as gamma-aminobutyric acid (GABA). Midazolam acts by potentiating the neural inhibitory effect of GABA.

Aims:

This observational study aims to analyse the gut and oral microbiome of patients undergoing conscious sedation with midazolam for oral surgery, to assess if a relationship exists between the microbiome and sedation response and co-operation. It also aims to explore if general and dental anxiety levels are linked to altered microbiome, along with baseline demographics, smoking/alcohol status and medical conditions.

Methodology:

100 patients aged 18-50 attending Cork Dental School are being recruited. Baseline oral health, dental anxiety, general anxiety and food-frequency are all being recorded. Microbiome profiles (shotgun analysis) of faecal and oral samples will be compared across participants. Statistical associations will be explored between microbial diversity, taxonomic composition and functional pathways with sedation and cooperation parameters.

Results & implications:

30 patients have been recruited to date with collection ongoing. There is a paucity of research evidence in dental sedation, particularly behavioural studies. Through microbiota analysis, we hope to be better placed to understand the potential role of the gut microbiome in behavioural patterns during sedation.

A National Service Evaluation of Dietetic Supports in Irish Cancer Treatment Centres: Malnutrition Risk, Nutrition-Impact Symptoms, Nutrition Concerns and Access to Dietetic Care.

Doireann Ní Chonaill (1), Erin S. Sullivan (2), Veronica McSharry (3), Niamh Rice (4), Jennifer Feighan (5), Aoife M. Ryan (1) and Irish Nutrition & Dietetic Institute (INDI)'s Dietitians' Cancer Strategy Working Group.

1. *School of Food & Nutritional Sciences, University College Cork, Cork, Ireland,*
2. *Department of Nutritional Sciences, King's College London, London, United Kingdom.*
3. *Irish Cancer Society, Dublin, Ireland*
4. *Irish Society for Clinical Nutrition & Metabolism, Dublin, Ireland*
5. *Irish Nutrition & Dietetic Institute, Dublin, Ireland*

Background: Cancer-related malnutrition is common, with significant clinical impacts. Timely access to dietetic care is integral to manage nutrition-impact symptoms(NIS) & weight/muscle loss. This national service evaluation aimed to describe the prevalence of nutritional issues and access to dietetic supports.

Methods: A patient experience survey was administered across 13 clinical sites and collected information on malnutrition risk, NIS, nutrition concerns & access to dietetic care.

Results: A total of 1,707 patients participated(51% male; median age 64 years). The most common cancer types were gastrointestinal(27%), haematological(22%) and breast(16%). Most were receiving active treatment(83%), and 33% had metastatic disease. Per BMI, 58% were overweight/obese and 5% underweight. MUST screening identified 12% at medium and 15% at high malnutrition risk, while PG-SGA-SF classified 25% at medium and 19% at high risk. Involuntary weight loss over six months was common; 14% reporting $\geq 5\%$ loss and 14% reporting $>10\%$ loss. Loss of muscle size(63%) and strength(71%) was frequently reported. The most common NIS were anorexia(19%), fatigue(17%) and nausea(15%). Of those with diet-related problems(36%), 43% rarely/never had access to a dietitian when needed. 37% wanted more support with diet/eating problems, yet 33% were rarely/never asked about these during healthcare visits. 40% of patients at high nutritional risk on PG-SGA-SF, and 33% at high risk on MUST never received dietetic care. Among patients who accessed dietetic care, 93% found it helpful.

Conclusion: This service evaluation identified high prevalences of malnutrition risk, NIS, and loss of weight and muscle in patients receiving cancer treatment, with insufficient access to dietetic supports.

The Lived Experience of Suicidal Thoughts and Behaviours in Adults with Cancer

Doireann Ní Dhálaigh (1), Zubair Kabir (1), Paul Corcoran (1,2), Eugene Cassidy (1,3), Ella Arensman (1,2), Fahmi Ismail (3)

1. *School of Public Health, University College Cork*

2. *National Suicide Research Foundation*

3. *Cork University Hospital*

Background: People with cancer are at a higher risk of suicide. While quantitative studies have identified risk factors including cancer type, stage, distress, pain, and hopelessness, the lived experience of suicidality in cancer is under-researched.

Methods: To date, 10 participants have been recruited in this ongoing study using purposive sampling. Inclusion criteria are a current cancer diagnosis and a recent episode (within 3 months) of suicidality, identified through mental health staff at Cork University Hospital. Semi-structured interviews explore physical and mental health before and after the cancer diagnosis and experiences of suicidality, analysed using reflective thematic analysis.

Preliminary Results: Four themes were constructed. Cancer magnified everything, intensifying existing vulnerabilities rather than acting as a single, discrete cause. Participants also described needing a human they could trust to look after them, a specific person rather than a system. Suicidal ideation itself functioned as a way of coping, a reassuring sense that an escape remained available, which made the thoughts feel protective and logical. For those who moved to attempting suicide, it was described as losing control and impulsive, in the context of a time-limited overwhelm.

Implications: Findings point to where care can intervene. Limiting access to means during periods of impulsive overwhelm, building trust through a consistent individual practitioner, and adequate palliative care that addresses both current pain and fear of future pain.

Baseline Characteristics, Quality of Life, and Early Ladder Progression in Children with IgE-Mediated Milk and Egg Allergy: A Pilot Cohort Study

Andrew O'Brien (1), Jessica Naude (1), Caoimhe Cronin (1), Aoife Gallagher (1), Molly Cremin (1), Sathbh Hurley (1), Juan Trujillo (1)

1. Department of Paediatrics and Child Health, School of Medicine, University College Cork, Ireland

Background: Cow's milk protein allergy (CMPA) and hen's egg allergy are among the most common food allergies in childhood and leading causes of anaphylaxis in early life. Graded dietary introduction using milk and egg ladders has emerged as an alternative to avoidance. This study aimed to characterise baseline characteristics, quality of life, and ladder progression in children commencing the milk and/or egg ladder, with prospective follow-up evaluating an e-diary as a monitoring tool.

Methods: A prospective pilot cohort study was conducted at the paediatric allergy service in Cork University Hospital. IgE-mediated CMPA and/or egg allergy was diagnosed based on clinical history, skin prick testing and/or serum-specific IgE. Children with non-IgE-mediated allergy or comorbidity were excluded. Primary outcomes were baseline characteristics and ladder progression via parent-reported e-diary; secondary outcomes included quality of life and adverse reactions.

Results: Twenty children were included (mean [SD] age 12.4 [8.8] months; 65% male). Fourteen (70%) were on the egg ladder, 2 (10%) the milk ladder, and 4 (20%) both. Immediate reactions occurred in 19 children (95%); urticaria in 94.7% and anaphylaxis in 10.5%. Child-centred quality-of-life burden was 0.86 (SD 1.49; scale 0–6); parental risk perception was 1.82 times greater. Eleven families (55%) submitted e-diary entries over 8.36 months. Five children reached Step 2 of the egg ladder (mean 2.32 months); no milk ladder progress was recorded. Ladder-related symptoms occurred in 44.4%.

Conclusions: E-diary reporting enabled remote monitoring but engagement was limited; improving digital participation is essential for evaluating ladder outcomes and predictors of tolerance.

Living with Palliative Care Needs in the Community: Experiences of Completing Future Care Plans

Elizabeth O'Connell (1), Caroline Kilty (1), Martina O' Reilly (2), Siobhan Masterson (3), Siobhan Fox (6), Feargal Twomey (4), Siobhan Murphy (5), Sara Leitao (5), Neil Fullerton (5), Nicola Cornally (1)

1. *School of Nursing and Midwifery, University College Cork, Ireland*

2. *HSE, Limerick, Ireland*

3. *NAS, Dublin, Ireland*

4. *Milford Hospice, Limerick, Ireland*

5. *Irish Hospice Foundation, Dublin, Ireland*

6. *School of Medicine, University College Cork, Ireland*

A Future Care Plan (FCP) is a structured process enabling individuals to reflect on their goals, values, and preferences for future treatment in anticipation of potential loss of decision making capacity (HSE, 2019). The term encompasses Advance Care Planning (ACP), Advance Care Directives (ACD), Treatment Escalation Plans (TEPs) and Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) decisions (Mann et al., 2025). FCPs are not legally binding (Taubert & Bounds, 2022), and engagement remains limited due to poor understanding, cultural influences, and discomfort discussing end of life issues (Rumbold & Aoun, 2021; McDermott & Selman, 2018). Understanding the experiences of people who complete FCPs is therefore critical to delivering community based palliative care aligned with what matters most to individuals and families.

This qualitative descriptive study formed part of a wider evaluation of FCP implementation for people with palliative care needs. Participants (n=17) who had completed an FCP between May and November 2025 in community settings were invited to complete a questionnaire about their experiences. Descriptive statistics and thematic analysis were used to analyse the data.

Most participants expressed a preference for receiving care at home. Completing an FCP was viewed positively, with individuals and families feeling heard and understood by healthcare professionals. The overarching theme, Supportive Empowerment, reflected how participants maintained a sense of control while confronting the distress associated with terminal illness. FCPs were widely regarded as valuable, helping people prepare for future healthcare decisions despite the sensitivity of the topic

Understanding perspectives on designing and implementing a healthcare application to support radiotherapy patients: a qualitative study.

Alana Murphy-Dooley (1), Annemarie Devine (1), Dr. Andrew England (1), Theresa O'Donovan (1), Prof. Aisling Barry (1,2,3)

1. *Discipline of Medical Imaging and Radiation Therapy, School of Medicine, University College Cork, Cork, Ireland*

2. *Radiation Oncology Department, Cork University Hospital, Cork, Ireland*

3. *Cancer Research@UCC, 4th Floor Western Gateway Building, Western Road, Cork, Ireland*

Introduction: Cancer treatment involves a multidisciplinary team and presents numerous challenges for patients and their families [1]. Treatments while effective, can have significant psychological impacts, including increased anxiety and reduced quality of life (QoL) [2-3]. Patients often report feeling overwhelmed and under informed during their treatment journey. A healthcare app that integrates reliable information, support services, and guidance could help patients navigate radiotherapy more confidently, improving their overall experience. This study aimed to explore perceptions of both healthcare professionals and individuals with lived experience of radiotherapy regarding the development and implementation of a healthcare app designed to support individuals undergoing radiotherapy.

Methods: This ethically approved qualitative study recruited participants via email, targeting healthcare professionals involved in radiation therapy and individuals with lived experience of radiotherapy. Over a seven-week period (February–April 2025), semi-structured interviews were conducted online using Microsoft Teams. Participants included radiation therapists (RTTs), radiation oncologists (ROs), and individuals with lived experience of radiotherapy. The interviews explored perceptions of essential app features, potential benefits, and drawbacks. Data were transcribed and analysed using Braun and Clarke's thematic analysis, supported by NVivo software (V:14) [4].

Results: Ten participants (seven healthcare professionals and three individuals with lived experience of radiotherapy) contributed rich insights. Key features identified for the app included access to supportive information, educational resources, and practical guidance—such as illustrative videos, electronic patient leaflets, and advice on managing side effects. Participants believed these features could reduce anxiety, improve understanding, and empower patients throughout their treatment. The app was also seen as a tool to enhance communication and continuity of care.

Conclusion: Findings align with existing research on cancer support apps, which show positive impacts on patient wellbeing. Participants expressed strong interest in an app that offers clear, accessible, and timely information. The contrast between current information delivery methods and the perceived benefits of a digital support tool highlights the potential value of implementing such an app. Incorporating patient and clinician perspectives into its design could lead to a more supportive, patient-centred radiotherapy experience.

References:

1. Kočo L, Weekenstroo HHA, Lambregts DMJ, Sedelaar JPM, Prokop M, Fütterer JJ, et al. The Effects of Multidisciplinary Team Meetings on Clinical Practice for Colorectal, Lung, Prostate and Breast Cancer: A Systematic Review. *Cancers*. 2021 Jan;13(16):4159.
2. Caruso R, Nanni ,Mara Giulia, Riba ,Michelle B., Sabato ,Silvana, and Grassi L. The burden of psychosocial morbidity related to cancer: patient and family issues. *International Review of Psychiatry*. 2017 Sep 3;29(5):389–402.
3. Costa DS, Mercieca-bebber ,Rebecca, Rutherford ,Claudia, Gabb ,Liam, and King MT. The Impact of Cancer on Psychological and Social Outcomes. *Australian Psychologist*. 2016 Apr 1;51(2):89–99.
4. Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101

Factors influencing a physiotherapist's approach to the management of a person with shoulder pain – a focus group study

Aidan O'Shea (1), Jonathan Drennan (2), Helen Slater (3), Julius Sim (4), Chris Littlewood (5), Joseph G. McVeigh (1)

1. School of Clinical Therapies, University College Cork, Cork, Ireland.

2. School of Nursing, Midwifery and Health Systems, College of Health and Agricultural Sciences, University College Dublin, Dublin, Ireland.

3. Curtin School of Allied Health, Curtin University, Perth, Australia.

4. School of Allied Health Professions, Faculty of Medicine and Health Sciences, Keele University, Keele, United Kingdom.

5. School of Health & Society, University of Salford, Salford, United Kingdom.

Background: Management of shoulder pain remains challenging, with limited evidence supporting any single intervention. Self-management has been proposed as an important component of care, yet clinicians' therapeutic approaches may influence patients' ability to self-manage. This study explored the factors influencing physiotherapists' approaches to managing people with shoulder pain and the impact of COVID-19 on clinical decision-making.

Methods: Experienced physiotherapists who regularly managed shoulder pain participated in online focus groups. Participants were purposively sampled to ensure diversity in clinical settings, experience, and backgrounds. Discussions were audio-recorded, transcribed verbatim, and analysed using reflexive thematic analysis.

Results: Four themes were identified. Clinical reasoning as contingent and context-sensitive described how treatment decisions were shaped by patient presentation, psychosocial influences, previous treatment experiences, and contextual factors. Exercise as the cornerstone of therapeutic approach reflected the central role of exercise in treatment, with clinicians viewing it as the intervention most likely to support long-term outcomes. Education and empowerment as enabling strategies highlighted the importance of developing patient understanding, confidence, and self-efficacy to facilitate engagement in rehabilitation and self-management. Navigating patient expectations captured the challenges of balancing evidence-informed care with expectations for imaging, injections, hands-on treatment, and rapid symptom relief. Participants also described how the COVID-19 pandemic accelerated the use of remote consultations, increased reliance on patient self-management, and influenced communication strategies.

Conclusions: Physiotherapists' approaches to shoulder pain are influenced by clinical, contextual, and patient-related factors. Exercise, education, and patient empowerment underpin practice, while managing patient expectations remains a key challenge. These findings may help inform self-management-focused care for people with shoulder pain.

Prognostic Impact Of Interphase FISH In Multiple Myeloma: Single-Center Irish Experience

Tushar Pramod (1), Ahmed Bannaga (1), Senthil Kumar (1), Brian Hennessy (1), Ezzat El Hassadi (1)

1. Department of Haematology, University Hospital Waterford

Background:

Interphase fluorescence in situ hybridization (iFISH) identifies recurrent chromosomal abnormalities in multiple myeloma (MM) that have strong and reproducible associations with progression-free and overall survival. This study provides real-world, population-specific insight into FISH-based MM biology within the Irish patients.

Aims:

To evaluate the frequency and prognostic impact of MM FISH abnormalities in our institution and compared with reported literature.

Methods:

69 patients with multiple myeloma were included. Electronic medical records and laboratory reports were used to collect demographic data, disease subtype, IPI score, FISH abnormalities. IMWG prognostic criteria were used for FISH-based disease risk stratification and compared with the reported data and genomic subgroups were examined for prognostic impact. Treatment regimens and responses were assessed using IMWG response criteria. Survival analyses were performed using Prism v10.06, with statistical significance (P value < 0.05) assessed using the log-rank (Mantel–Cox) test.

Results:

69 patients with multiple myeloma were analysed. FISH analysis was successful in 67 cases. Median age at diagnosis was 68 years, with a male predominance. IgG myeloma was the most common subtype (65%). Cytogenetic abnormalities were identified in 54% of patients, most frequently gain of 1q21 (33.3%). High-risk cytogenetics per IMS 2025 criteria were present in 26.1%. Median overall survival was significantly inferior in high-risk versus standard-risk FISH patients (48 vs 88 months, $p=0.016$) and in patients aged >65 years versus <65 years (74 vs 127 months, $p=0.024$).

Summary/Conclusion:

This study reports real-world outcomes of patients with multiple myeloma treated at a regional Irish cancer centre, with a focus on the cytogenetic landscape and its prognostic significance. The demographic characteristics and distribution of genetic abnormalities observed in this cohort are comparable to those described in large international series.

Understanding Psychological Factors influencing Eating Behaviours in Overweight or Obese Adults with Cystic Fibrosis: A Systematic Scoping Review

Ciara Quigney 1, Tamara Vagg 1,2,3, Abby Sinclair 1, Karen Cronin 1, Barry J. Plant 1,2,3

1. Cork Centre for Cystic Fibrosis (3CF), Cork University Hospital, University College Cork, Wilton, Cork, Ireland.

2. The HRB funded Clinical Research Facility, University College Cork, Cork, Ireland.

3. Department of Medicine, University College Cork, Cork, Ireland.

The nutritional management of cystic fibrosis has shifted markedly in recent decades. Historically, care centred on preventing malnutrition through high fat, high calorie diets, which improved BMI, lung function, and survival. Earlier diagnosis, pancreatic enzyme therapy, and structured dietary guidance have helped many people with CF (pwCF) achieve healthier weight status. As a result, underweight prevalence has fallen. However, overweight and obesity are now increasing, driven by broader population trends and the introduction of CFTR modulators such as elexacaftor/tezacaftor/ivacaftor (ETI), which can cause rapid weight gain.

Recent registry data indicate that a substantial proportion of adults with CF now fall into the overweight category. Emerging evidence suggests that energy-dense, nutrient-poor dietary patterns may elevate metabolic risk. Although long-term consequences of overweight in CF are still being explored, potential complications include impaired glucose tolerance, diabetes, hypertension, hyperlipidaemia, sleep apnoea, and poorer transplant outcomes. Psychological effects—such as depression, anxiety, shame, and weight-related stigma—may further reduce engagement in physical activity, a core component of CF management.

Reflecting these concerns, recent European CF guidelines now recognise overweight and obesity as emerging clinical challenges. Eating behaviour is shaped by early family environments, learned habits, emotional contexts, and external pressures. For pwCF, long-standing high-calorie recommendations, disrupted hunger cues, and ingrained eating patterns can make transitioning to healthier diets difficult, particularly as appetite often improves with CFTR modulators. Despite these challenges, the psychological factors influencing eating behaviour in pwCF who are overweight or obese remain poorly understood. This scoping review aims to identify and synthesise these drivers to inform future multidisciplinary interventions and support strategies.

Identifying Patient Reported Care Needs in an Adult Cystic Fibrosis Service

Ciara Quigney 1, Abigail Sinclair 1, Tamara Vagg 1, Claire Fleming 1, Mairead McCarthy 1, James Dorgan 1, Edel Madden 1, Karen Cronin 1, Fiona Holmes 1, Vicky Matthews 1, Sarah Twohig 1, Kevin F. Deasy 1,2,3, Hisham Ibrahim 1,2,3, Barry J. Plant 1,2,3

1. *Cork Centre for Cystic Fibrosis (3CF), Cork University Hospital, University College Cork, Wilton, Cork, Ireland*

2. *The HRB funded Clinical Research Facility, University College Cork, Cork, Ireland*

3. *Department of Medicine, University College Cork, Cork, Ireland*

Background: Recent publications from the European Cystic Fibrosis Society highlight major progress in Cystic Fibrosis (CF) management and quality of life, while recognising that people with CF (pwCF) continue to face evolving challenges. Previous studies emphasise that adults with CF wish to discuss issues such as fatigue, work or study, reproductive health, and disease progression with their multidisciplinary teams (MDTs).

Aims & Objectives: The Cork Adult CF Centre designed a digital mixed-methods survey to identify key areas where pwCF may require additional information/support, and their preferred formats for receiving it.

Method: The survey, developed and validated collaboratively with the CF MDT through several meetings, was distributed via SMS to 180 adult pwCF (pre- and post-transplant). Responses were anonymised.

Results: 80 pwCF responded to the survey. All 14 topics presented were considered important. See Table 1. for topic breakdown, response number, mean ages, positive and negative topic ratings. Certain topics were identified as particularly relevant to specific subgroups, such as Perimenopause and Menopause (n=16 women; mean age 41). Across all respondents, one-to-one sessions were the preferred format for receiving support and information.

Discussion & Conclusions: These findings underscore the continued importance of the MDT in addressing the holistic needs of pwCF. As CF care evolves, attention to changing lived experiences remains essential.

Evaluating the Utility of Cerebrospinal Fluid Procalcitonin for the Diagnosis of Neurosurgical Infection

Niamh Reidy (1), Sadhbh McLoughlin (1), Kwong Soon Fong (1), Briedgeen Kerr (2), Caroline Joyce (2), Patrick J Stapleton (1,3)

1. Department of Clinical Microbiology, Cork University Hospital, Cork, Ireland

2. Department of Clinical Biochemistry, Cork University Hospital, Cork, Ireland

3. Department of Pathology, School of Medicine, University College Cork, Cork, Ireland

Introduction: Patients undergoing neurosurgical procedures and with indwelling neurosurgical devices such as external ventricular drains, ventriculoperitoneal shunts, and lumbar drains, are at risk of device infections and post-neurosurgical meningitis/ventriculitis. Diagnosis is challenging due to nonspecific clinical features postoperative inflammatory cerebrospinal fluid (CSF) changes and reduced microbiological yield following empiric antimicrobial exposure. CSF procalcitonin (PCT) has emerged as a potential biomarker for distinguishing bacterial infection from aseptic inflammation.

Methods: We performed a retrospective observational study evaluating CSF PCT on stored CSF samples from neurosurgical patients in Cork University Hospital between January – May 2026. Samples were classified by reviewer adjudication into definite/probable infection, possible infection, or no infection [Table 1]. Diagnostic performance characteristics were assessed, and p-values were calculated using Mann-Whitney U tests.

Results: 49 CSF samples from 20 patients were analysed, 21/49 (41%) samples were classified as definite/probable infection, 4/49 (8%) as possible and 24/49 (49%) as no infection. Median CSF PCT levels were significantly higher in definite/probable infection compared with non-infected episodes (0.09ng/mL vs 0.02 ng/mL, $p < 0.001$) [Table 2]. Mean CSF PCT was 0.239ng/mL in definite/probable infection, compared with 0.045ng/mL in non-infected/possible infection. Using a CSF PCT cutoff of ≥ 0.1 ng/mL, sensitivity was 48%, specificity 93%, positive predictive value 83%, and negative predictive value 70%. Serum CRP did not significantly differ between groups ($p = 0.94$).

Discussion: CSF PCT may have utility as an adjunctive biomarker for diagnosis of neurosurgical infection where conventional CSF parameters are difficult to interpret. High specificity at a cutoff of ≥ 0.1 ng/mL suggests elevated CSF PCT may support diagnosis of bacterial CNS infection, although sensitivity remained modest. Larger prospective studies are required to validate diagnostic thresholds and define the role of CSF PCT alongside conventional diagnostics.

Table 1. Definitions used for reviewer adjudication of neurosurgical CNS infection status

Classification	Definition
No infection	Alternative diagnosis favoured, and no convincing clinical, microbiological, or radiological evidence of CNS infection
Possible infection	Some features suggestive of infection (e.g. CSF pleocytosis), but insufficient evidence for probable/definite infection
Probable infection	Clinical/radiological features and CSF findings consistent with infection, with antimicrobial treatment initiated despite negative microbiology results
Definite infection	Positive CSF culture, 16S rRNA PCR, or microbiological confirmation from a related sterile site consistent with CNS infection

Table 2. Comparison of inflammatory markers between definite/probable neurosurgical CNS infection and non-infected episodes

Variable	Definite/Probable Infection Median	No Infection Median	p-value
CSF procalcitonin (ng/mL)	0.09	0.02	< 0.001
Serum CRP (mg/L)	13.85	12.1	0.795
CSF WCC (cells/ μ L)	14	3.5	0.049

Advanced Spectral and Complexity Analysis of Continuous Cerebral Oxygenation Signals (rcSO₂) of Extremely Preterm Infants Diagnosed with Intraventricular Haemorrhage

Hoyang Seo (1), Fiona McDonald (1,2), Eugene Dempsey (1,2,3)

1. School of Medicine, University College Cork, Cork, Ireland

2. INFANT Research Centre, University College Cork, Cork, Ireland

3. Department of Neonatology, Cork University Maternity Hospital, Cork, Ireland

Extremely preterm infants (<28 weeks' gestation) face high risks of intraventricular haemorrhage (IVH). While regional cerebral oxygenation (rcSO₂) is a standard metric, threshold-based NIRS-guided treatments show no effect on severe brain injury or death. Advanced signal processing of rcSO₂ may instead reveal early physiological instabilities. This retrospective case-control study characterised rcSO₂ variability to determine if advanced signal features differ in infants later diagnosed with severe IVH. We hypothesised that infants developing severe IVH exhibit higher rcSO₂ complexity and variability within the first 72 hours of life.

Data from 93 extremely preterm infants (severe IVH=16; non-IVH=77) were derived from the SafeBoosC-III trial. Pseudo-anonymised rcSO₂ datasets, initiated within 6 hours of birth, provided epochs for analysis. Primary outcomes were advanced rcSO₂ features across five frequency bands, alongside IVH outcomes and secondary prolonged desaturation event (PRD) features.

Advanced signal dynamics were significantly altered in the IVH group. Infants with severe IVH exhibited higher rcSO₂ envelope kurtosis (mixed-effects ANOVA, $p < 0.05$), lower fractal dimension ($p = 0.0010$), and lower instantaneous frequency (IF mean, $p = 0.0031$) compared to infants without severe IVH. IF skewness, envelope SD, and PRD features showed no significant differences ($p > 0.05$).

These findings suggest that cerebral oxygenation patterns differ in infants developing severe IVH, exhibiting increased volatility and decreased structural complexity. This points to a collapse of cerebrovascular autoregulation. Monitoring these spectral and complexity-based features may offer superior clinical foresight for preventing cerebral injury.

Shifting perspectives, shifting strain: How attitudes towards clients with emotion dysregulation mediates clinician burnout after Modular DBT Training

Christopher Shum (1,2), Ashweeja Gowda (1,2), Blaithin Power (1), Emily Boylan (1) Stephanie Wall (1), Ruth O'Driscoll (1,3), Declan O'Shea (1,3), Mary Joyce (1,2), Mary Kells (1,2,3), Alan Fruzzetti (1,2,3), & Flynn, Daniel (3)

1. *National Dialectical Behaviour Therapy Research Team, Old Health Centre, Ballincollig, Cork, Ireland*

2. *National Suicide Research Foundation, Western Gateway Building, University College Cork, Cork, Ireland*

3. *Mental Health Services, Cork Kerry Community Healthcare, Health Service Executive, St. Finbarr's Hospital, Cork, Ireland.*

Dialectical Behavior Therapy (DBT) training provides clinicians with a better understanding of emotion dysregulation. This can improve clinician attitudes towards clients who may have engaged in self-harm and suicidal behaviour, and potentially reduce clinician burnout. However, the processes linking these outcomes have not yet been investigated. This study first examined the effect of a modular DBT training model on clinician burnout and attitudes. The second aim was to test whether the training's effects on clinician attitudes mediated the effect of the training on burnout, and whether the training's effect on burnout, in turn, mediated the training's effect on clinician attitudes. A total of 188 clinicians who attended DBT training completed assessments of attitudes toward clients with emotion dysregulation and burnout at three time points: (1) pre-training, (2) post-training, and (3) 6-month follow-up. Multi-level models found that there was a significant reduction in negative attitudes from baseline to post-training and follow up ($b = -2.62$, $SE = .56$, $p < .001$, $CI [-3.71, -1.52]$). At baseline, 28.4% of participants reported moderate or high work burnout, and 11.5% reported moderate client burnout. However, attending DBT training was not associated with changes in burnout scores over time. Longitudinal mediation analysis found that changes in attitude scores significantly mediated changes in burnout scores but changes in burnout scores did not mediate post-training attitudes. These findings suggest that the training demonstrates a directional, attitude-driven mechanism of change, whereby training-related improvements in attitudes precede and account for subsequent reductions in burnout.

Clinical Outcomes Following Uterine Artery Embolization for Uterine Fibroids: A Retrospective Cohort Study.

Youssef Garras (1), Vivienne Wang (1), Zibi Marchocki (1,2)

1. School of Medicine, University College Cork, Cork, Ireland

2. Obstetrics and Gynaecology, Cork University Maternal Hospital, Cork, Ireland

Introduction: Uterine artery embolisation (UAE) is a minimally invasive treatment for symptomatic uterine fibroids, offering uterine preservation and faster recovery than surgery. Ongoing evaluation of real-world outcomes is important for patient counselling and clinical decision-making.

Aim: To assess clinical outcomes following UAE at a tertiary maternity centre, focusing on complications, reintervention rates, and symptom improvement.

Methods: A retrospective single-centre case series included women of reproductive age undergoing UAE between November 2021 and December 2024. Data were obtained from electronic medical records. Primary outcomes were peri-procedural complications (per Society of Interventional Radiology criteria) and reintervention rates. Secondary outcomes included clinician-documented menstrual symptom improvement.

Results: A total of 114 patients were included (mean age 45.5 years; mean BMI 29.5). Menorrhagia was the most common symptom (79.5%). Median follow-up was 119 days. Complications occurred in 17% of patients, most commonly pain, post-embolization syndrome, fibroid expulsion, and infection. Rare events included small bowel obstruction and fistula. Reintervention occurred in 5.3%. Among 59 patients with available data, 74.6% reported symptom improvement. No significant predictors of complications were identified.

Conclusion: UAE demonstrated a favourable short-term safety profile with low reintervention rates and meaningful symptom improvement. Limitations include missing data, short follow-up, and lack of standardised outcome measures. Further prospective studies are needed for a more robust evaluation of outcomes.

Development and Evaluation of 3D-Printed Polymer Implants for Sustained Delivery of Benznidazole

Sara A. Alshaikh (1), Ciaran Considine (1), Katie B. Ryan (1)

1. School of Pharmacy, University College Cork, Cork, Ireland

Chagas disease is a neglected tropical disease caused by the parasite *Trypanosoma cruzi*. Benznidazole (BZD) remains the primary first-line treatment and has been in clinical use since the 1970s. However, current therapy requires prolonged oral administration over 60-90 days and is frequently limited by adverse effects and poor patient adherence. Long-acting, drug-loaded implants offer a potential alternative by reducing dosing burden and improving treatment outcomes.

BZD-PCL blends (20, 30, and 50% w/w) were prepared by melt mixing and 3D-printed as 40×2 mm rods using a BIOX2 CELLINK 3D-printer. BZD solubility and stability were assessed using UV-Vis spectrophotometry. Thermal stability was evaluated using differential scanning calorimetry (DSC) and thermogravimetric analysis (TGA). In-vitro BZD release was evaluated in PBS (pH 7.4, 37 °C) under sink conditions for up to 70 days. Implants were characterised using scanning electron microscopy (SEM) prior to and following 70 days of in-vitro release.

BZD showed poor aqueous solubility (0.175 ± 0.023 mg/mL), but demonstrated appropriate stability in PBS for 70 days. Implants were successfully 3D-printed at all loadings, with increased surface irregularity observed with higher loadings, particularly at 50% w/w. Thermal analysis confirmed drug compatibility with processing temperatures and near-nominal drug loading. The implants demonstrated controlled release at sink conditions, with cumulative release at day 70 between 86.88% and 101.90% for the different implants.

The BZD-PCL implants demonstrated suitable 3D-printability and controlled in-vitro release profiles across different drug loadings, supporting their potential as a sustained release drug delivery platform for the treatment of Chagas disease.

SKOR1 as a novel therapeutic target to combat α -synuclein-induced degeneration using models of Parkinson's Disease.

Lauren Barrett (1)*, Kieran McDermott (2), Aideen M. Sullivan (3), Louise M. Collins (1,4), Gerard W. O'Keeffe (1).

1. *Department of Anatomy & Neuroscience, School of Medicine, University College Cork, Cork, Ireland.*

2. *Graduate Entry Medical School, University of Limerick, Limerick, Ireland.*

3. *Department of Pharmacology & Therapeutics, School of Medicine, University College Cork, Cork, Ireland.*

4. *Department of Physiology, School of Medicine, University College Cork, Cork, Ireland.*

Parkinson's disease (PD) is a neurodegenerative disorder involving α -Synuclein (α -Syn) accumulation and nigrostriatal neurodegeneration. There is an unmet need to identify therapeutic targets for PD, as there are currently no disease-modifying therapies available. Previous analysis highlighted SKI Family Transcriptional Corepressor 1 (SKOR1) as the most upregulated gene in the α -Syn rat model of PD. We hypothesize that SKOR1 knockdown can protect against α -Syn-induced degeneration. SH-SY5Y cells were co-transfected with GFP or GFP- α -Syn plasmids, siRNA for SKOR1 (siSKOR1) or control siRNAs (siSCR) and treated with 6-hydroxydopamine (6-OHDA) or vehicle. Cells were cultured for 72hr, imaged and fixed for immunocytochemistry (ICC). SKOR1 overexpression reduced neurite length, comparable to α -Syn, while also reducing somal area, an early sign of damage, without affecting cellular viability. In contrast, siSKOR1 was neuroprotective against α -Syn-induced degeneration. ICC proved overexpression of α -Syn, knockdown of SKOR1 and revealed that neurite length alterations were not secondary to differences in α -Syn. This neuroprotective effect was not seen using the 6-OHDA cellular model of PD, suggesting a specific relationship between SKOR1 and α -Syn. In terms of mechanisms, using a GFP-Smad reporter construct, we uncovered an inverse relationship between SKOR1 level, and BMP-Smad dependent transcription, with a comparable reduction seen following α -Syn overexpression. In parallel, the midbrain from C57BL6/J mice at various ages are being analyzed to investigate potential expression changes in SKOR1 and related molecules across the lifespan. This provides insights into the actions of SKOR1, highlighting SKOR1 as a novel therapeutic target for PD.

“Finding an inner strength” - a qualitative analysis of the Coping Skills for Addiction Recovery (CoSAR) structured aftercare programme in Ireland.

Michelle O'Toole (1,2), Catherine Raupe (1), Madeline Polcer (3), James O'Shea (4), Eoin Coughlan (1)

1. School of Medicine, Brookfield Health Sciences Centre, University College Cork, Ireland

2. School of Medicine, RCSI University of Medicine and Health Sciences, Dublin, Ireland

3. Ardu Addiction Service, Health Service Executive, St Dymphna's Hospital Carlow, Ireland

4. MindAware Consultancy, Greenbank House, 5 Bridge St, Gibbethill, Waterford

Background and Aims: Substance use disorder is a chronic condition marked by repeated cycles of treatment, abstinence, and relapse. Although primary rehabilitation programmes are well established in Ireland, evidence-based aftercare remains limited. This study examines how the Coping Skills for Addiction Recovery (CoSAR) structured aftercare programme influences participants' rehabilitation.

Methods: We conducted in-person and phone interviews before and after the programme using a participatory approach informed by the Valuing All Voices framework. We analysed 27 pre-programme and 19 post-programme interviews with participants from mixed groups addressing alcohol and drug use disorders, within HSE Social Inclusion–Addiction Services across Dublin North City and West and Dublin North County. Using thematic analysis, we explored participants' experiences and generated an in-depth understanding of the programme's impact.

Findings: Pre-programme interviews produced five themes: early expression and reflective processing; ongoing process and peer support; coping skills and self-regulation; everyday functioning and growth; and programme design and understanding. Post-programme interviews generated four themes: outcomes and impact; mechanisms of change; engagement and experience; and implementation and improvement. Participants reported developing stronger coping and life skills, with activities such as art therapy and mindfulness helping them identify triggers, regulate emotions, and express themselves. They also highlighted areas for improvement but overall, they endorsed the programme.

Conclusions: The COSAR programme supported meaningful growth and enhanced coping abilities. These findings underscore the need to expand evidence-based aftercare and integrate aftercare supports into policy.

Early-life microbiota regulates mitochondrial energetics and stress-axis development in zebrafish

Sauranil Guha 1,2, Koushika Chandrasekaran 1,2, Maria R Aburto 1,3, John F. Cryan 1,3, Jatin Nagpal 1,2

1. APC Microbiome Ireland, University College Cork.

2. Dept of Pharmacology & Therapeutics, School of Medicine, and School of Pharmacy, University College Cork.

3. Dept of Anatomy & Neuroscience, School of Medicine, University College Cork.

Early-life brain development depends on the integration of microbiota-derived signals with host metabolic programmes that support neural circuit maturation. Mitochondria are central to this interface, linking cellular energetics to neurodevelopmental processes that shape circuits involved in stress and social behaviour. Using zebrafish, which combine transparent embryos, rapid development and amenability to microbial manipulation, we investigated whether microbiota depletion from early embryogenesis disrupts mitochondrial health and critical neurodevelopmental milestones.

Microbiota-deficient germ-free embryos were assessed longitudinally across developmental windows, from zygotic genome activation and hatching to larval stages when conserved hypothalamic stress-social circuitry becomes functional. Microbial depletion altered gene-expression programmes during zygotic genome activation and delayed hatching, associated with disrupted thyrotropin-releasing hormone signalling. These developmental changes coincided with impaired mitochondrial energetics, including dysregulated electron transport chain complex expression, reduced oxygen consumption, altered ATP-linked respiration and reduced cellular viability. At later stages, germ-free larvae showed altered expression of genes linked to hypothalamic neurodevelopment and impaired HPA stress-axis outputs. Ongoing rescue experiments are testing microbial-rich media and microbiota-derived metabolite-based approaches.

Together, these findings suggest that microbiota-dependent mitochondrial programming links early microbial signals to developmental timing and hypothalamic maturation, highlighting microbiota as a tractable target for developmental brain health.

From Early Life Diet to Adult Eating Behaviour: Microbiota-Targeted Interventions Shape Healthy Eating in Mice

Saoirse Kelly (1,2), Bram Flipsen (1,2,4), Clara Deady (1,2), Michael Carroll (2,3), Catherine Stanton (2,3), Siobhain M. O'Mahony (1,2), Harriët Schellekens (1,2)

1. Department of Anatomy and Neuroscience, University College Cork, Cork, Ireland

2. APC Microbiome Ireland, Cork, Ireland

3. Teagasc Food Research Centre, Moorepark, Fermoy, Co. Cork, Ireland

4. Aavans University of Applied Sciences, Breda, North Brabant, Netherlands.

The Western diet, characterized by high-calorie foods (1) rich in saturated fats and sugars, is associated with increased risk of metabolic dysfunction later in life (1, 2). Early-life high-fat-high-sugar diet (HFHS-diet) exposure may be particularly disruptive, as this represents a critical developmental window during which appetite regulation, dietary preference and reward pathways are shaped (3). Early-life high-fat diets have been shown to promote long-term changes in dietary preferences and central reward signaling (4,7). Emerging evidence suggests that the microbiota-gut-brain-axis may contribute to the regulation of body weight, appetite and reward behaviours and that microbiota-targeted strategies may help modulate some of the maladaptive behavioural and metabolic effects associated with HFHS exposure (4-6).

We investigated the impact of early-life HFHS-diet exposure on eating behaviour and whether microbiota-targeted interventions can attenuate these effects.

From birth to week 6, male and female C57BL/6J mice were exposed to either control or HFHS-diet, after which all mice were switched to control diet. Both sexes from two of the HFHS groups received microbiota-targeted interventions; postbiotic, or Fructo-Oligosaccharides and Galacto-Oligosaccharides with postbiotic.

Upon later life re-exposure to the HFHS-diet, the mice who received HFHS-diet during early-life showed an increased food preference, motivation and intake for palatable diet in adulthood, with microbiota targeted interventions, particularly postbiotic containing treatments, attenuating this response in both male and female mice, resulting in intake levels closer to controls.

We demonstrate that early-life exposure to a HFHS-diet results in changes in eating behaviours which persist into adulthood, which can be alleviated via microbiota targeted interventions.

The effects of ethanolamine on doxorubicin-induced cardiotoxicity

Réalta Victory(1), Ilaria Mastroianni(1,2), Rneem Bassurah(1), Ellena O' Keeffe(1,3), Dr. Órla P. Barry(1), Dr Róisín Kelly-Laubscher(1).

1. *Department of Pharmacology and Therapeutics, School of Medicine, College of Medicine and Health, University College Cork, Ireland*

2. *University of Milan, Italy*

3. *Department of Oncology, University of Oxford, Oxford, United Kingdom*

Doxorubicin, an anthracycline chemotherapeutic drug, is associated with significant cardiotoxicity. Ethanolamine protects the isolated heart against ischaemia-reperfusion injury; however, whether it can protect against doxorubicin-induced cardiotoxicity(DIC) is unknown.

Male and female C57/Bl6 mice (n=12/group), pretreated with ethanolamine (1.6, 16, or 160 mg/kg), were exposed to acute (20 mg/kg i.p.) or chronic (6 mg/kg/week i.p. for 3 weeks) doxorubicin treatment. After 1 week (acute) or 6 weeks (chronic), cardiac biomarkers and histology were assessed. The effects of ethanolamine pretreatment on DIC in H9c2 cardiomyoblasts and NIH3T3 fibroblasts were also evaluated. Data were analysed using one-way or two-way ANOVA followed by Dunnett's post hoc test. Doxorubicin alone did not cause significant changes in BNP and troponin levels, in the acute or chronic models. However, pretreatment with 16 mg/kg ethanolamine increased serum BNP levels in the chronic model for females only ($p=0.0099$). Ethanolamine pretreatment of fibroblasts significantly increased metabolic activity compared to fibroblasts treated with doxorubicin alone ($p<0.05$) but did not protect cardiomyoblasts. Histological analysis of hearts and in vitro experiments evaluating the effects of oestradiol on ethanolamine's effects in DIC are ongoing.

Ethanolamine increased cardiac stress in females in the chronic model of DIC. While the nonsignificant effect of doxorubicin alone suggests subthreshold exposure in this model, it is possible that the observed cardiac damage in females results from a combined effect of doxorubicin and ethanolamine. Considering ethanolamine is found in the diet, these findings warrant further investigation.

Funding: Little Princess Trust in partnership with CCLG through the CCLG Charity Research Network.

Assessment of the reliability of FFPE tumour tissue as a source of bacterial DNA for metataxonomic studies

Emilene S. Morais¹, Maeve A. Hennessy², Grace Walsh^{1,3}, Erin Crowley^{1,4}, Corina Girleanu^{3,5}, Juliet Barry⁵, Joana Fay⁶, Leonie Young⁶, Mark Tangney^{*1,7}, Roisin M. Connolly^{*1,3}

1. Cancer Research @UCC, College of Medicine and Health, University College Cork, Ireland

2. Dept Breast Medical Oncology, University of Chicago, Chicago, IL

3. Cancer Trials Cork, CUH/UCC Cancer Centre, Cork University Hospital, Cork, Ireland

4. Clinical Research Facility-UCC, University College Cork, Ireland

5. Department of Academic Pathology, Cork University Hospital, Ireland

6. Royal College of Surgeons in Ireland, Dublin, Ireland

7. APC Microbiome Ireland, University College Cork, Ireland

*Co-Last Authors

The microbiota can affect cancer prognosis and treatment response, with tissue-resident bacteria potentially influencing the tumour microenvironment and immune modulation. Formalin-fixed paraffin-embedded (FFPE) tissue represents a vast, clinically annotated resource for microbiome studies. However, low bacterial biomass, contamination and DNA fragmentation limit its suitability. This study assessed the feasibility of using FFPE tumour tissue for bacterial metataxonomic profiling by 16S rRNA gene sequencing.

FFPE archival breast tumour specimens from 23 patients enrolled in protocol NCT01840293 were analysed (18 baseline biopsies and 20 surgical resections). DNA was extracted using an FFPE-optimised protocol, quantified by Qubit fluorometry, and analysed by PCR targeting the 16S rRNA gene V1–V2, V3–V4, and V4 regions, and by qPCR targeting the V6 region. No-template controls (NTC), block-matched tissue-free FFPE matrix, and FFPE agar blocks were included to monitor background contamination. Laboratory procedures minimised contamination, although FFPE specimens were not originally prepared for microbial analysis.

PCR amplification of the 16S rRNA gene V1–V2, V3–V4, and V4 regions yielded insufficient product for downstream analysis, preventing sequencing library generation. qPCR targeting the V6 16S rRNA gene detected bacterial DNA in FFPE tissue samples, matched tissue-free FFPE matrix, and FFPE agar controls, while NTCs showed no amplification. Comparable 16S rRNA gene quantities across all sample types prevented discrimination between bacterial and background signals.

Despite optimisation and contamination-aware laboratory procedures, bacterial DNA signals in tumour samples were indistinguishable from tissue-free controls, potentially reflecting contamination introduced during non-sterile FFPE preparation. These findings highlight FFPE limitations for tumour microbiota analysis.

Respiratory impairment in severe cancer cachexia: a comprehensive characterisation of the novel KPP model of pancreatic ductal adenocarcinoma

Ben T. Murphy (1), Anthony L. Marullo (1), Ken D. O'Halloran (1)

1. Department of Physiology, School of Medicine, University College Cork, Cork, Ireland.

Cancer cachexia is hypothesised to be responsible for 20-30% of cancer-related deaths. Notwithstanding the contribution of respiratory failure toward cancer mortality, there remains a dearth of respiratory-focussed research in this condition. Our objective was to investigate the respiratory phenotype of the novel KPP model of pancreatic cancer cachexia.

Subsequent to phenotype induction and progression, ventilatory capacity during chemo-activation was determined via whole-body plethysmography. Maximal inspiratory pressure was measured in-vivo with contemporaneous electromyogram activity of 8 respiratory muscles during airway occlusion. Diaphragm contractile performance was assessed ex-vivo.

KPP animals lost 23.4% bodyweight. Diaphragm muscle mass was reduced by 43%. Diaphragm absolute isometric force was significantly reduced ($P < 0.0001$), however, specific force was equivalent between groups, indicating preservation of intrinsic function in KPP mice. KPP isotonic maximum shortening velocity was reduced ($P = 0.0035$), contributing toward a 10% deficit in peak power. Ventilatory equivalents were unchanged during hypercapnic-hypoxic exposure, indicating maintenance of KPP ventilatory capacity. Impaired respiratory performance was evident in reduced peak inspiratory pressure ($P = 0.0177$), alongside decreased peak diaphragm electromyographic activity ($P = 0.0029$).

Severely cachectic KPP animals retained sufficient ventilatory capacity to meet metabolic demand. Altered contractile kinetics suggest a compensatory mechanism may have preserved diaphragm force at the expense of shortening velocity, ultimately contributing to dysfunction revealed in peak power production. Despite preserved intrinsic force production, maximal respiratory performance was decreased due to loss of diaphragm mass. Our study revealed respiratory dysfunction in a translational model of cancer cachexia. We will employ a multi-omic approach to delineate molecular mechanisms contributing to diaphragm dysfunction.

Hypothalamic Blood-Brain Barrier Integrity and Autonomic Function Following Early-Life Hypoxia and Gram-Positive Bacterial Challenge in the Neonatal Rat

Anna O' Connell (1), Maria Luis Dias Casacão (1), Karen O' Connor (1), Ken O'Halloran (1), Fiona McDonald (1)

1. Department of Physiology, School of Medicine, University College Cork, Cork, Ireland

Background: Preterm infants frequently require cardiorespiratory support resulting in prolonged hospitalisation, increasing the risk of hypoxia and nosocomial infection respectively. Hypothalamus is a key regulatory of autonomic balance. There is evidence that hypoxia and inflammation alone disrupt blood-brain barrier (BBB) integrity and stimulate glia in this important region.

We aimed to investigate whether chronic intermittent hypoxia (CIHH) and lipoteichoic acid combined with peptidoglycan (LTA+PGN), independently or synergistically, compromise BBB integrity in the paraventricular nucleus (PVN) and supraoptic nucleus (SON), and influence blood pressure in a neonatal rat model.

Methods: Dams and litters were either left at normoxia or placed in an environmental chamber where FiO₂ was manipulated to generate intermittent hypoxia (8%)/hyperoxia (30%)/normoxia (21%) (CIHH) between postnatal day (PND) 3 and 12. On PND13, pups received intraperitoneal saline or LTA+PGN. BBB permeability was assessed via fluorescent tracer extravasation visualised by confocal microscopy. Extra/intravascular fluorescence ratios were quantified in capillaries (n=5–6). Brains were also used for neuroglial characterisation. A separate cohort underwent in vivo systemic blood pressure assessment under urethane anaesthesia (n=3-4).

Results: LTA+PGN increased the extra/intravascular fluorescence ratio in the magnocellular and intermediocellular regions of the PVN (Gas × LTA+PGN, p=0.02 and p=0.01 respectively). Blood pressure was unaffected by either intervention.

Conclusions: LTA+PGN and CIHH increased PVN BBB permeability, but this effect was not additive. The implication of this finding is that it could facilitate central cytokine signalling but was not demonstrated to modulate blood pressure. Further studies will examine the local hypothalamic stress.

Bacillus subtilis Supplementation Preserves Nigrostriatal Integrity in a 6-OHDA Rat Model of Parkinson's Disease.

Joan Omosefe Osayande (1,2), Fionnuala E. Wilson (1,2), Lauren Barrett (2), Louise M. Collins (1), Aideen M. Sullivan (1,2), Gerard W. O'Keeffe (2).

1. *Department of Pharmacology and Therapeutics, School of Medicine, University College Cork, Cork, Ireland.*

2. *Department of Anatomy and Neuroscience, School of Medicine, University College Cork, Cork, Ireland.*

The use of live microorganisms, “probiotics”, as a therapeutic intervention for neurological diseases, including neurodegenerative diseases, has gained increased attention globally. In Parkinson's disease (PD), gut dysbiosis is not only a prominent nonmotor symptom but is also considered to contribute to disease pathogenesis. For instance, transplantation of faecal microbiota from PD patients into the alpha-synuclein overexpressing mouse model induces motor impairments, while probiotic administration has been shown to rescue nigrostriatal dopaminergic neurons and improve motor impairment in PD animal models. Interestingly, *Bacillus Subtilis* protects against alpha-synuclein aggregation and 6-OHDA-induced dopaminergic neuronal injury in *C. elegans*. However, its effects on 6-hydroxydopamine rat model of PD remain unclear. This study investigates neuroprotective effects of *B. Subtilis* in a 6-hydroxydopamine-induced rat model of PD. Adult Sprague-Dawley rats received unilateral stereotactic injections of 6-OHDA, and *B. Subtilis* was administered two weeks before and after surgery. Motor tests and faecal microbiota profiling (at baseline, day 0, and 14), immunostaining (TH, NeuN, Iba-1) were performed. Immunohistochemistry of TH, a dopaminergic neuronal marker, confirmed that *B. Subtilis* protects striatal dopaminergic fibres and dopaminergic neuronal cell bodies in nigral region in 6-OHDA-lesioned rats. In addition, *B. Subtilis* treatment protects against neuronal cell loss in 6-OHDA-lesioned rats using NeuN, a neuronal marker. Furthermore, *B. Subtilis* improved motor performance and reduced nigrostriatal microglial activation in 6-OHDA-lesioned rats. Overall, these findings show that *B. Subtilis* could maintain nigrostriatal integrity and mitigate neuroinflammatory responses following 6-OHDA-induced injury and highlight the therapeutic potential of gut microbiota modulation as a neuroprotective strategy for PD.

Differential $\gamma\delta$ T cell Phenotypes in Proximal and Distal Colon Cancer Tissues

Karla O'Shea (1,2), AnneMarie Cusack (2), Abdulrahman Rudwan (2), Peadar Waters (2), Morgan McCourt (2), Noel Lynch (2), Shane Killeen (2), Michael W. Bennett (2), Saif Al Mandhari (2), Henry Paul Redmond (1,2), Emmet Andrews (1,2), Cathriona Foley (1,2)

1. Department of Surgery, School of Medicine, University College Cork, Ireland

2. Cork University Hospital, Wilton, Cork, Ireland

Unlike $\alpha\beta$ T cells, $\gamma\delta$ T cells (V δ 1&V δ 2 cells) are MHC unrestricted and tissue resident capable of detecting and killing several types of solid tumours in-vitro, including colon cancer (CC) cells. $\gamma\delta$ T cells are targets of immune checkpoint blockade in responsive patients, with HLA-class-I-negative MMR-d CC tumours. Proximal and distal CC differ in their incidence, clinical presentation, molecular characteristics, treatment strategies, and prognosis. Our aim was to characterise the $\gamma\delta$ T cell activation and inhibitory receptors within proximal and distal CC tumours and normal adjacent to tumour (NAT) (≤ 5 cm and ≥ 10 cm from the tumour) colon tissue. Tissues were processed into a single cell suspension for flow cytometry analysis. Proportions of V δ 1 cells were significantly higher in distal colon NAT tissues ≤ 5 cm than in distal tumours (n=10) ($p < 0.05$) relative to proximal tissues, while proportions of V δ 2 cells were significantly higher in distal colon NAT tissues ≥ 10 cm than in distal tumours (n=10) ($p < 0.05$). Relative to proximal tissues, V δ 2 cells expressed significantly more TIGIT in distal tumours than distal NAT tissue (≤ 5 cm and ≥ 10 cm) (n=8) ($p < 0.05$). Both V δ 1 and V δ 2 cells expressed significantly more PD1 in distal tumours than distal NAT tissue (≤ 5 cm and ≥ 10 cm) (n=8) ($p < 0.05$) relative to proximal tissues. There is significantly more NKG2D+PD1+V δ 2 expression in proximal tumours than proximal NAT tissue ≥ 10 cm (n=7) ($p < 0.05$) relative to distal tissues. Proximal tumours express significantly more CD155 than proximal NAT tissue (≤ 5 cm and ≥ 10 cm) (n=7) ($p < 0.05$) relative to distal tissues. $\gamma\delta$ T cells revealed differential location-specific distribution and receptor expression in patients with colon cancer.

ASD-Associated Microbial Metabolites Disrupt Hypothalamic Oxytocin Homeostasis In Vitro

Andrea Pignatelli-Espejo 1,2 , Amelie Tuerling 1 , Gerard McGlacken 4 , Harriet Schellekens 1,2 , Jatin Nagpal 1,3 , and Friederike Uhlig 1,3

1. APC Microbiome Ireland, University College Cork

2. Department of Anatomy and Neuroscience, School of Medicine, University College Cork

3. Department of Pharmacology and Therapeutics, School of Medicine, University College Cork

4. School of Chemistry, University College Cork

Autism spectrum disorder (ASD) is a cluster of neurodevelopmental disorders mainly characterised by core symptoms of social deficits and repetitive/restricted behaviours. Beyond these central symptoms, individuals also present gastrointestinal comorbidities and alterations in gut microbiota composition. Specifically, the aromatic microbial metabolites p-cresol and 4-ethylphenyl sulfate (4EPS) are found at elevated levels in both ASD cohorts and animal models. In parallel, the neuropeptide oxytocin linked to social behaviour has been reported reduced in ASD.

Here, we investigated the direct effects of physiologically relevant increasing concentrations of 4EPS and pCresol - as well as structural analogues, on the expression of oxytocin and its receptor in the murine adult hypothalamic cell line mHypoA-2/28 using qRT-PCR and immunocytochemistry.

Gene expression results did not show any significant changes in oxytocin and oxytocin receptor levels with neither pCresol or 4EPS nor their derivatives. In contrast, immunocytochemistry revealed a significant decrease in oxytocin protein levels after p-cresol (50 μ M) and 4EPS (10 μ M) treatment associated with an increase in cell size. Interestingly, the p-cresol derivative ethyl-phenol did not affect oxytocin levels but also increased cell size.

Together, these results suggest that these microbial metabolites may impair oxytocin homeostasis through translational, post-translational, or secretory mechanisms. This work provides the first steps for unravelling the possible correlation between specific gut-bacteria metabolites and oxytocin, and positions p-cresol and 4EPS as a potential target in microbiota brain interactions relevant to ASD.

Exploring the impact of LRRK2 genetic mutations on cellular susceptibility to pesticides as a risk factor for Parkinsons Disease

Rachel Roberts (1,2), Louise M Collins (2,3), Gerard W O'Keeffe (2,3), Aideen M Sullivan (1,3)

1. Department of Pharmacology and Therapeutics, School of Medicine, University College Cork

2. Department of Anatomy & Neuroscience, School of Medicine, University College Cork,

3. Parkinson's Disease Research Cluster (PDRC), University College Cork

Parkinson's Disease (PD) is the most common movement disorder worldwide, thought to be influenced by genetic-environmental interactions. Mutations in LRRK2 are associated with genetic PD. Exposure to pesticides such as rotenone and glyphosate have been linked to PD risk.

To test the hypothesis that G2019S-LRRK2 mutation increases cellular susceptibility to pesticide-induced degeneration, SH-SY5Y cells stably overexpressing wild-type (WT)-LRRK2 or G2019S-LRRK2 were treated with rotenone or glyphosate for 72 h, with or without 1h pre-treatment with the LRRK2 kinase inhibitor, Mli-2. There was higher basal LRRK2 kinase activity in G2019S-LRRK2 compared to WT-LRRK2 cells, reflected by increased pSer935-LRRK2 levels relative to total LRRK2 levels. Mli-2 pre-treatment reduced kinase activity in both genotypes.

G2019S-LRRK2 exhibited lower neurite length than WT-LRRK2 cells, indicating that mutation alone induces morphological deficits. Rotenone and glyphosate caused dose-dependent reductions in neurite length in both genotypes, particularly G2019S-LRRK2 cells. Mli-2 treatment increased neurite length of G2019S-LRRK2, but not WT-LRRK2, cells. Mli-2 pre-treatment attenuated the effects of rotenone and glyphosate on neurite length, in both cell types.

Lysosomal function was assessed by measuring LAMP2 levels. G2019S-LRRK2 had lower LAMP2 levels than WT-LRRK2 cells, which were restored following Mli-2 treatment. Mli-2 had no effect on LAMP2 levels in WT-LRRK2 cells. Glyphosate, but not rotenone, significantly reduced LAMP2 levels in both cell types, an effect that was reversed by Mli-2 pre-treatment.

These findings demonstrate that the G2019S-LRRK2 mutation impairs neurite outgrowth and lysosomal function and enhances vulnerability to pesticide-induced neurotoxicity, and that these pathological effects are mitigated by LRRK2 kinase inhibition.

Uncovering the Role of Circadian Rhythmicity in Gut Microbiota-Mediated Cancer-Cachexia

Parul Sharma (1,2), Devat Kandoriya (1,2), Jorge R. Soliz-Rueda (3,4,5), Begoña Muguerza (3,4,5), John F. Cryan (1,2), Harriët Schellekens (1,2)

1. Department of Anatomy and Neuroscience, University College Cork, Cork, Ireland

2. APC Microbiome Ireland, Cork, Ireland

3. Nutrigenomics Research Group, Department of Biochemistry and Biotechnology, University Rovira i Virgili, Tarragona, Spain

4. Institut d'Investigació Sanitària Pere Virgili, University Rovira i Virgili, Tarragona, Spain

5. Center of Environmental, Food and Toxicological Technology (TecnATox), University Rovira i Virgili, Tarragona, Spain

Cancer cachexia is a complex metabolic condition marked by loss of skeletal muscle and fat, systemic inflammation, loss of appetite, and metabolic dysregulation. Recent evidence indicates that disruptions in circadian rhythms can lead to metabolic problems and cancer progression. However, the role of circadian rhythm disruption in cancer cachexia is not well understood. In particular, diurnal changes in the brain's feeding and fasting regulation may affect appetite, energy balance, and the metabolic issues seen in cachexia.

Hence, the current study aimed to explore whether factors related to cancer cachexia disrupt the daily rhythms in the appetite-regulating centre and if metabolites from microbes can restore these rhythms. For this, hypothalamic (mHypoE-N44) cells were exposed to supernatants from cancer cachexia-causing cells or inflammatory cytokine with or without certain microbial metabolites for 24 hours. After forskolin pulse synchronization, cells were collected at 4-hour intervals over a 24-hour period for gene expression analysis of Clock appetite-regulating genes by qPCR.

Early findings demonstrate that inflammatory signals associated with cachexia change the rhythmic patterns of key clock components and metabolic regulators. Ongoing research focuses on identifying microbial metabolites that can improve circadian alignment and reduce metabolic issues related to cachexia.

This work sheds light on the connections between circadian biology, cancer cachexia, and signals from the microbiome. It may help develop new treatment strategies for managing cachexia based on circadian biology.

Keywords: Cancer cachexia, Circadian rhythm, Gut microbiome, Microbial metabolites, Hypothalamus, Skeletal muscle, Inflammation

Monocarboxylate transporter-mediated acetate sensing regulates microglial immunometabolism

Indira Priya Siva Venkatesh (1) Shauna Mulcahy (1) John F. Cryan (1) Lily Keane (1#)

1. APC Microbiome, University College Cork, Cork, Ireland

#Corresponding author

Microglia are the primary immune cells of the central nervous system and constitute approximately 10–15% of brain cells. Gut microbiota-derived metabolites, particularly acetate, are known to influence microglial development, maturation, and inflammatory responses. Consistent with this, we observed that acetate pretreatment reduced lipopolysaccharide (LPS)-induced Tnf expression and increased IGF expression in BV2 microglial cells, supporting an immune-modulatory role for acetate in microglia. However, the mechanisms underlying acetate uptake and its effects on microglial immunometabolism remain poorly understood.

Current literature suggests that acetate exerts its functions through free fatty acid receptors (FFARs) and monocarboxylate transporters (MCTs). While microglia do not robustly express FFARs, they express MCT1 and MCT4. Therefore, this study aims to delineate the role of MCT1 and MCT4 in mediating acetate uptake in microglial cells. BV2 cells were subjected to siRNA-mediated knockdown of MCT1 or MCT4 followed by treatment with ¹³C-labelled acetate. Samples will undergo LC-MS/MS-based metabolomic analysis to trace ¹³C incorporation into intracellular pathways and characterise acetate-driven immunometabolic reprogramming. Given that acetate is also a potent epigenetic regulator, this study will additionally investigate histone acetylation as a potential mechanistic pathway underlying acetate–microglia interactions.

In the future, this work will be extended to diffuse midline gliomas (DMGs), an aggressive paediatric brain tumour characterised by a highly immunosuppressive microenvironment, to investigate whether acetate-mediated microglial reprogramming contributes to tumour progression and immune dysregulation, or alternatively, whether modulation of this pathway could help rescue the immunosuppressive phenotype and improve anti-tumour immune responses.

The Oxytocin System as a Potential Target for Disorders of Gut-Brain Interaction

Carla Viñola-Renart (1)(2), Amelie Türling (2), Harriët Schellekens (3)(2), Niall Hyland (4)(2), Friederike Uhlig (1)(2)

1. *Department of Pharmacology and Therapeutics, University College Cork, Cork, Ireland*

2. *APC Microbiome Ireland, Cork, Ireland*

3. *Department of Anatomy and Neuroscience, University College Cork, Cork, Ireland*

4. *Department of Physiology, University College Cork, Cork, Ireland*

Emerging evidence implicates oxytocin as a regulator of gastrointestinal physiology and gut-brain communication, with reported therapeutic benefits in autism and irritable bowel syndrome. However, signalling pathways, cell types involved, and origin sites of oxytocin remain unclear.

Here, we describe peripheral oxytocin pools along the gut-brain-axis and investigate oxytocin's direct effects on intestinal ion transport in mice.

Oxytocin and oxytocin receptor (OXTR) expression were studied throughout the gastrointestinal tract via qRT-PCR and immunohistochemistry, and immunostained in cultured dorsal root ganglia. To assess their functional relevance, changes in intestinal electrolyte transport were measured in Ussing chambers after a basolateral application of oxytocin (1 μ M). Oxytocin-induced responses were characterized pharmacologically. All procedures were approved by the AWB and AEEC at University College Cork.

Oxytocin and OXTR were expressed along the gastrointestinal tract with regional, layer and sex-specific expression patterns (N=6 per sex). Specifically, oxytocin was enriched in the epithelial layer of the jejunum and ileum compared to the duodenum. Females expressed more oxytocin in these two regions than males. High levels of oxytocin expression were also observed in cultured DRGs. Despite lower OXTR expression in epithelium than in muscle, epithelial OXTRs are functionally relevant, as oxytocin modulated ion transport in small intestine and colon. Oxytocin increased fluid transport in the small intestine, and this response was sensitive to OXTR antagonist L-371.

In conclusion, the presence of endogenous oxytocin and OXTR across the gut-brain axis and its functional impact on intestinal ion transport position oxytocin as a potential therapeutic agent in disorders of gut-brain interaction.

Cytotoxic Capacity of Vδ1 T-Cells Post-Expansion from Healthy Blood Donors

Amy Walsh (1,2), Anne Marie Cusack (1,2), Siobhan Blankson (1,2), Rosemary O'Connor (3), Henry Paul Redmond (1,2), Cathriona Foley (1,2)

1. Department of Surgery, School of Medicine, College of Medicine and Health, University College Cork, Cork, Ireland

2. Cork University Hospital, Wilton, Cork, Ireland

3. School of Biochemistry and Cell Biology, Biosciences Institute, University College Cork, Cork, Ireland

γδ T-cells are MHC-unrestricted lymphocytes comprising two major subsets; tissue-resident, cytotoxic Vδ1 T-cells, and circulating Vδ2 T-cells. Preclinical studies have demonstrated anti-tumour cytotoxicity of expanded γδ T-cells with tumour-killing efficacy influenced by expansion protocols, cellular phenotype, and immune checkpoint modulation. This work aimed to expand Vδ1 T-cells from peripheral blood and assess their phenotype and killing capacity post-expansion.

Vδ1 T-cells were isolated from fresh whole blood of healthy blood donors by depleting αβ and Vδ2 T-cells, followed by CD3+ cell selection using immunomagnetic cell isolation (n=15). Vδ1 T-cells were expanded with stimulants for 21 days, with post-expansion phenotyping and cytotoxicity against colorectal cancer (CRC) cell lines assessed by flow cytometry.

On average, the expanded product consisted of 7.1×10^5 CD3+Vδ1 T-cells (63.6%). Post-expansion, CD3+Vδ1+ T-cells highly expressed activation receptors: NKG2D (93.7%), CD226 (84%), and CD69 (76.4%). Although TIGIT expression was high pre- (52.9%), and post-expansion (66.3%), expanded CD3+Vδ1+ T-cells had lower expression of TIM-3 (58.8%), LAG-3 (31.7%), and PD-1 (14.8%). Additionally, CD3+Vδ1+ T-cells predominately displayed an effector memory (TEM, 54.3%) phenotype, and TIGIT+ CD3+Vδ1 T-cells had significantly elevated Granzyme B ($p < 0.0001$) and Perforin ($p = 0.0016$) expression than TIGIT- cells. CD3+Vδ1 T-cells displayed increasing cytotoxicity against the metastatic CRC cell line, SW620, at increasing Effector:Target ratios; 0:1 (0%), 5:1 (14.3%, $p = 0.04$), 10:1 (20.1%), and 20:1 (23.8%, $p = 0.005$, $n = 8$).

In conclusion, the primarily Vδ1 T-cell product elicited cytotoxicity against CRC cells, however further phenotypic and functional characterisation is required to evaluate their potential as a cellular therapy for CRC.

Funding: Taighde Éireann-Research Ireland (Grant#:GOIPG/2025/7696).

Poster Numbers and Room Locations

Room Number	Poster Number	Presenting Author	Abstract Title
WGB_G13	1	Aloeristok, Emilie	Preventing suicide in public places: A Systematic Review and Meta-analysis
WGB_G13	2	Arensman, Ella	Hospital presenting self-harm among older adults 2019-2023: time series analysis from a national registry study
WGB_G13	3	Arnott, Julie	Burden of maternal and neonatal Parvovirus B19 infections, morbidity and mortality, a national retrospective cohort study
WGB_G13	4	Arnott, Julie	Burden of non-immune Hydrops Fatalis, morbidity and mortality, an indicator of adverse foetal outcomes due to Parvovirus B19 infection: a national retrospective cohort study
WGB_G13	5	Banasiak, Julia	Current Public and Patient Involvement (PPI) practices in oral health research: a scoping review protocol
WGB_G13	6	Barry, Fiona	Antimicrobial stewardship in Ireland-a descriptive study.
WGB_G13	7	Baskaran, Ramya	Pregnancy loss and perinatal death bereavement care: A scoping review of staff education and training interventions
WGB_G13	8	Cronin, Matthew	Risk and protective factors associated with adolescent gambling in Ireland: findings from the Planet Youth West 2024 survey
WGB_G13	9	Cunningham, Colette	Beyond the Virus: Media Framing, Misinformation and Public Health Communication During the 2026 Hantavirus Cruise Outbreak
WGB_G13	10	Curran, Colleen	Developing a termination of Pregnancy National Audit Database in Ireland
WGB_G13	11	Curtin, Margaret	Whose knowledge is it anyway? Community-engaged perspectives on co-design
WGB_G13	12	Dunlea, R. & Gallogley, E.	The association between number of pregnancy complications and depression or anxiety in offspring in late adolescence
WGB_G13	13	Fitzpatrick, David	Hospital-presenting self-harm: reconsidering the categorization of intentional drug overdose presentations
WGB_G13	14	Harnett, Zara	Let's Talk About Suicide: Evaluation of a brief introductory online suicide prevention training programme
WGB_G13	15	Hayes, Ronan	Global evaluation of food-based dietary guidelines for older adults: A grey literature scoping review
WGB_G13	16	Iladiva, Lydia	Healthcare professionals Experiences of Implementing the Structured Chronic Disease Management Programme for COPD in Irish General Practice: A Qualitative Study
WGB_G13	17	Iladiva, Lydia	Experiences of Patients and Carers Receiving Care Under the Structured Chronic Disease Management Programme for COPD in Irish General Practice: A Qualitative Study
WGB_G13	18	Irfan Khan, Midhah	Miss(ed) Diagnosis: A Literature Review on the Impact of Delayed ADHD Identification in Females
WGB_G13	19	Kelly, Louise	Tracking iGAS in Ireland: Molecular Epidemiology and Trends, 2011–2023
WGB_G13	20	Kelly, Martha	‘Contexts of Animal-Assisted Therapy Delivery: A Scoping Review of Practice and Reporting’
WGB_G13	21	Khan, Almas	Implementing a Community-based Mental Health Training Programme for Community Facilitators and Mental Health Professionals

Room Number	Poster Number	Presenting Author	Abstract Title
WGB_G13	22	Khan, Almas	Enhanced cognitive behavioural therapy for suicidality among people with comorbid mental and physical health conditions: a pragmatic randomised controlled trial
WGB_G13	23	Looney, Eibhlín	The importance of authentic caregiver involvement through Patient and Public Involvement (PPI) to improve measurement in early childhood obesity prevention research
WGB_G13	24	MacArthur, Megan	Adherence to ISPAD-Recommended Screening for Vascular Complications in Paediatric Type 1 Diabetes: A Retrospective Audit at CUH
WGB_G13	25	O'Connor, Karen	From Demonstration Sites to National Reform: Scaling Early Intervention in Psychosis in Ireland
WGB_G13	26	O'Leary, Anna	Exploring Implementation of a National Curriculum for Chronic Disease Prevention and Management in Higher Education Institutes in Ireland
WGB_G13	27	Phillips, Grace	Screening practices and subsequent prevalence of perinatal Post-Traumatic Stress Disorder: a systematic review and meta-analysis
WGB_G13	28	Steele, Margaret	Evaluation of Cork city food policy through an equity lens
WGB_G13	29	Tobin, Rachel	Exploring Public and Patient Involvement in Research in the Irish Health Services: A Scoping Review Protocol
WGB_G13	30	Vagg, Tamara	How to deliver digital health literacy training to PwCF, families, and caregivers: results of an Irish survey
WGB_G13	31	Vagg, Tamara	Competencies and proficiencies needed for a Digital Health Literacy (DHL) framework for CF Telehealth
WGB_G13	32	Visco, Kendall	The Influence of the Food Industry on Advocacy for Policy Change by Civil Society Focused on Vulnerable Population Groups: Perspectives and Experiences from Non-Governmental Organizations
WGB_G13	33	Weng Chu, Hio	Hypertensive disorders of Pregnancy and the long-term risk of maternal peripheral vascular disease –a systematic review and meta-analysis
WGB_G15	34	Barbosa, Teresa	A Service Evaluation of a Pharmacist-Led Penicillin Allergy Reconciliation and Assessment Service in an Irish Hospital
WGB_G15	35	Crowley, Clare	Features of intrapartum fetal heart rate monitoring associated with moderate to severe hypoxic ischaemic encephalopathy: A systematic review
WGB_G15	36	Curtin, Claire	Oral health and care practices in an Irish long term residential care facility - a mixed methods study
WGB_G15	37	Folan, Pádraig	Impact of Clonal Haematopoiesis of Indeterminate Potential (CHIP) on Prognosis and Treatment Outcomes in Breast Cancer
WGB_G15	38	Garras, Youssef	Urinary and Serum Biomarkers for Upper Urinary Tract Obstruction in Adults: A Systematic Review
WGB_G15	39	Hayes, Martina	Oral Health in Adults with Cystic Fibrosis. A Cross Sectional Study
WGB_G15	40	Izsak, Judah	Prehospital Broad-Spectrum Antibiotics in Suspected Sepsis: A Systematic Review and Meta-Analysis of In-Hospital Mortality
WGB_G15	41	Johnston, Katie	ePRO-Triggered Virtual Dietetic Consultations in Breast and Gynaecologic Cancer Survivors: Results from the LYSA Randomized Controlled Trial
WGB_G15	42	Johnston, Katie	A Digital Health Approach to Cancer Survivorship: Practical Lessons From an Investigator-Initiated Patient-Reported Outcomes Trial in Ireland
WGB_G15	43	Junaid, Maheen	Incidence of Permanent Pacemaker Requirement in Patients with Bicuspid Aortic Valve Disease Undergoing Transcatheter Aortic Valve Implantation: A Systematic Review and Meta-Analysis

Room Number	Poster Number	Presenting Author	Abstract Title
WGB_G15	44	Kavanagh, Emily	Evaluating Clinician Attitudes and Screening Practices for Adolescent E-Cigarette Use in the Paediatric Emergency Department
WGB_G15	45	Keye, Catriona	Mapping Menopause Education for Healthcare Professionals: A Scoping Review
WGB_G15	46	Kilty, Caroline	Title: Future Care Planning for people with palliative care needs- the ENCIRCLE-PC pilot initiative from the HSE, Specialist Palliative Care Services and the National Ambulance Service: Insights from stakeholder focus groups
WGB_G15	47	Kumar, Rhea	Investigating the Prevalence of Depression and Anxiety in Patients with Inflammatory Bowel Disease (IBD)
WGB_G15	48	Lynch, Emer	Trial in Progress Abstract: MELODY – Mapping the Enhanced Landscape of advanced breast cancer fOr DYnamic treatment approaches.
WGB_G15	49	Malhotra, Akshita	Risk of Myocardial Infarction Across Coronary Artery Disease Severity Assessed by Coronary CT Angiography: A Systematic Review and Meta-Analysis
WGB_G15	50	McGeown, Danielle	Real-time Measurement of Bioaerosols in an Irish Community Dental Clinic
WGB_G15	51	Murphy, Margaret	Implementing a Knowledge Translation Impact and Dissemination plan to maximise breastfeeding with people and populations
WGB_G15	52	Murphy, Síofra	Patient behaviour during conscious sedation with midazolam; an analysis of the gut and oral microbiome.
WGB_G15	53	Ní Chonaill, Doireann	A National Service Evaluation of Dietetic Supports in Irish Cancer Treatment Centres: Malnutrition Risk, Nutrition-Impact Symptoms, Nutrition Concerns and Access to Dietetic Care.
WGB_G15	54	Ni Dhalaigh, Doireann	The Lived Experience of Suicidal Thoughts and Behaviours in Adults with Cancer
WGB_G15	55	O'Brien, Andrew	Baseline Characteristics, Quality of Life, and Early Ladder Progression in Children with IgE-Mediated Milk and Egg Allergy: A Pilot Cohort Study
WGB_G15	56	O'Connell, Elizabeth	Living with Palliative Care Needs in the Community: Experiences of Completing Future Care Plans
WGB_G15	57	O'Donovan, Theresa	Understanding perspectives on designing and implementing a healthcare application to support radiotherapy patients: a qualitative study.
WGB_G15	58	O'Shea, Aidan	Factors influencing a physiotherapist's approach to the management of a person with shoulder pain – a focus group study
WGB_G15	59	Pramod, Tushar	Prognostic Impact Of Interphase FISH In Multiple Myeloma: Single-Center Irish Experience
WGB_G15	60	Quigney, Ciara	Understanding Psychological Factors influencing Eating Behaviours in Overweight or Obese Adults with Cystic Fibrosis: A Systematic Scoping Review
WGB_G15	61	Quigney, Ciara	Identifying Patient Reported Care Needs in an Adult Cystic Fibrosis Service
WGB_G15	62	Reidy, Niamh	Evaluating the Utility of Cerebrospinal Fluid Procalcitonin for the Diagnosis of Neurosurgical Infection
WGB_G15	63	Seo, Hoyang	Advanced Spectral and Complexity Analysis of Continuous Cerebral Oxygenation Signals (rcSO2) of Extremely Preterm Infants Diagnosed with Intraventricular Haemorrhage
WGB_G15	64	Shum, Christopher	Shifting perspectives, shifting strain: How attitudes towards clients with emotion dysregulation mediates clinician burnout after Modular DBT Training
WGB_G15	65	Wang, Vivienne	Clinical Outcomes Following Uterine Artery Embolization for Uterine Fibroids: A Retrospective Cohort Study.

Room Number	Poster Number	Presenting Author	Abstract Title
WGB_G14	66	Alshaikh, Sara	Development and Evaluation of 3D-Printed Polymer Implants for Sustained Delivery of Benznidazole
WGB_G14	67	Barrett, Lauren	SKOR1 as a novel therapeutic target to combat α -synuclein-induced degeneration using models of Parkinson's Disease.
WGB_G14	68	Coughlan, Eoin	"Finding an inner strength"- a qualitative analysis of the Coping Skills for Addiction Recovery (CoSAR) structured aftercare programme in Ireland.
WGB_G14	69	Guha, Sauranil	Early-life microbiota regulates mitochondrial energetics and stress-axis development in zebrafish
WGB_G14	70	Kelly, Saoirse	From Early Life Diet to Adult Eating Behaviour: Microbiota-Targeted Interventions Shape Healthy Eating in Mice
WGB_G14	71	Mastroianni, Ilaria	The effects of ethanolamine on doxorubicin-induced cardiotoxicity
WGB_G14	72	Morais, Emilene	Assessment of the reliability of FFPE tumour tissue as a source of bacterial DNA for metataxonomic studies
WGB_G14	73	Murphy, Ben	Respiratory impairment in severe cancer cachexia: a comprehensive characterisation of the novel KPP model of pancreatic ductal adenocarcinoma
WGB_G14	74	O'Connell, Anna	Hypothalamic Blood-Brain Barrier Integrity and Autonomic Function Following Early-Life Hypoxia and Gram-Positive Bacterial Challenge in the Neonatal Rat
WGB_G14	75	Omosefe Osayande, Joan	Bacillus subtilis Supplementation Preserves Nigrostriatal Integrity in a 6-OHDA Rat Model of Parkinson's Disease.
WGB_G14	76	O'Shea, Karla	Differential $\gamma\delta$ T cell Phenotypes in Proximal and Distal Colon Cancer Tissues
WGB_G14	77	Pignatelli Espejo, Andrea	ASD-Associated Microbial Metabolites Disrupt Hypothalamic Oxytocin Homeostasis In Vitro
WGB_G14	78	Roberts, Rachel	Exploring the impact of LRRK2 genetic mutations on cellular susceptibility to pesticides as a risk factor for Parkinsons Disease
WGB_G14	79	Sharma, Parul	Uncovering the Role of Circadian Rhythmicity in Gut Microbiota-Mediated Cancer-Cachexia
WGB_G14	80	Siva Venkatesh, Indira Priya	Monocarboxylate transporter-mediated acetate sensing regulates microglial immunometabolism
WGB_G14	81	Viñola-Renart, Carla	The Oxytocin System as a Potential Target for Disorders of Gut-Brain Interaction
WGB_G14	82	Walsh, Amy	Cytotoxic Capacity of V δ 1 T-Cells Post-Expansion from Healthy Blood Donors