**Health and Care Economics Cymru**

**2020 – 2025**

**End of Award Report**

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**SUSTAINABILITY IN ACTION: HEALTH ECONOMICS FOR THE LONG TERM**

The ongoing economic pressures facing the UK and Welsh Governments continue to place health and social care systems under significant strain, reinforcing the vital role of health economics in shaping evidence-based policy and practice. As we mark our fifth year as Health and Care Economics Cymru (HCEC), we are proud to share how our work continues to influence health and social care locally, nationally and internationally.

This report showcases our key achievements from across our five-year award, with a particular focus on recent milestones where we have consolidated our impact and laid strong foundations for the future. We have delivered excellence across our core work packages while expanding into important and emerging areas, including social care economics and the economics of climate change. Our interdisciplinary approach, strong partnerships and growing influence position us to lead in addressing the complex health and care challenges of the next decade.

We are proud to remain a cornerstone of the health and care research infrastructure in Wales (see page 5). Our collaborations continue to thrive (page 27), our research impact is growing (for example, page 19), and our public engagement activities are reaching new audiences (pages 15 to 17). We also celebrate the achievements of our early career researchers (page 24) and are pleased to share our growing leadership in the field of social care economics (page 13).

We are grateful to all our colleagues across other infrastructure groups, Public Health Wales, our health board partners, funders and stakeholders, including our Advisory Board and PPIE representatives, for their continued support. Together, we are working towards a more sustainable, equitable and economically resilient health and care system for Wales and beyond.

**We hope you enjoy reading our 2020/25 HCEC End of Award Report.**

**HEALTH AND CARE ECONOMICS AT A GLANCE**

Health economics is the study of how we use scarce resources to meet the health and social care needs of the population. When resources are limited, we need to make difficult choices on where and how to allocate our resources to get the maximum benefit for the health and well-being of populations. Health economics applies the principles of economic theory and robust frameworks of methods and analyses to provide evidence on the cost-effective use of resources in health and care decision-making.

**Find out more about what we do and how we can help on our website:** [**https://healthandcareeconomics.cymru/**](https://healthandcareeconomics.cymru/)

**INTRODUCTION TO HCEC**

Health and Care Economics Cymru (HCEC) is an all-Wales collaborative research infrastructure group funded by Welsh Government via Health and Care Research Wales. Our aim is to deliver world-class excellence in health economics research, its methodology and application.

We strive to sustain and grow a community of health economics experts in Wales, with strong collaborations across the health and care sector, that makes a positive difference to health and care research and the people who benefit from it. In this way, we contribute to the generation of high-quality evidence that is crucial to make the best possible decisions to improve health and care outcomes for the people in Wales and beyond.

**Methodology and application**

(Insert Welsh version of expertise infographic here)

**OUR PEOPLE AND STRUCTURE**

HCEC continues to thrive through its inclusive, collaborative ethos and the strength of its all-Wales community of health economics expertise. Our co-directorship model remains a cornerstone of our success, fostering shared leadership, joint accountability, and a clear strategic vision. This year, we have further strengthened connections across our two centres, building a cohesive team culture that promotes innovation, mutual support, and collective impact. By working together as one community, we ensure that HCEC continues to deliver excellence in health economics across Wales.

**OUR HCEC CO-DIRECTORS**

Prof. Rhiannon Tudor Edwards

Centre for Health Economics and Medicines Evaluation (CHEME), Bangor University

Prof. Deb Fitzsimmons

Swansea Centre for Health Economics (SCHE), Swansea University

**OUR GOVERNANCE STRUCTURE**

**Advisory Board**

Independent Chair: Prof. Steve Morris (University of Cambridge)

Independent Co-Chair: Prof. Monica Busse-Morris (Cardiff University)

Karen Harrington (Public contributor), Nathan Davies (Public contributor), Dr Brendan Collins (Welsh Government), Dr Lisa Trigg (Social Care Wales), Prof. Ceri Phillips (Cardiff and Vale UHB/Swansea University), Dr Angela Boland (University of Liverpool), Prof. Rod Taylor (University of Glasgow)

**HCEC Management Board**

Co-Directors: Prof. Deb Fitzsimmons, Prof. Rhiannon Tudor Edwards

Co-Investigators: Dr Ceryl Davies, Katherine Cullen, Jacob Davies

Project Manager: Jacob Davies

Administrators: Ann Lawton, Claire Evans

Care Lead: Ceryl Davies

Comms Lead: Kalpa Pisavadia

PPIE Lead: Ceryl Davies

ECR Lead: Jacob Davies

Impact Leads: Katherine Cullen and Dr Sofie Roberts

Methods Lead: Katherine Cullen

Trial Units Leads: HCEC co-directors

HCEC Researchers (All staff are supported by multiple funders)

Maria Cheshire-Allen

Julia Lowin,

Dr Mari Jones, Derek Foster,

Kodchawan Doungsong

Dr Victory Ezeofor,

Dr Bethany Anthony,

Dr Ned Hartfiel

**OUR AWARD PERIOD AT A GLANCE**

(Insert Welsh version of core metrics infographic here)

**HCEC DELIVERS ON ITS OBJECTIVES**

HCEC has built on its success as a leader in health economics research in Wales through strong grant capture, publications, developing our talent pipeline and widening our portfolio into other research areas and disciplines across our 5-year award period. The strength of our research income generation in Years 3 and 4 has enabled us to secure and deliver a portfolio of longer-term projects in our final year, positioning us strongly for the future.

Alongside research delivery, this award period has seen a significant focus on supporting our early career researchers. By encouraging collaboration with senior colleagues in developing grant applications, we are investing in building capability and capacity within our team. This approach reflects our ambition to nurture talent internally and establish a sustainable trajectory of health economists as HCEC enters its next chapter.

We are delighted that in October 2024, HCEC was awarded sustainability funding from Welsh Government through Health and Care Research Wales. As part of this success, our respective universities committed to providing material contributions through part-funding, which demonstrates a shared belief in the value of health economics in Wales and a commitment to supporting its continued growth.

**ESTEEM – Evaluating the clinical and cost-effectiveness of testosterone to improve menopause-related quality of life**

Menopause can affect both physical and mental health, with symptoms lasting from a few months to several years. Despite affecting many women, menopause has not been a major focus for research or healthcare services. To improve this, the All-Wales Menopause Task and Finish Group was created in July 2022. Their goals include using the best practices recommended by health experts for menopause care in Wales and finding out more about how to manage menopause symptoms effectively. Currently, health experts suggest that women with low sexual desire during menopause should consider testosterone supplements if hormone replacement therapy (HRT) alone is not working. However, more research is needed to understand how testosterone affects other menopause symptoms.

**Our role in the study**

The health economics team at SCHE are collaborating with Cardiff University in this study led by Professor Mike Robling and Dr. Helen Munro, along with other experts from England and Wales. Katherine Cullen is leading the health economic analysis on this project, which has received a £2.7 million grant. Key activities will include conducting a review of published research to understand the costs of menopause for individuals, the NHS, and society, and creating a measure for collecting resource use during the trial. The team will also advise on data collection methods, create the health economic analysis plan, and develop an economic evaluation to assess the cost-effectiveness of testosterone for menopause symptoms.

**How does this work link to Welsh Government policy?**

This is an important piece of research that aligns with UK strategies and National Institute for Health and Care Excellence guidelines aimed at improving access to affordable treatments for menopause. It will also support the Welsh Government and NHS Women's Health Plan, which aims to provide high-quality health services for women and girls throughout their lives.

**About Katherine**

Katherine Cullen is a health economist based at the Swansea Centre for Health Economics. Katherine started her career working at a health economics consultancy, before working on the clinical guidelines programme for the National Institute for Health and Care Excellence identifying and developing economic evidence for guidelines on chronic conditions, and women’s and children’s health. Katherine joined Swansea University in 2016 where she designs and executes economic evaluations, and related analyses, for collaborative research across a number of areas, specialising in complex interventions.

**REFLECTING ON THE DIVERSITY AND IMPACT OF OUR ACHIEVEMENTS (2020–2025)**

1. **Securing High-Quality Research Awards and Income for Wales**

As illustrated on page 5, we have successfully delivered on our core objectives in terms of grants awarded, income generated for Wales and HCEC, and job creation.

1. **Delivering a Balanced Portfolio of HCEC-Led and HCEC-Supported Research**

We are proud to have achieved a balance in our HCEC-led research, where we apply our health economics methodological expertise to lead new studies, alongside a strong ethos of collaboration, providing health economics input for trials and studies led by other groups. Our research portfolio reflects a 40/60 balance between group-led and supported research. These achievements are highlighted in our stakeholder report.

1. **Diversifying Income Streams**

Our proven agility to respond to opportunities during COVID has enabled us to develop a proportionate balance of national and local funders. This reflects our continued commitment to achieving success with major national and international funders such as the NIHR and Horizon Europe, alongside our work with local health boards and other organisations where the focus is on delivering impact through generating the evidence for policy and/or practice change. On page 20, our work with Cardiff and Vale Health Board to shift lower-value treatments for Type II diabetes towards prevention is highlighted.

1. **Building Capacity in Health Economics in Wales**

HCEC’s strength lies in its people. We have invested significantly in developing the next generation of health economics researchers in Wales. Throughout this report, our team members share personal reflections on how HCEC has supported their professional growth.

1. **Securing High-Quality Research Awards and Income for Wales**

Our exemplar on page 9 demonstrates how HCEC is creating opportunities in new areas of transdisciplinary research on climate change, with HCEC leading a strong health economics contribution.

1. **Supporting Research Excellence Across Infrastructure Groups**

HCEC has led health economic evaluations in 24 new NIHR clinical trials and real-world studies during our award period, reinforcing our role as a trusted partner in delivering high-quality research.

1. **Delivering high quality research outputs**

HCEC researchers have collectively delivered 155 peer-reviewed publications, with 45% first-authored by HCEC members. On page 25, we highlight our most notable papers. These publications span a wide range of topics, demonstrating the breadth of our methodological expertise.

1. **Supporting the creation of new areas of research excellence in Wales**

Our collaboration with Cardiff University and the University of South Wales enabled HCEC to make a strong contribution to the development of the successful Catalyst Award for the Centre for Vision Services Research. Our work in driving our social care economics theme is now coming to fruition, as detailed on page 13.

**OUR PATHWAY TO SUSTAINABILITY**

For the period 2020-2025 HCEC has built a critical mass of health economics expertise driven by research excellence, staff development and inclusivity. This places HCEC in a strong position to lead the way in health economics research in Wales as we embark on the next iteration of HCEC. Our focus will be on enhancing agility and proactively addressing the evolving needs of health economics within the dynamic landscape of the NHS and social care system in Wales.

(Insert Welsh version of Pathway to sustainability infographic here)

**With an increased commitment to prevention, digital healthcare, and genomics, we aim to:**

* Prioritise the economics of illness prevention and the maximisation of health and well-being for people and communities.
* Align with the major strategic direction of the NHS in Wales, Public Health Wales, and the Welsh Value in Health Centre, which emphasises prevention.
* Position HCEC as a leading centre of research excellence in the UK and internationally, attracting top researchers to Wales to advance our areas of expertise and strength.
* Integrate equality, diversity, and inclusion (EDI) into all plans, leveraging our diverse backgrounds and emphasising the importance of diverse perspectives.
* Maximise HCEC resources to ensure fair and equitable access to training based on team needs.
* Provide individual mentoring to support team progression and enhance team understanding of contributions to HCEC.

**Driving Global Sustainability Through Transdisciplinary Research**

Climate change presents profound challenges to health and care systems, requiring solutions that cut across traditional disciplinary boundaries. Transdisciplinary research is critical to understanding and addressing the complex, interconnected impacts of climate change on health outcomes. Within HCEC, our researchers are increasingly engaging with climate-related projects, exploring methodologies to assess economic impacts, value preventative actions, and inform sustainable health and care strategies. This emerging focus strengthens HCEC’s role as a leader in health economics research that addresses some of the most urgent and complex challenges facing Wales and the wider world.

Bangor University is strengthening its international engagement through strategic partnerships aiming to advance research that addresses global climate challenges and promotes a more sustainable future for people, the planet, and local communities.

As part of this initiative, Bangor University hosted a high-profile workshop featuring Professor Carlos Tomaz from Universidade Ceuma, Brazil, centred on the theme ‘Sustainable Transitions: How might we move towards a more balanced and equitable future for the sustainability of land, people, and culture?’ The event brought together researchers from across Bangor University and highlighted Universidade Ceuma’s cutting-edge work on health and the environment.

This collaboration supported the development of a joint funding application to the British Academy’s Just Transitions fund. The proposed project, ‘Stewardship of Amazonian and Welsh Cynefin (o habitacão): Negotiating just transitions to sustainable futures in the Amazon Biome via a co-learning approach with Wales’, seeks £299,228. This collaboration supported the development of a joint funding bid led by Professor John Parkinson, with contributions from Dr Sofie Roberts and Professor Rhiannon Tudor Edwards, which offers a potential model for sustainable development elsewhere across the globe.

HCEC staff played a key role, delivering a presentation on the links between nature, health, and well-becoming, and contributing to the health economics work package, ensuring academic rigour and practical relevance.

Early outcomes of this new consortium include partnership working across Bangor University Schools on an economic impact of obesity study with Cwm Taf Morgannwg University Health Board and expanded interdisciplinary work on sustainable food systems.

**About Sofie**

Sofie completed her PhD at Bangor University in 2022, and is now a Research Officer at CHEME. Sofie is particularly interested in climate and health research anchored in place-based approaches and the wider determinants of health and well-being of people and planet. Sofie is a management board member at HCEC and also sits on the management board of the Places of Climate Change Research Centre (PloCC) at Bangor University. Sofie is a Welsh speaker from the foothills of Eryri.

**OUR WORK PACKAGES**

(Insert Welsh version of cross-cutting themes infographic here)

**Thank you**

A heartfelt thank you to all members of HCEC for their unwavering dedication and commitment to our work packages. Your support, respect, and collegiality empower us to achieve ambitious objectives and create new opportunities for delivering world-class health economics research expertise in the long term. We deeply appreciate all the hard work and celebrate every team achievement, from publishing a first paper as lead author to receiving senior promotions. Thank you, team!

**WORK PACKAGE 1: OPTIMISING COLLABORATION WITH HEALTH AND SOCIAL CARE RESEARCHERS**

I am a senior health and care modeller at SCHE and work primarily in the areas of cancer and eyecare. By using robust mathematical techniques, I build simulation models to reflect the complexities within healthcare and then costs and consequences are assigned to ascertain whether a service is cost effective or not. I mentor other team members in all aspects of quantitative analysis and have secured funding to be chief investigator on an NIHR Programme Development Grant.

**TRAK-MSK – a musculoskeletal digital self-management physiotherapy intervention for individuals with musculoskeletal pain**

Musculoskeletal pain affects about 32% of people in Wales, which is around 974,000 people. It affects women, minority ethnic groups, and people in poverty more than others. The Welsh Government expects the number of people with musculoskeletal conditions to increase because the population is getting older, people are becoming less active, and obesity levels are rising. Since there is no cure for musculoskeletal pain, helping people manage their own condition is very important. Digital tools that help people learn how to manage their pain can make physiotherapy more effective and reduce the need for health services.

**Our role in the study**

Cardiff University to see if it is feasible and acceptable to run a large study comparing the TRAK-MSK digital physiotherapy tool to regular care for managing musculoskeletal pain. Since there is no cure for musculoskeletal pain, which can affect people's ability to work and do daily activities, they tested two measures: ICECAP-A (for capability and well-being) and EQ-5D (for health-related quality of life). They also looked at how much people use NHS services, like doctor visits, hospital appointments, scans, and pain medication, as well as the impact on working, caregiving, hobbies and sports. This study helped us understand whether these measures are valid for musculoskeletal pain and if participants find them acceptable, which will help plan future trials.

**How does this work link to Government policy?**

This work will help create treatments based on solid evidence to support people with musculoskeletal conditions in Wales. It is part of a plan for 2024-2028 to improve musculoskeletal services and will contribute to the guidelines within

"Living with Arthritis and Musculoskeletal Conditions: A Framework for the Future."

**Supporting Families Affected by Rare Dementias – the Rare Dementia Support (RDS) programme**

We were proud to be part of a UK-wide research project—the Rare Dementia Support (RDS) programme funded by ESRC and NIHR. This is the first significant project examining how specialised support groups can help people living with rare dementias and their families.

Conducted across multiple centres, the study investigates the impact of these services in several key areas: emotional and social wellbeing, caregiver support, service delivery, long-term sustainability, and the cost-effectiveness of these services. It aims to generate robust evidence on the effectiveness and cost-effectiveness of the RDS programme, with the goal of shaping future healthcare policy and improving support for those affected by rare dementias.

The study also includes an examination of the dementia action plan in Wales, focusing on the themes of assessment, diagnosis, and post-diagnostic support, to assess whether these goals are being effectively realised.

**Our Role in the Study**

HCEC researchers played a key part in this project. Our health economists, Dr Victory Ezeofor and Dr Bethany Anthony, worked closely with the research team, supported by Professor Rhiannon Tudor Edwards helping design the main evaluation and advising on data collection to ensure quality and consistency. HCEC researchers led the health economics element of the study, looking at costs, benefits, and long-term value for the NHS and for families.

**What We Did**

The health economic analysis provided a clear picture of how people with rare dementias use NHS services and what that means in terms of costs. These findings will help health service leaders plan better, more cost-effective care for the future.

This research is already helping to shape how rare dementia services are designed and delivered. The results are being shared with academic journals and healthcare decision-makers.

I am a Research Officer at the Centre for Health Economics and Medicines Evaluation (CHEME) at Bangor University. My PhD (funded by Health and Care Research Wales) explored the provision of general medical services by non-medical health professionals and allied health professionals. I have a particular interest in costing and budget impact methodology and primary care health economics. I also co-lead the Bangor Institute for Health and Medical Research (BIHMR) review team for the Health and Care Research Wales Evidence Centre. ~ Dr Bethany Anthony Research Officer HCEC

**Social Care Economics NEtwork (SCENE)**

Spotlight on

The drive of HCEC to develop a focus on social care economics has continued across several projects during 2023/24, with Dr Ceryl Teleri Davies leading on the development of how we measure the impact, outcomes and cost-effectiveness of social care interventions. Supported by a 5-year development plan, Ceryl has continued to embed social care economics within HCEC activities to address this current research gap across the UK and Wales to enhance HCEC’s position in this novel area of economics.

Members of HCEC have also contributed to the development of Social Care Economics NEtwork (SCENE), led by Professor Helen Weatherly, University of York. This network, launched in October 2023, focuses on applying economic thinking, theory, and methods to social care interventions to promote an interdisciplinary approach to social care economics. In December 2024, CHEME facilitated a workshop session for SCENE, outlining the Welsh perspective on social care economics. Our workshop highlighted the challenges of measuring outcomes across social care services in England and Wales, focusing on a life-course and a well-becoming approach to enhancing the application of social care economics in practice. The overall aim of the workshop was to discuss the meaning of building good health and well-being in society, highlighting how social care economics can support the development of robust and reliable data across social care services. HCEC will continue to promote the development of applied social care economics through the co-production of a social care economics position statement for HCEC and conceptualising social care economics across the life-course.

**About Ceryl**

Ceryl has a diverse background in law, social work, and social policy, applying an interdisciplinary perspective. Throughout her social work career, she has held a variety of senior and directoral roles in social care. Ceryl is passionate about addressing violence against women and girls and has led several research initiatives focused on understanding domestic abuse.

Ceryl is currently a Senior Research Fellow at CHEME, where she is dedicated to advancing social care economics. In this capacity, she aims to establish a comprehensive method for measuring outcomes, cost-effectiveness, and resource utilisation across social care services.

**SPRING study – Shoulder Replacement Prehabilitation and Rehabilitating Early**

The number of surgeries for shoulder replacement have quadrupled in the last two decades in England. Lengthening waiting time for surgery has been linked to deteriorating health-related quality of life, anxiety, pain, and function which can lead to worse post-surgery outcomes. People from more deprived groups, ethnic minorities, and older adults are at greater risk of complications post-surgery leading to longer hospital stays. Prehabilitation could improve mental and physical readiness for major surgery by offering advice, support and activities that can boost psychological well-being, and help with management of co-existing health conditions. Rehabilitation after surgery can maximise timely recovery, reduce length of time in hospital, and avoid complications.

The health economics team at SCHE have been collaborating with Cardiff University on a series of studies of physiotherapy interventions. This most recent application is to co-design prehabilitation and early rehabilitation interventions for people undergoing total shoulder replacement and test the clinical and cost-effectiveness of these interventions in improving function and reducing pain compared to the current care received. Katherine Cullen and Dr Mari Jones are leading on the health economic evaluation for this study which started in March this year after the award of a £2.5 million grant by the National Institute for Health and Care Research.

**Tackling School Bullying with Evidence-Based Solutions: The KiVa Programme**

Bullying in childhood is a major contributor to later mental health problems. To address this, we supported the largest UK trial of the KiVa anti-bullying programme, a structured, school-wide approach developed in Finland. Over the course of a year, more than 11,000 pupils across 118 primary schools in England and Wales took part. The results showed that pupils in KiVa schools were 13% less likely to report being bullied, and teachers observed improved empathy and fewer peer problems.

KiVa focuses on the critical role of bystanders, encouraging children to support victims and challenge bullying behaviour, thereby changing the culture around bullying. Notably, the programme proved effective across diverse school settings, from small rural schools to large urban ones.

**Our role in the study?**

Our team at Bangor University played a key role in evaluating KiVa’s cost-effectiveness. At a time when schools face tight budgets, it is essential to identify affordable, impactful interventions. With funding of £2.57 million, led by Professor Judy Hutchings and co-investigator Professor Rhiannon Tudor Edwards, our economists analysed pupil and teacher-reported data, contributed to trial design and management, and collaborated with partners across Wales and England to adapt the Finnish model for UK schools. We demonstrated that KiVa is not only effective but also low-cost.

**How does this work link to Welsh Government policy?**

This research supports the Welsh Government’s 2019 anti-bullying guidance (Rights, respect, equality), which calls for bullying prevention to be embedded in school life. KiVa is specifically named in this guidance as an effective intervention. Our findings provide strong evidence for its wider implementation across Wales and beyond, helping schools meet their obligations while improving pupil outcomes.

**WORK PACKAGE 2: PATIENT AND PUBLIC INVOLVEMENT AND ENGAGEMENT**

Patient and Public Involvement and Engagement (PPIE) is central to HCEC's research, ensuring that public and patient perspectives are integrated into all stages of our projects. HCEC is committed to fostering meaningful engagement, with research co-produced through active collaboration with diverse public and patient representatives. This includes contributions ranging from strategic advice provided by our PPIE Advisory Board to individual mentoring of researchers, ensuring PPIE is embedded from the initial research idea through to dissemination and impact.

Over the past five years, PPIE has been gradually developed from the ground up from 2020 by dedicated PPIE leads, Dr Llinos Haf Spencer and Dr Liv Kosnes, and we are grateful for the continued engagement and commitment of our members. Looking ahead, we aim to grow and diversify our membership, with a strong focus on Equality, Diversity and Inclusion (EDI), ensuring our PPIE community reflects the wide range of voices and experiences across society.

**WOULD YOU LIKE TO GET INVOLVED?**

If you are interested in helping to develop health economics research in Wales, please consider joining the HCEC Public Involvement and Engagement Group (PIG). Information about involvement opportunities and details about current research projects are circulated to individuals in this group via emails and newsletters.

**If you are interested in joining the HCEC PIG as a member of the public please go to our website.**

**Thank you!**

We are sincerely thankful to all public members of our HCEC Advisory Board. Their invaluable expertise has been essential in laying the strong foundations we have today and in influencing the future trajectory of Patient and Public Involvement and Engagement (PPIE).

Additionally, we would like to express our appreciation to all members of our PIG/Cadw mi gei group. Their varied backgrounds provide unique experiences, knowledge, and insights that greatly enhance the development of our research. We are dedicated to ensuring that HCEC truly embodies the principle of "no research about me without me" which is vital for advancing our PPIE initiatives.

**PUTTING THE VALUES OF PPIE AT THE HEART OF WHAT WE DO**

* Obtaining feedback from public members at every stage of research projects will continue to be a central function, ensuring that public perspectives are continuously integrated.
* Strategic direction for public engagement will be provided by dedicated HCEC members, ensuring that public involvement is a priority in all research activities.
* Including public members in our Advisory Board to ensure public input in strategic decisions.
* PIG/Cadw mi gei Group facilitates public involvement in HCEC activities, promoting shared learning between public members and researchers.
* HCEC will ensure that all communications and dissemination activities are designed to be easily understood by non-health economists and the general public.
* HCEC will produce and publish reports in formats that are easy for the public to understand, ensuring transparency and accessibility.

I completed my Master’s degree in Public Health and Health Promotion in 2022. I have experience as a clinical pharmacist and have a strong skillset in statistical analysis and quantitative methods. I currently work at CHEME on a wide range of economic evaluations within clinical trials of interventions and conditions, such as dementia, sleep apnea, maternal mental health, rehabilitation, and ophthalmology. Currently, I am a PhD candidate, focusing on health economic evaluation in individuals with epiretinal membrane. ~ *Kodchawan Doungsong*

*Research Project Support Officer*

*HCEC*

**Promoting Equality, Diversity and Inclusion**

As an all-Wales infrastructure group, we are committed to equality, diversity and inclusion (EDI) in everything we do. We aim to create a diverse, inclusive, and supportive environment within HCEC, ensuring that EDI principles are embedded in all aspects our work. We already have a solid foundation through our development of a diverse and inclusive community of health economists, and work is already underway to:

* Foster an inclusive research culture that actively supports and mentors researchers from diverse backgrounds, ensuring a fair and equitable pathway to career development.
* Track diversity and acceptability across multiple dimensions (e.g., gender, ethnicity, disability, socioeconomic background) to identify specific needs and barriers.
* Develop case studies demonstrating EDI delivery in our work, aligning with PPIE and co-production principles.
* Invest in fair and equitable access to training of our team based on need.
* Ensure that diverse talent is retained beyond the research/academic sector within a community of health economics expertise.
* Develop training for public members interested in health economics with consideration of barriers to access with accessible material and reporting.

EDI and PPIE will continue as areas of focus for the new award.

I am a Research Project Support Officer and staff candidate PhD student at CHEME, with a research focus on women's health. I work across a range of projects, including the MAP ALLIANCE project, which aims to improve outcomes for women during the perinatal period.

My academic interests centre on integrating an intersectional lens into health economic evaluation, examining how race, sex, gender, and socioeconomic status interact to shape health outcomes for women.

My PhD research adopts a co-produced, place-based intersectional feminist approach to explore the lived experiences of women who have experienced domestic abuse, with a strong emphasis on amplifying diverse and often marginalised voices within health research. ~*Kalpa Pisavadia HCEC management board*

**WORK PACKAGE 3A: DELIVERY OF HEALTH ECONOMICS ADVICE AND SUPPORT**

I am a Research Assistant at the Swansea Centre for Health Economics (SCHE). My work specialises in data analysis and decision modelling, where I apply sophisticated mathematical modelling techniques to real-world problems.

I have a keen interest in the medical field which increased during my Medical Engineering undergraduate degree. My strengths lie in quantitative analysis, and I am currently undertaking an MSc by Research in Health Economics. The aim of this work is to conduct a health economic evaluation to assess the feasibility and acceptability of an alternative pathway for hospital referrals for those with suspected diabetic eye disease. ~ *Megan Davies*

*Research Assistant*

*HCEC*

**Health Economics supporting Big Data Initiatives for the UK Government**

Since joining HCEC in June 2024, HCEC has contributed to a project with the Ministry of Justice, Public Health Wales, and the SAIL Databank under the Better Outcomes through Linked Data (BOLD) programme. This work explores the feasibility of using linked data to evaluate the economic impact of initiatives supporting substance or alcohol rehabilitation as part of criminal sentencing.

As part of the project, the team conducted a health economic evaluation to analyse costs and outcomes for both the criminal justice system and the NHS. They also developed a user-friendly, fully functional economic model to aid policy makers in making efficient decisions, with potential for future developments to facilitate local decision making. The project is now approaching completion, with findings and the model to be shared shortly.

**Megan says**

As an early career researcher, this project has been an invaluable learning experience. It has deepened my understanding of the pivotal role health economics plays in driving well-informed policy decisions and illustrated the substantial benefits of data linkage. I have gained valuable insights into the importance of evidence-based decision making and efficient resource allocation, as well as the profound impact these practices can have on population health and on public services. I’m grateful to have had the opportunity to work with this team and to gain valuable exposure to the influence of health economics at governmental level.

**Spotlight on...**

**Social care economics**

**Launch of Chilltastic: A Mindfulness App Supporting People with Learning Disabilities**

The Chilltastic mindfulness app was launched this year in collaboration with the Learning Disabilities Transformation Programme and HCEC. Tailored for people with learning disabilities, the app offers accessible, person-centred mindfulness tools, including bilingual (Welsh and English) guided meditations.

Developed by Dr Ceryl Teleri Davies (HCEC Care Lead) with Ashley Bale (IT Services, North Wales Together), and the Transformation Programme, the project was funded by the North Wales Learning Disability Transformation Partnership. An evaluation is underway to assess app usage and impact, including a cost-consequence analysis to explore how the app supports the well-being outcomes of people with learning disabilities.

More information and access to the app are available at chilltasticapp.wales.

**iSupport**

**Welsh-led Health Economics Research Supports Global Rollout of World Health Organization’s Dementia Carer Intervention**

Researchers at HCEC played a central role in a UK-wide trial of the World Health Organization’s ‘iSupport’—an online intervention designed to reduce distress and depression among carers of people living with dementia.

The multi-centre randomised controlled trial recruited carers across England, Wales, and Scotland. Alongside assessing clinical outcomes and quality of life, HCEC researchers Dr Bethany Anthony and Pim Doungsong, under the mentorship of Professor Rhiannon Tudor Edwards, led a robust cost-consequence analysis from both public sector and societal perspectives. Findings submitted to the NIHR show promise for guiding policy and global implementation.

Dissemination efforts are now underway, underscoring the global impact of Welsh-led health economics research.

I completed my master's degree in economics and econometrics, possessing a strong theoretical foundation and a keen interest in applying these principles to preventative healthcare research. My career has encompassed diverse experiences, including publishing political and economic news at Reuters and working as a Research Analyst at the Greater Manchester Chamber of Commerce, where I contributed to the Local Skill Improvement Plan. ~ *Limssy Varghese*

*Research Project Support Officer*

*HCEC*

**WORKING WITH LOCAL HEALTH BOARDS**

Using economic insight to invest in prevention and high-value care

With Type 2 diabetes on the rise in Wales, from 182,325 to over 191,000 cases between 2017 and 2022, Cardiff and Vale University Health Board is taking proactive steps to manage growing demand in health services. In response to a recommendation in the 2021 Annual Public Health Report, a Programme Budgeting and Marginal Analysis (PBMA) was undertaken to shift resources from lower-value treatments toward prevention and more impactful care.

**Our role in the study**

Working closely with Cardiff and Vale University Health Board, the PBMA was led by HCEC researchers. Professor Rhiannon Tudor Edwards brings extensive experience from previous PBMA projects across Wales, while Dr Ned Hartfiel and Limssy Varghese worked closely with the Health Board to shape the process. The project team conducted a detailed review of the Type 2 diabetes care pathway. This included gathering evidence, consulting with clinicians, and analysing services to identify opportunities for greater efficiency and improved outcomes. The PBMA process allowed the team to assess current spending, share knowledge across services, and make informed, consensus-based recommendations on where to invest for maximum benefit.

**How does this work link to Welsh Government policy?**

This work aligns strongly with the Well-being of Future Generations (Wales) Act 2015 by focusing on prevention, collaboration, and long-term impact. It also supports Public Health Wales’ strategic goal to create a sustainable, preventative health system that addresses health inequalities and improves outcomes for all. By adopting PBMA, the analysis will help to deliver on a national vision for a healthier Wales.

**WORK PACKAGE 3B: CONTRIBUTING HEALTH ECONOMICS EXPERTISE TO DECISION-MAKING AND POLICY FORMULATION**

**Notable examples of how we supported decision-making and policy formulation in Wales in 2024/25 include:**

* HCEC has provided health economics membership to All Wales Medicines Strategy Group (AWMSG), Health Technology Wales (HTW), One-Wales Commissioning and Evidence Based Procurement Board (EBPB) panels.
* HCEC are proud to follow the success of our previous ECRs who were trained, mentored and supported by senior HCEC leads. These include Dr Jo Davies (Head of Health Economics for Welsh Government), Dr Ramin Ziwary (World Bank), Dr Nathan Bray (Senior Lecturer, Bangor University), Dr Carys Stringer, Dr Lucy Bryning and Eira Winrow (Lecturers in Health Economics, Bangor University).
* Dr Ceryl Davies presented the evaluation on the impact of the Tata Steel UK employment changes in Port Talbot on domestic abuse at the Senedd twice in March 2025.
* Professor Rhiannon Tudor Edwards contributed to the NHS Wales Task and Finish Ministerial Advisory Group tasked with reflecting on the accountability of governance structures in NHS Wales.

**DELIVERING EVIDENCE BASED RECOMMENDATIONS**

HCEC researchers conducted a six-month evaluation of the economic impact of overweight and obesity on Cwm Taf Morgannwg University Health Board (CTMUHB). Led by Professor Rhiannon Tudor Edwards, with co-investigators Dr Sofie Roberts and Jacob Davies, the project applied a whole-system health economics perspective to quantify direct and indirect costs.

Using reviews of the published literature, a granular case study, targeted survey and asset mapping of CTM communities, the team delivered evidence-based recommendations to support CTMUHB’s preventative health strategy. Findings aligned with national policies including Healthy Weight: Healthy Wales, contributing to wider public health planning across Wales. This work demonstrates the critical role of health economics in shaping policy and investment decisions to address obesity and promote long-term health system sustainability.

**WORK PACKAGE 4: BUILDING CAPACITY AND CAPABILITY IN METHODOLOGICAL AND APPLIED HEALTH ECONOMICS RESEARCH**

**Welsh Health Economists’ Group (WHEG) 2024**

During this award period, HCEC has continued to organise the annual Welsh Health Economists Group (WHEG) meeting. In response to the unprecedented COVID-19 pandemic, the event transitioned seamlessly to an online format. Since then, WHEG has remained a key platform for bringing together the critical mass of Welsh health economists to share research, discuss policy developments, and strengthen collaborative ties across the field. These meetings reinforce HCEC’s role as a central part of the broader health economics community in Wales.

Each meeting has attracted significant interest and engagement, with over 40 delegates in attendance annually. Attendees represent a wide cross-section of stakeholders, including academia, Welsh research and policy infrastructure, and health and social care professionals. Notable keynote speakers over the past five years have included Professor Ceri Phillips (Professor Emeritus, Swansea University), Professor Emma McIntosh (University of Glasgow), Professor Jim McManus (National Director of Health and Wellbeing, Public Health Wales), and Dr Brendan Collins (former Head of Health Economics, Welsh Government).

The meetings continue to offer valuable opportunities for HCEC early career researchers (ECRs) and affiliated PhD students to present their work, gain experience, and receive expert peer feedback in a supportive environment.

**DEVELOPING EARLY CAREER RESEARCHERS**

**New Welsh representative for the Health Economists’ Study Group (HESG) Early Career Researcher (ECR) Committee**

In Autumn 2024, our project manager, Jacob Davies took on the role as the Welsh representative for the HESG ECR committee, a role previously held by Dr Shaun Harris (SCHE). As part of the role, Jacob acts as a point of contact for ECR health economists in Wales and the UK. The committee disseminates relevant information to early career HESG members, holds online training sessions, and runs ECR events at HESG meetings in person.

~ *Jacob Davies*

*HCEC management board*

**Spotlight on...**

**ACTIVE WORKPLACE PROGRAMME**

In support of staff wellbeing, we are implementing positive changes to encourage group activity. This includes allocating more time for movement between meetings, fostering conversations, sharing skills, and seeking out opportunities for physical activity in the workplace. This initiative is part of the Active Workplace programme being evaluated by HCEC researchers. Led by Dr Catherine Lawrence at CHEME as our Active Workplace Champion, team members have reported an increased uptake in physical activity and have adopted regular movement habits throughout the workday to prevent or alleviate injuries caused by prolonged sitting. The concepts of movement and physical activity have varied meanings for different individuals in the group. For instance, this can involve active commuting (like walking or cycling to work), using a standing desk for part of the day, stretching for five minutes between meetings, or going for a 20-minute jog during lunchtime.

**About Catherine**

Dr Catherine Lawrence is a Research Officer at Bangor University and provides reading support to Professor Rhiannon Tudor Edwards. With a background in Psychology, Catherine has expertise in research projects exploring how to support people living with cancer, dementia and Parkinson’s disease. She recently co-edited a book called Health economics of well-being and well-becoming across the life-course, published by Oxford University Press. Alongside her qualifications in Coaching and Mentoring, Catherine has undertaken training to become an Active Workplace Champion, promoting a supportive culture for colleagues to move more during the working day to improve their physical and mental health and well-being.

**DEVELOPING EXPERTISE TO MEET THE NEEDS OF AN AGEING SOCIETY**

Katherine Cullen attended the Longevity Economy and Care Economy Short Course run by the Care Policy and Evaluation Centre of the London School of Economics and Political Science, held in Bilbao in January. The course covered a range of topics related to the ageing population; it is estimated that 30% of the population living in Wales will be over the age of 60 years by 2026. This packed two-day course presented on how older people are ageing such as living with chronic disease, healthy ageing, how to deliver a system to meet the needs of this population, the economic value of older people, the care economy incorporating invisible care, benefits for older people and their carers, how to capture information and data for these groups, how to measure quality and outcomes in social care, and methods for economic evaluation. There is between 17 to 20 years difference in the average life expectancy of people in Wales and the average healthy years life expectancy with increasing health and social care needs, and dependency on carers. Age Friendly Wales is the Welsh Government strategy for an ageing society and sets out how to address the factors that influence how we age. This course provided valuable training to understand how to design evaluations of interventions for older people and their carers to help build capacity within Welsh research where it is needed and to support the work of Welsh Government and the Older People’s Commissioner for Wales.

**NOTABLE CONFERENCE PRESENTATIONS**

**Congratulations to our colleagues for their recent achievements and contributions!**

Dr Sofie Roberts was awarded second place at the January 2025 HESG conference for her presentation, "Transdisciplinarity, Climate Change and Future Roles for Health Economists." The Best Presentation award at the January 2023 HESG meeting was previously won by Abraham Makanjuola.

Dr Vladyslav Kulikov had his paper, "Getting Inside the Black Box of Prevention," discussed at the January 2025 HESG conference. The session generated valuable feedback and fresh ideas to support the development of his PhD research on social prescribing in Wales.

Dr Bernadette Sewell presented findings from the economic evaluation of EVITE , examining the costs of shielding during the COVID-19 pandemic at ISPOR Europe.

In 2022, Dr Llinos Haf Spencer and Abraham Makanjuola presented their work at

the Lancet Public Health Conference.

**Congratulations to all on your impressive work and continued contributions to the field!**

**Our key publications**

**Examples of key publications 2020/25 include:**

(English references can remain here)

**For more information on HCEC publications, please visit our HCEC website.**

**Farewell and Best Wishes to Departed Colleagues**

During this reporting period, we said goodbye to several valued colleagues who have moved on to exciting new roles and opportunities. Each has made a unique and lasting contribution to SCHE and CHEME, and we extend our heartfelt thanks for their work, as well as our very best wishes for the future.

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**Dr Berni Sewell**

In 2024, SCHE said farewell to Dr Berni Sewell, Senior Lecturer in Health Economics and a key management board member of HCEC. Berni has been a valued member of SCHE since 2009 leading real-world evaluations and decision-analytic modelling to support critical healthcare research as well as contributing to two national clinical guidelines. We are pleased that Berni continues her involvement with SCHE as an Honorary Fellow.

**Dr Rachel Granger**

We were pleased to acknowledge the contributions of Dr Rachel Granger, whose research focuses on women’s health, well-being, and behaviour change. She played a key role in the NIHR-funded Liverpool Citizens Advice on Prescription project. Rachel also led work on the health economics of health justice partnerships and contributed to CHEME’s flagship Active Workplace programme.

**Dr Llinos Haf Spencer**

In June 2024, Dr Llinos Haf Spencer became a Research Fellow at the Royal College of Surgeons in Ireland. She led the CHEME/HCEC review team for the Health annd Care Research Wales Evidence Centre and was instrumental in advancing Patient and Public Involvement in research. She was also a strong advocate for the Welsh language and made an important contribution to mentoring and supporting early career researchers.

**Dr Pippa Anderson**

Dr Pippa Anderson’s appointment as Senior Research Fellow at Cardiff University, within the newly established Centre for Vision Services Research, marks a significant expansion of HCEC’s reach. As a key member of the team that secured £1.7 million in funding from Health and Care Research Wales this year, Pippa played a central role in the creation of the multidisciplinary Research Centre at Cardiff University. She continues to contribute to HCEC through her ongoing membership of SCHE and her valued role on the HCEC Advisory Board.

**Dr Liv Kosnes**

Dr Liv Kosnes left HCEC in October 2022 to focus on teaching on the MSc in Public Health and Health Promotion. A valued member of the HCEC Management Board, Liv played an important role in the development of our public and patient involvement (PPI) work. She has since joined Public Health Wales, where she now serves as Public Health Evaluation Lead.

**IMPACT THROUGH COLLABORATIONS**

**TAKING A SMART CAPACITATING INVESTMENT APPROACH IN THE INVEST4HEALTH PROJECT**

Launched in January 2023, Invest4Health is a €5.5 million Horizon Europe project aiming to revolutionise health promotion and disease prevention financing across Europe. By introducing Smart Capacitating Investment (SCI), the initiative seeks to shift focus from reactive healthcare to proactive, preventative measures. The research consortium consists of 18 partner organisations across nine European countries. Invest4Health pilots and tests innovative financial models that encourage cross-sector collaboration and sustainable investment in public health in regional testbeds in Sweden, Spain, Germany, and Wales.

**Our role in the study**

Led by Professor Rhiannon Tudor Edwards, HCEC researchers Dr Holly Whiteley, Jacob Davies and Dr Sofie Roberts focused on establishing a foundational understanding of SCI in public health. The team conducted a rapid scoping review of academic and grey literature to identify existing innovative financial and non-financial investments in health promotion and disease prevention. Additionally, a realist synthesis explored how, for whom, and under what circumstances SCI models are effective. Following the development of the SCI concept, HCEC researchers worked collaboratively to develop frameworks to evaluate the real-world implementation of SCI approaches in the test-beds. Working closely with each test-bed, an evaluation plan was designed that considered respective contexts and initiatives. Evaluation is set to commence in Summer 2025.

**What is the expected impact?**

Invest4Health is expected to transform health financing by introducing SCI models that prioritise prevention and equity. By enabling risk-sharing, resource pooling, and citizen co-governance, the project aims to deliver sustainable returns on investment, improve population health, and reduce inequalities. Validated through regional test-beds, these models will offer scalable solutions for policymakers and funders across Europe.​

I hold a PhD in Mathematical Medicine and Biology from the University of Nottingham. Currently, I am a Research Officer at CHEME, Bangor University, where I work on a diverse portfolio of projects, including preventative health, maternal healthcare, dental, and dementia research. My expertise lies in decision analytical modelling, discrete choice experiments, and mathematical and statistical analyses. A key focus of my research is the interpretation and analysis of "complex interventions within complex systems" across various health systems. ~ *Dr Victory Ezeofor*

*HCEC Research Office*

**Our Key Collaborators**

**Academic**

* Bangor University
* Swansea University
* Cardiff University
* Aberystwyth University
* University of South Wales
* University of Southampton
* University of Nottingham
* University of Edinburgh
* University College London
* St George's University
* King’s College London
* University of Liverpool
* University of Birmingham

**HEALTH AND CARE RESEARCH WALES INFRASTRUCTURE**

* National Centre for Mental Health
* Wales Cancer Research Centre
* SAIL Databank
* PRIME Wales
* Wales Cancer Biobank
* CASCADE-Partnership
* DECIPHer
* Advanced NeuroTherapies Centre
* Wales Kidney Research Unit
* Centre for Trials Research
* National Cardiovascular Network for Wales

**NHS AND CARE ORGANISATIONS**

* Aneurin Bevan UHB
* Betsi Cadwaladr UHB
* Cardiff and Vale UHB
* Cwm Taf UHB
* Swansea Bay UHB
* Hywel Dda UHB
* Public Health Wales
* Velindre NHS Trust
* All Wales Therapeutics and Toxicology Centre
* Health Technology Wales
* Neath Port Talbot Council
* Pembrokeshire County Council
* Royal College of Surgeons (Ireland)

**INTERNATIONAL**

* European Organisation for Research and Treatment of Cancer
* Horizon Europe

**OTHER COLLABORATORS**

* Citizens Advice
* Moondance Cancer Initiative
* Cancer Research UK
* Patients and the public

**OUR PROGRESS AND THE PATH AHEAD**

***A message from our co-directors***

In this End of Award Report, we have shared our research highlights, our growing impact across Wales and beyond, the activities and achievements of our early-career researchers, and the publications of which we are most proud.

We are delighted to have secured funding for another five years until 2030, enabling us to continue strengthening the pipeline of early-career and mid-career health economists in Wales. Many of these health economists often go on to make significant contributions within Welsh Government, Public Health Wales, and other key organisations, providing essential evidence to inform health and social care policy.

Looking to the future, we anticipate a growing emphasis on several critical areas: social care economics, the economics of greening the NHS to reduce its carbon footprint, and the health co-benefits of climate action across the Welsh economy. We will continue to support the Health and Care Research Wales-funded centres with diverse research that addresses pressing patient needs to help prevent avoidable ill-health, disability, and premature death.

The resource challenges that the NHS and social care system face in Wales mean the role of health economics remains more important than ever. Addressing issues of equity and ensuring access to services for marginalised and underserved populations will be a key consideration in our work. We remain committed to supporting efficient and equitable health and social care across Wales going forward.

On behalf of HCEC, we thank you for reading our 2020/25 End of Award Report. We hope to meet you during the next year to discuss and share ideas and to work with many of you over the coming months and years.

*~ Prof. Deb Fitzsimmons and Prof. Rhiannon Tudor Edwards*

**Find Out More**

For more information on Health and Care Economics Cymru, our work and how we can support you, please visit our website: <https://healthandcareeconomics.cymru/>

**Join Us on Social Media**

**Contact us**

If you would like health economics advice or to discuss how we can support you in your research, please feel free to email us:

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