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WELCOME TO HEALTH AND CARE ECONOMICS CYMRU!

Health and Care Economics Cymru (HCEC) is an all-Wales collaborative research infrastructure group and we are delighted to be 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 grow and sustain a community of health economics experts in Wales with strong collaborations across the health and care sector to make a difference to health and care research. 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, and outcomes for the people in Wales.

OUR MISSION

'To provide world-class health economics expertise (collectively harnessing an agile, integrated all-Wales approach) to enable excellent health and social care research and development in Wales to the benefit of patients, the public and the economy.'



The HCEC Management Board at one of our monthly meetings.

We accomplish our aim and mission through our objectives to:

- 1 Achieve a strategic, collaborative all-Wales direction for health economics, aligned to priorities for Wales.
- 2 Ensure Patient and Public Involvement and Engagement is embedded in everything we do.
- 3 Provide easy access to health economics support for researchers working within the Health and Care Research Wales infrastructure.
- 4 Optimise collaboration with the health and care research community to ensure the best evidence possible is available to support decision-making for service users and taxpayers.
- 5 Provide advice and support to decision-making, policy formulation and analysis through targeted involvement with committees.
- 6 Enhance capacity and capability across the health economics community in Wales, by developing an all-Wales methodological hub in areas of health economics.
- 7 Increase awareness of health economics in health and care with our key stakeholders.

WHY DO WE NEED HEALTH ECONOMICS?

In the recovery period following the COVID-19 pandemic, it has become clearer than ever how limited our health and care resources are. Every choice we make on how to allocate our scarce resources has an opportunity cost. This means we need to sacrifice one service in order to provide another and every decision will have unintended health and care consequences with some groups within society disproportionately affected. We therefore must understand the value for money, or cost-effectiveness, of the health technologies, interventions and services we provide. This will enable us to reduce inequalities, promote a fair prioritisation of resources, improve the wellbeing of the population and ensure sustainability of our health and care system for the benefit of the people of Wales.

Find out more about what we do and how we can help on our website:

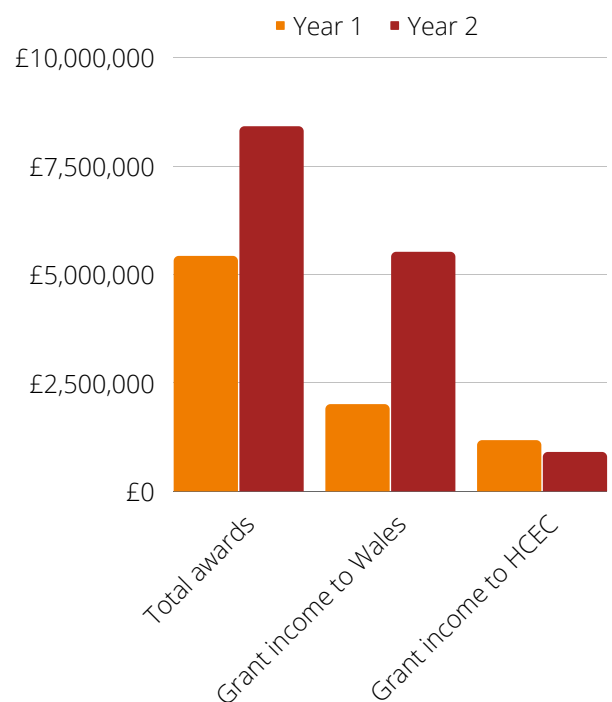
<https://healthandcareeconomics.cymru/>

BUILDING RESILIENCE FOR A BRIGHTER FUTURE

During 2021/22, our agility and flexibility as an all-Wales team allowed us to adapt to the changing health and care landscape and to build resilience and capacity of health economics in Wales. So we can support the return to a 'new normal' following the COVID-19 pandemic for the benefit of the people, NHS and economy of Wales.

Wales now faces a triple challenge resulting from Brexit, the COVID-19 pandemic, and climate change. Reduced service provision, long waiting lists and increased health-harming lifestyle behaviours result in deteriorating mental and physical health of the population, compounded by the current economic challenges to families and communities. Difficult choices on how to allocate our increasingly scarce health and care resources are unavoidable. As such, health economics plays a more crucial part than ever in rebuilding a sustainable health service. And where the NHS has made a commitment to value-based health care, concepts of prudent health care and co-production, HCEC remains committed to providing the evidence, advice and support required to ensure that the health and social care we deliver is as efficient, fair and beneficial as possible. Our drive to build a brighter future for Wales and our agility as a team allowed us to increase our contribution to health and care research, prioritisation and policy making in Wales during our second year.

Compared to our first year, we have increased our conversion from bid to award by 21% and our total grant income by £3 million:



As our much-valued stakeholders, we are delighted to share with you our achievements of our second year. We are proud of how we made a difference during 2021/22 and how we demonstrate our impact through leading and supporting research in our annual report. **We hope you'll enjoy reading it.**

THE HCEC TEAM

The HCEC team is based within the two Welsh health economics units at Bangor University and Swansea University. Our co-directorship model, supported by the co-applicants, project managers and management board and a strong advisory board continued to successfully support our objectives during 2021/22.

OUR HCEC CO-DIRECTORS

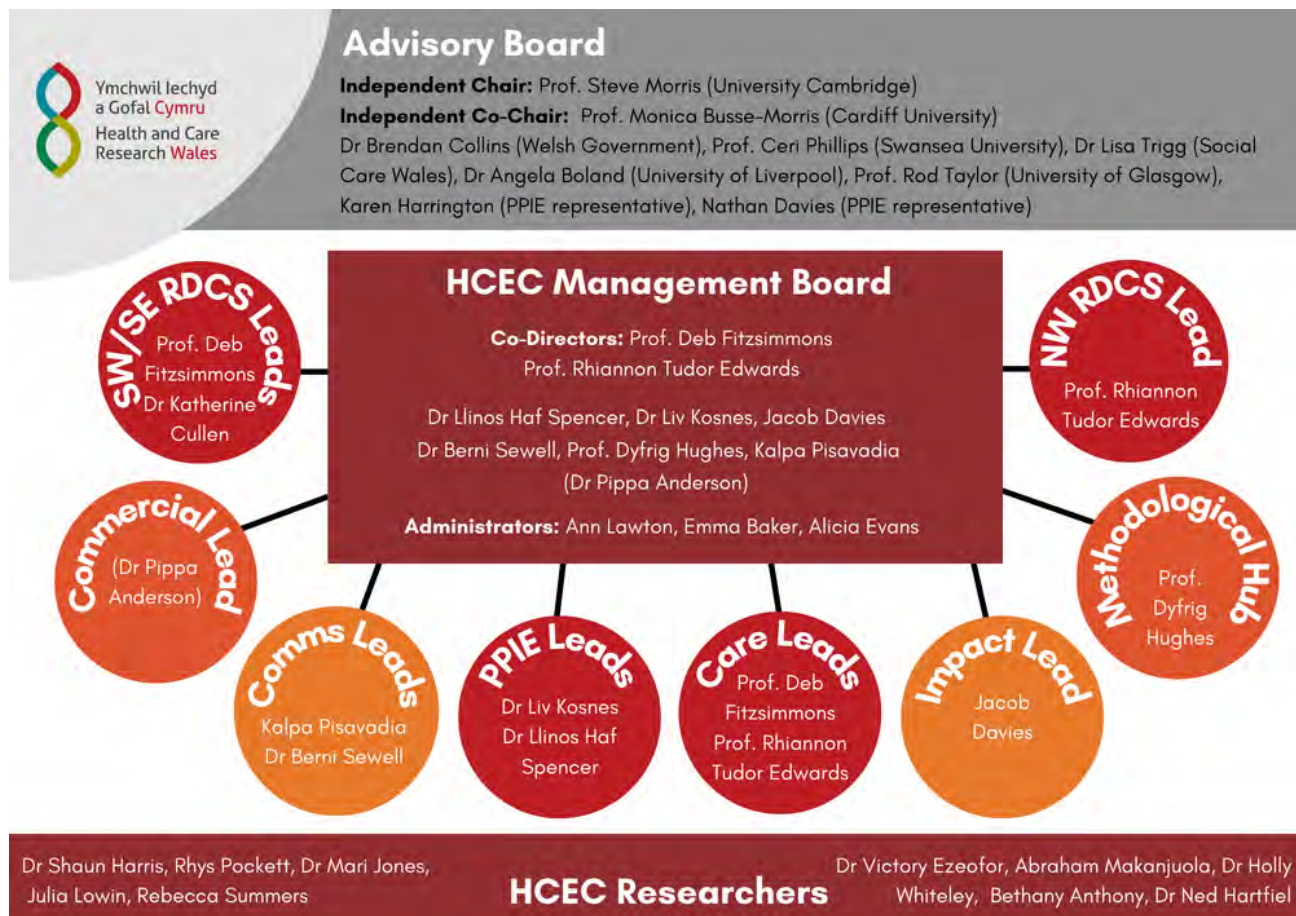


Prof. Rhiannon Tudor Edwards
HCEC Co-Director



Prof. Deb Fitzsimmons
HCEC Co-Director

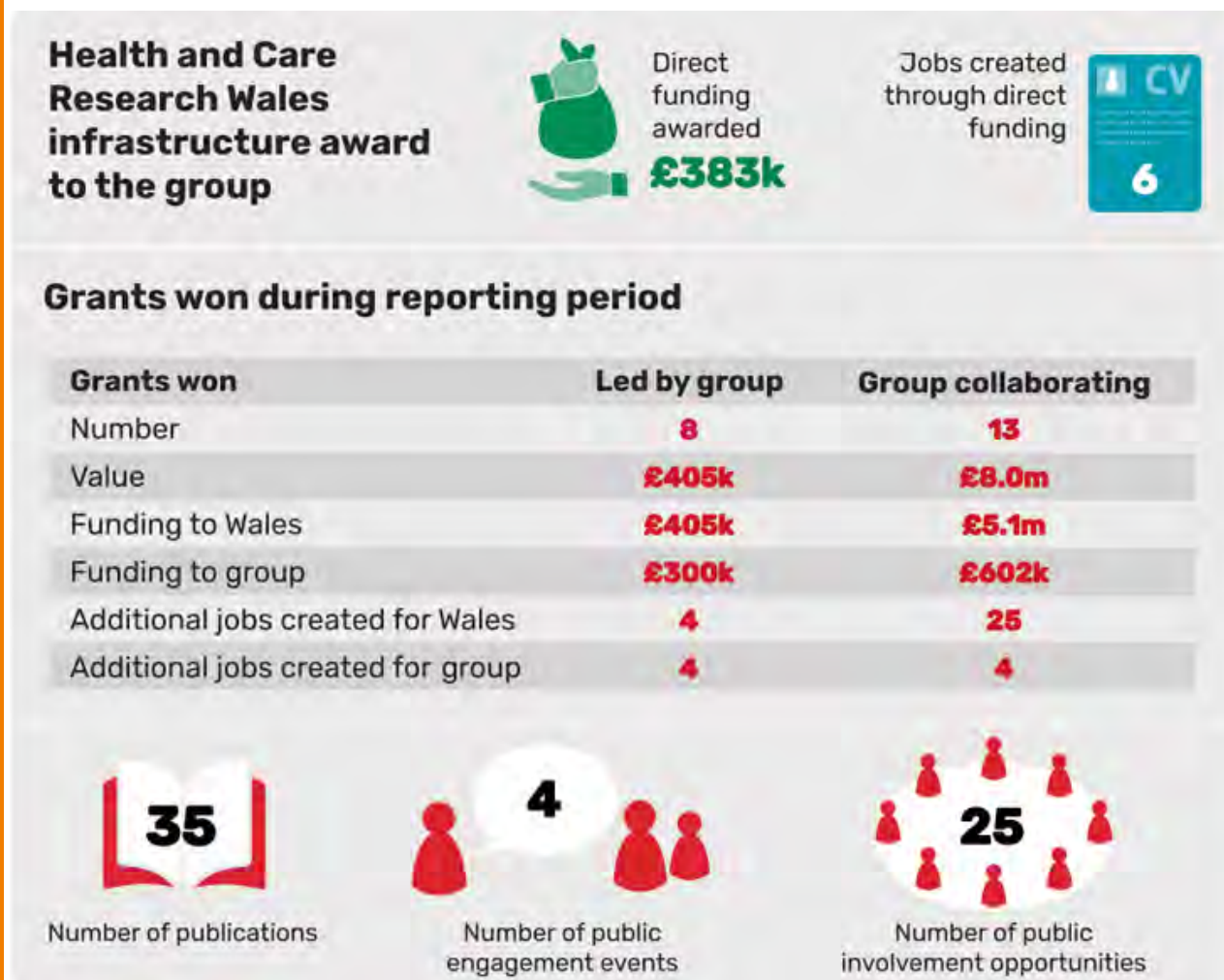
OUR HCEC ORGANISATION



SUMMARY OF THE YEAR

OUR KEY METRICS

Our key metrics of 2021/22 are summarised in the infographic below:



GROWING HCEC'S IMPACT AND CONTRIBUTION

In 2021/22, we improved our conversion rate from grant applications to funded award from 24% in Year 1 to 45% (21 awards out of 47 submissions). We are delighted to report our contribution to six National Institute for Health Research (NIHR) Awards during Year 2 which represented over 80% (£475,000) of our direct research income to HCEC obtained from a leading UK health research funder. We continue to demonstrate our healthy collaboration with other groups across the Health and Care Research Wales community and across the UK, with a total of £8 million of grants awarded where HCEC contributed as a co-applicant (compared to £3 million in Year 1).

OUR YEAR AT A GLANCE

In 2021/22, our key achievements against our objectives (as described on page 3) included:

1

Our continued all-Wales contribution to provide methodologies, evidence and senior advice to **support Welsh Government policies and decision making regarding priorities** such as COVID-19 (see page 19), dementia (see page 12) and areas of public health and prevention (see page 9).

2

Our well-received public involvement event on 3rd November 2021 which aimed to show members of the public the breadth and depth of health economics involvement in different research settings and projects and **encouraged them to become involved with health economics research** studies (see page 16).

3

Our health economics support for researchers working within the Health and Care Research Wales infrastructure and Health Boards that led to **21 collaborative and group-led grant awards** during 2021/22.

4

Our collaboration with the Centre for Trials Research and the National Centre for Mental Health evaluating a guided self-help intervention for people with post-traumatic stress disorder (PTSD) which will **reduce NHS waiting lists (of currently 18 months) and lead to increased options of therapy** for people with PTSD (see page 25).

5

The provision of health economics advice and support to decision-making, policy formulation and **the COVID-19 response and recovery**, supporting Welsh Government, the Test and Trace Value for Money Expert Academic Board and as Senior Research Leaders for Health and Care Research Wales during 2021/22 (see page 10).

6

Enhancing the health economic capacity and capability in Wales, by **training future health economic leaders** (see page 23) and re-positioning our methodological hub as a centre of excellence in applied research with focus on wellbeing, prevention, and recovery.

7

Our contribution to leading core work-streams in multimillion pound UK multi-centre trials (with 6 NIHR and 1 UKRI bids awarded in 2021/22) which shows an **increase of awareness of the importance of health economics and the high-quality work we produce** within the research community and with key stakeholders (see page 6).

HIGHLIGHTS OF OUR AREAS OF IMPACT

During 2021/22, our emphasis was on 'rebuild and renew' as we move out of the global pandemic. We contributed to research across the life course with recovery and prevention being our unifying theme across our portfolio, with a growing focus on well-being and well-becoming for people and communities across Wales.

THE HCEC RESPONSE TO COVID-19 RECOVERY

HCEC made a strong contribution to the immediate response to the COVID-19 emergency and now continues to support decision making and policy formulation during the recovery period.

We were awarded funding to investigate the impact and unintended consequences of COVID-19 on people with dementia (see page 21) and to continue our evaluation of the costs and effectiveness of the COVID-19 shielding initiative in Wales. Both of these projects, funded by Health and Care Research Wales and the National Core Studies for COVID-19 Immunity Programme will

help to inform government response to further COVID-19 waves and other health emergencies in the future.

We are also investigating the cost-effectiveness of a novel self-management intervention for people with long COVID to provide hope to a growing patient group with desperate unmet healthcare needs (see page 11). Furthermore, HCEC continues to collaborate with the Wales COVID-19 Evidence Centre providing rapid, robust and representative evidence reviews in response to COVID-19 related questions set by Welsh Government (see page 19).

FOCUS ON WELLBEING AND WELL-BECOMING



Prof. Rhiannon Tudor Edwards (pictured on the left) is consolidating a decade of leading research in the field of health economics in wellbeing by editing an Oxford University Press textbook entitled: 'Well-becoming - Exploring the health economics of wellbeing and well-becoming across the life-course', due to be published in 2023.

COLLABORATING TO PROVIDE RESEARCH EXCELLENCE IN WALES AND BEYOND

In addition to our collaboration with other Health and Care Research Wales infrastructure groups (see pages 25 and 26), we also have strong links to industry (e.g. by providing external reviews for pharmaceutical companies and helping to develop a new ophthalmic scanner to improve the management of eye disease) and third sector organisations (e.g. by collaborating to evaluate the TRIO Shared Lives day support service for people with dementia). We also collaborate internationally, e.g. by leading the multinational PROMs pancreatic cancer project (funded by the EORTC Quality of Life Group) and by contributing to the €5 million Invent 4 Health Horizon Europe bid.



PREVENTION AND MENTAL HEALTH

Alongside our contribution to COVID-19 recovery, **our focus in Year 2 was on well-being and well-becoming**. We supported research which cuts across health, social and educational boundaries with **strong emphasis on public health and prevention**, such as our collaboration with the Gambling Research, Evaluation and Treatment Wales Network to help address the causes and effects of problem gambling in UK Armed Forces veterans (see page 15), or our evaluations of the KiVa school-based anti-bullying programme (see page 14) and the Family Nursing Partnership programme (see pages 12-13) aimed at improving primary school pupils' and vulnerable children's mental health, emotional wellbeing and academic attainment. Furthermore, we contribute to the **improvement of population mental health**, with our economic evaluations of the Rare Dementia Service (see page 12), a guided self-help programme for people with post-traumatic stress disorder (see page 25) and a support programme to reduce financial insecurity and health inequalities (see page 14).

UPDATES ON WORK PACKAGES

Our objectives are supported by four work packages:

- 1** Optimising collaboration with health and social care researchers through an all-Wales Health Economics (HE) community of expertise.
- 2** Patient and Public Involvement and Engagement.
- 3** A) Delivery of HE advice and support to health and social care organisations against WG priorities and needs.
B) Contributing HE expertise to decision-making and policy formulation.
- 4** Building capacity and capability in methodological and applied HE research to position HCEC across the HE community.

The following case studies showcase the increasing impact HCEC made in each of our work packages during 2021/22.

LEADING RESEARCH IN WALES

We are delighted that Prof. Deb Fitzsimmons and Prof. Dyfrig Hughes (pictured on the right) were selected as Health and Care Research Wales Senior Research Leaders (SRLs). Health and Care Research Wales SRLs are among the most prominent and prestigious health and care researchers in the country. They play a vital role in leading and developing the health and care research community in Wales.



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

A new hope for long COVID sufferers – the LISTEN study

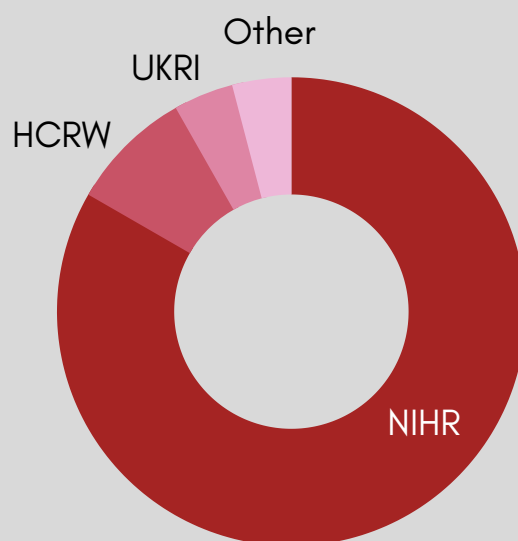
What was the question that HCEC could help with?

Long COVID is a complex condition characterised by persistent post-COVID symptoms. Patients report over 200 different symptoms affecting 10 organ systems which commonly include fatigue, breathlessness, malaise, and cognitive dysfunction but can be different for every patient. Long COVID can have serious and debilitating long-term effects, making life challenging for thousands of people across the UK. Yet, the condition is still poorly understood, and lack of a clear diagnosis and effective management options increase the risk of long COVID patients feeling misunderstood by healthcare professionals and services and not receiving the treatment they require.

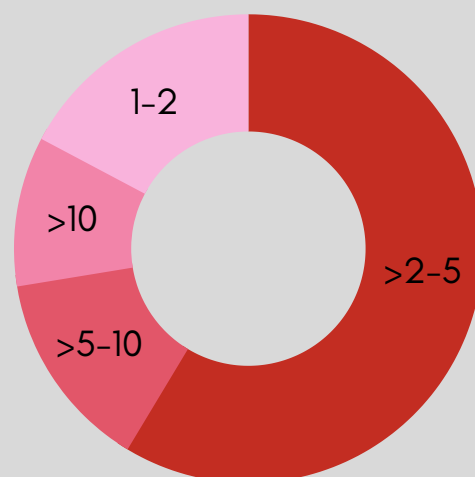
What did we do?

HCEC researchers are collaborating with Prof. Fiona Jones of Kingston University and clinicians and researchers from universities across the UK to co-design and evaluate a personalised self-management support option for people with long COVID. The multi-centre LISTEN trial was awarded £1.1 million by the National Institute for Health and Care Research (NIHR) and is hoped to improve treatment and outcomes of patients battling long-term symptoms of COVID-19.

HCEC total awards 2021/22 by funder



Impact factors of our 2021/22 publications



Rare Dementia Support (RDS) aims to empower, guide, and inform people living with a rare dementia diagnosis and those who care for them. Combining social, emotional, and practical support with research and training about rare dementias, the RDS impact study is working to shape services and increase awareness about these conditions so that everyone affected by rare dementias feels better supported in their communities.



*Dr Victory Ezeofor,
HCEC Researcher*

Empowering people with rare dementias and their carers: The Rare Dementia Support (RDS) impact study

What was the question that HCEC could help with?

Despite more research to diagnose early stages of dementia, our understanding of rare dementias remains limited, which results in diagnoses being delayed and 30% of people living with rare dementia first receiving an incorrect diagnosis. Furthermore, many existing health, social and voluntary services do not sufficiently accommodate the needs of people living with a rare form of dementia. Rare Dementia Support (RDS) addresses this unmet need of people with rare forms of dementia, their families, friends, and healthcare professionals.

What are we doing?

We collaborate on a five-year research programme, funded by the NIHR and the Economic and Social Research Council (ESRC) and led by University College London to evaluate the Rare Dementia Service (RDS), a world-leading, UK-based service provided by the University College London Dementia Research Centre (DRC) and partners and funded by The National Brain Appeal. We will explore the cost-effectiveness of the pathway from referral to multicomponent support groups for patients and carers affected by rare dementias over a lifetime period, and the cost-effectiveness of the online support community.

Improving health and development in young children: the Building Blocks 2-6 routine data-linkage study

What was the question that HCEC could help with?

The Family Nursing Partnership (FNP) programme, supporting teenagers expecting their first child, reduced child abuse and neglect in the longer-term in US studies and its short-term effectiveness was evaluated in England. However, no longer-term data existed to gauge the costs and effectiveness of the FNP programme.

What did we do?

We collaborated with Professor Mike Robling (CTR) and others on the Building Blocks 2-6 (BB 2-6) study, funded by the NIHR Public Health Programme Grant Scheme. Using data linkage, the study followed participants from the previous Building Blocks trial for up to the age of 7 years in routine social care, health, and education data. We undertook a cost-consequences analysis using routine data which found no significant differences in use of secondary care resources and costs between the FNP group and usual care. This supports the clinical findings of no observable benefits in maltreatment. However, the programme generates higher rates of school readiness and child attainment of educational goals at Key Stage 1.

What is the expected impact?

Our findings, which were recently [published in BMJ Open](#), will contribute to future local and national commissioning decisions on the use of the FNP programme within the UK and support the international evidence base on the use of early years intervention programmes to mitigate the harms for vulnerable children and their families and reduce inequalities in health, social and education outcomes.

HOW WE OPTIMISE COLLABORATION WITH HEALTH AND SOCIAL CARE RESEARCHERS

- *Using a senior triage model, we support our early career researchers (ECRs) to gain experience of grant development, leading on bids and starting their own collaborations and networks. This allows them to develop their own portfolio of research, e.g. Dr Shaun Harris who is working through PRIME and clinical trials units (CTR/STU) to develop trial-based evaluations in the areas of surgery, trauma and anaesthesia.*
- *We focus on targeted networking with other infrastructure groups such as the Centre for Ageing and Dementia Research (CADR) to develop mutual research opportunities, such as linking with engineers on a bid to the Engineering and Physical Sciences Research Council (EPSRC).*
- *We continue to expand our Co-Lead model within HCEC to involve our early career researchers and to further deepen our all-Wales collaboration.*

WAYS TO WELLBEING - OUR CONTRIBUTION TO REDUCING HEALTH INEQUALITIES



With risk of poverty and health inequalities having increased during the pandemic, HCEC teamed up with Dame Professor Hazel Genn, University College London, to investigate the most effective approaches to integrate anti-poverty measures into services to reduce financial insecurity and health inequalities across the North West.

TACKLING BULLYING IN SCHOOLS

Around 10% of pupils in Wales report being bullied regularly in primary school years. HCEC contributes to the evaluation of the KiVa school-based anti-bullying programme, which changes bystander behaviour and provides consistent strategies for dealing with incidents of bullying. The study is funded by the NIHR Public Health Research Programme and will provide schools with more comprehensive guidance regarding anti-bullying policies. This will help to improve student mental health and emotional wellbeing, school attendance and academic attainment, and teachers' self-efficacy in dealing with bullying, mental wellbeing, and burnout.



Our support to the Gambling Research, Evaluation and Treatment Wales Network

What was the question that HCEC could help with?

Funded by the Forces in Mind Trust, HCEC health economists supported a multi-disciplinary research group, collaborating with researchers from various leading institutions across the four UK nations and the Gambling Research Education and Treatment (GREAT) Network to investigate the relationship between problem gambling and healthcare costs in UK military veterans.

What did we do?

We measured healthcare resource utilisation, criminal justice contacts and the social costs incurred by veterans and conducted a cost-consequences analysis (CCA) of these harms in veterans differing by gambling status. The study demonstrated that veterans are at risk of greater healthcare needs than age- and gender-matched non-veterans. It further highlighted the impact military service has on greater physical and mental health needs and emphasised a link between treatment seeking in veterans and gambling-related problems which warrants further investigation and targeted interventions in Wales and the UK. Our findings support an economic case for screening for gambling-related harm among UK Armed Forces veterans.

FOCUS ON PRIMARY, SECONDARY, AND TERTIARY PREVENTION

Prof. Rhiannon Tudor Edwards launched the Public Health and Prevention Economics Research Group network across Bangor University and Betsi Cadwaladr University Health Board (BCUHB), strengthening links between the University and Health Board, and Public Health Wales. We will work in an inter-disciplinary way and, where possible, at a 'systems level' with respect to the 'Building Back Fairer' agenda set by Prof. Sir Michael Marmot.

It's exciting to see that my first first-authored paper as an early career researcher (ECR) was accessed over 3,800 times and has already been cited. I have also been appointed to the Health Economists' Study Group (HESG) ECR committee in January 2022. HCEC support is crucial for me to develop my own networks and portfolio of health economic research and to start taking on more responsibilities in grant applications, collaborations and as investigator.



Dr Shaun Harris,
HCEC Early Career Researcher

I feel [the work undertaken by HCEC] will resonate well with the public and demonstrates far reach across a number of vulnerable groups across the UK.



*Mrs Karen Harrington, HCEC
Public Representative*

Our Public Involvement Group (PIG) members add valued perspectives at all levels of our research, and their feedback shapes our PPIE strategies and activities. PIG members are involved in our projects, and we actively support their involvement in funding bids as Co-Investigators.



*Dr Liv Kosnes,
HCEC PPIE Co Lead*

WORK PACKAGE 2: PATIENT AND PUBLIC INVOLVEMENT AND ENGAGEMENT (PPIE)

This year, we recorded 25 public involvement activities, including research design, development of funding bids, support with research ethics, development of resource use measures and data collection tools, review of reports, strategies and action plans and participation in key meetings with public members, with funders and as part of advisory boards and panels. We also held three HCEC Public Involvement Group (PIG)/Grŵp Cadw-mi-gei meetings and one online PPIE event. Our PPIE representatives Karen Harrington and Nathan Davies remain invaluable members of our HCEC Advisory Board and we thank all our public representatives for their contributions to HCEC during 2021/22.

Informing the public about Health Economics research

On 3rd November 2021, we held our first Public Involvement and Engagement (PPIE) online event, organised by HCEC PPIE co-leads Dr Llinos Haf Spencer and Dr Liv Kosnes, in collaboration with members of our HCEC Public Involvement Group (PIG)/Grŵp Cadw mi gei. The event showcased health economics involvement in different research settings and projects and informed the public of how to become involved with health economics research studies through presentations of five guest speakers, including Prof. Nefyn Williams, Liverpool University, Dr Annie Hawton from the University of Exeter and Peter Gee of Health and Care Research Wales. The event was well attended and received and sparked interest in health economics, current research and training opportunities.

Focus on PPIE: Examples of how we involved the public during 2021/22

- Public representatives helped to take the SEREN economic evaluation bid from Stage 1 to Stage 2 in the Research for Patient and Public Benefit (RfPPB) bidding process.
- HCEC supported the recruitment of one of the public involvement co-applicants on the CYMELL (diabetic screening and ethnic minorities in Wales) RfPPB bid.
- Five members of the public have been involved with the COSMO study (see page 21) from inception. The study has a public co-applicant who participated in the development of the Advisory Panel for the COSMO study and acts as co-chair of the panel. Two successful advisory panel meetings have been held to inform the subpopulation chosen for the COSMO study.
- The Formative Process Evaluation and Value Based Evaluation for the All-Wales Diabetes Prevention Programme is supported by two public contributors from the Diabetes Research Group Swansea Public Reference Panel.

Below: Prof. Dyfrig Hughes presenting at the HCEC Public Involvement Group (PIG)/Grŵp Cadw-mi-gei meeting on 17th February 2022.

The image shows a Zoom meeting interface. On the left, a presentation slide titled "Covid-19 vaccines" is displayed. The slide contains the following text: "Covid has grown gradually less lethal over the pandemic, mainly due to immunity, the majority of which has come via vaccines". Below this is a line graph showing the "Evolution of Covid's infection fatality ratio in England, overlaid on levels and sources of immunity". The graph plots four metrics from July 2020 to January 2022: "Covid IFR" (red line, decreasing from ~0.8% to ~0.1%), "% of adults with antibodies" (blue line, increasing from 0% to ~100%), "% of adults who have had Covid" (green line, increasing from 0% to ~100%), and "People with immunity via vaccination" (yellow shaded area, increasing from 0% to ~100%). The graph also indicates "Vulnerable groups vaccinated" and "Boosters" in late 2021. The Zoom meeting grid on the right shows several participants, including Prof. Dyfrig Hughes (highlighted in a yellow box), Liv Kosnes, Rachel Granger, Llinos Spencer, Katherine Cullen, Karen Harrington, Claire J, and Nathan Davies. The Zoom control bar at the bottom includes icons for Stop Video, Security, Participants (14), Polls, Chat, Share Screen, Record, Live Transcript, Breakout Rooms, Support, Reactions, More, and End.

WOULD YOU LIKE TO HELP?

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](#).

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

During 2021/22, we continued to provide health economic evidence and advice to ensure health economics remains incorporated into decision and policy making to improve quality of care and sustainability of our strained health and care system. The NHS Confederation, which represents the seven local health boards and three NHS trusts, estimates that it will cost up to £300 million per year to meet the backlog of those on NHS waiting lists here in Wales. Health economics will be crucial in the years ahead to ensure we prioritise services that provide good value for money to meet this backlog of unmet demand and address existing inequalities in health and life chances, which have been exacerbated by the COVID-19 pandemic, Brexit and climate change.

Some of our contributions during 2021/22 are summarised below:

- We submitted 37 research proposals supporting other research groups to help mitigate the shorter and longer-term impact of the pandemic on the people and economy of Wales, strengthen public health and preventative service provision, address the deteriorating mental health and wellbeing of the population and to help improve efficiency and value for money of NHS treatments and services.
- Our co-directors were appointed to the Test and Trace Value for Money Expert Academic Board, Joint Biosecurity Centre, Department of Health and Social Care, UK Government. They were two of four UK nominated experts providing independent health economics advice to the work programme. The work has been completed and is currently awaiting the final report for review, pending further communication on next steps from the Centre. Whilst focused on NHS England, the findings will be shared with Welsh Government and Scottish Parliament. Our nomination demonstrates our standing at UK level.
- We move into supporting the wider care landscape, e.g. Prof. Rhiannon Tudor Edwards worked with Prof. Carl Hughes, School of Educational Sciences, most recently on a bid to evaluate how to support disadvantaged learners currently identified through free school meals. Prof. Deb Fitzsimmons is working as part of a consortium bid to support research capacity building in social care in Neath Port Talbot Council.

Our Contribution to the Wales COVID-19 Evidence Centre

What was the question that HCEC could help with?

The Wales COVID-19 Evidence Centre ensures the best available, up-to-date and relevant evidence is readily available to inform decision-making around the COVID-19 pandemic and recovery for stakeholders involved in health and social care across Wales.

What did we do?

Working with the PRIME Centre, the Bangor Institute for Health & Medical Research (BIHMR) and other collaborators, HCEC hosts and supports the health economics contribution to the Wales COVID-19 Evidence Centre. Demonstrating our agility and commitment as a strong partner in supporting the agenda for Health and Care Research Wales regarding the COVID-19 pandemic, this collaboration has kept health economics at the centre of how Welsh Government addresses the most important and relevant questions for Wales in health and care priorities as we learn from the COVID-19 pandemic. Specifically, our contribution to the Wales COVID-19 Evidence Centre means that a health economics lens is being applied to consideration of questions regarding COVID-19 for the benefit of the economy and people of Wales.

We deliver high quality, rapid evidence summaries to inform the work of the Wales COVID-19 Evidence Centre. As such, we make a robust and distinctive contribution to evidence-based policy at a Welsh Government and Health Board level, acting as part of the Health and Care Research Wales infrastructure. This means that health economics and value-based healthcare are included into evidence-informed policy. Our collaboration brings meaningful all-Wales working into practice on COVID-19 matters.

COMPLETED RAPID REVIEWS LED AND SUPPORTED BY HCEC

- Which innovations can improve timeliness of investigations and address the backlog in endoscopy for patients with potential symptoms of upper and lower gastrointestinal (GI) cancers?
- Have infection control and prevention measures resulted in any adverse outcomes for care home and domiciliary care residents and staff?



*Dr Llinos Haf Spencer,
HCEC PPIE Co Lead*

We work with the All Wales Therapeutics and Toxicology Centre (AWTTC) by creating an on-line training platform for health economics for AWMSG members and AWTTC staff to further deepen health economic understanding of decision makers in Wales.



Dr Berni Sewell,
HCEC Communications Co-Lead

We forged a strong relationship with the School of Vision Science and Optometry at Cardiff University, developing a programme of research to help refine and revise the delivery of eye services in Wales to optimise outcomes and patient experience.



Health

fellow

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

During 2021/22, we continued to provide our senior-led support and advice to policy-making committees across Wales and the UK, such as the All Wales Medicines Strategy Group (AWMSG), the Evidence Based Procurement Board (EBPB) and the Welsh Health Specialised Services Committee (WHSSC). We are also **reaching wider across the health and care community of Wales** to help increase efficiency and sustainability of the health and care system and improve patient care and outcomes.

Examples of our new opportunities include:

- Prof. Rhiannon Tudor Edwards has secured two PhD studentships with Hywel Dda University Health Board (UHB) as part of the rural health initiative.
- Prof. Deb Fitzsimmons is engaging with several local authorities in South and West Wales, helping to embed health economic thinking and methods into local decision making.
- Dr Liv Kosnes is representing HCEC on the Violence Against Women, Domestic Abuse and Sexual Violence Research Network Wales (VAWDASV).
- Dr Katherine Cullen was appointed the strategic theme lead (economics) for the Welsh Institute for Physical Activity and Sport (WIPHAS).
- Drs Llinos Haf Spencer and Victory Ezeofor are working with Betsi Cadwaladr UHB on the economic case for new stroke rehabilitation services.

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

MOVING EARLY CAREER RESEARCHERS INTO LEADING PROJECTS AS A PRINCIPAL INVESTIGATOR: THE COSMO STUDY

What was the question that HCEC could help with?

One key area of skills and expertise for health economic evaluation is economic modelling which requires advanced quantitative and mathematical/econometric knowledge and application to health economic problems and methods of analysis. In 2019/20, we invested our previous WHESS underspend in supporting Dr Mari Jones, a PhD mathematician and operational researcher, to undertake additional training and gain experience in applied health economics. This provided Mari with the opportunity to develop her skills in grant application and hone her economic evaluation skills, e.g. as part of the successful [evaluation of the Rapid Diagnosis Centre](#) for people with non-specific symptoms that could be due to cancer.

What did we do?

With the support of her mentors and through the previous training provided, Mari was awarded a Health and Care Research Wales Health Research Grant of £249,997 to use mathematical modelling to explore the health economic impact of COVID-19 on care and support for people over 65 years in Wales (the COSMO study). The project in collaboration with researchers from CASCADE/CADR, Swansea University and a public co-applicant will support 1.05 WTEs within Wales and commenced in October 2021 to be completed in September 2023.

What is the expected impact?

Our investment in capacity and capability building enabled Dr Mari Jones to lead her own research and forge strong networks with the Centre for Ageing and Dementia Research (CADR). As a consequence, Maria Cheshire-Allen from CADR, another early career researcher who recently completed her PhD is being supported from the project. Mari leads a team of researchers to undertake a project co-designed by our stakeholders and public contributors which will produce an ethical framework for prioritising decisions for older people in future health and economic shocks.

ENGAGING WITH THE COMMUNITY OF HEALTH ECONOMISTS ACROSS WALES

In November 2021, HCEC once again hosted the **Welsh Health Economist Group (WHEG) meeting** which brought together health economists (both from academic and non-academic research and assessment units as well as Welsh Government), early career researchers and PhD students. We also welcomed our collaborators from CADR, Health Technology Wales, the Welsh Health Specialised Services Committee (WHSSC) and Cedar to discuss the all-Wales strategic direction of health economics and to strengthen collaboration in health economics across Wales.



Some presentations at the 2021 WHEG meeting:

- Dr Rui Duarte, HTA Lead & Senior Research Fellow at the Institute of Population Health, University of Liverpool, presented his view on the role of health economists in supporting the National Institute for Health and Care Excellence (NICE) appraisal process.
- HCEC researchers Dr Katherine Cullen and Rhys Pockett talked about the Welsh Institute for Physical Activity, Health and Sport, and a single site marker condition analysis of GPs in EDs, respectively.
- Bangor University's Dr Will Hardy discussed the extrapolation of survival for advanced therapy medicinal products and PhD student Yankier Pijeira Perez introduced his systematic review of NICE technology appraisal recommendations.



HCEC researcher Abraham Makanjuola presented his work on the social return on investment (SROI) of a lifestyle coaching programme.

"GROWING" NEW LEADERS OF HEALTH ECONOMICS IN WALES

We are proud to report that, during 2021/22, many of our 'home-grown' health economists secured promotions and excellent new positions, with all their skills and talent remaining in Wales:

- Dr Joanna Charles accepted a position as **Deputy Head Health Economist for Welsh Government**, working alongside Dr Brendan Collins.
- Dr Nathan Bray accepted a part-time role as Senior Lecturer, **heading up the new Applied Learning for Preventative Health Academy (ALPHAcademy)**, part of the Welsh Government Intensive Learning Academy programme focused on prevention.
- Dr Carys Jones joined the learning academy as **Lecturer in Prevention**. She is continuing her research career in health economics as an independent PI as well as contributing to teaching at the academy.
- Eira Winrow accepted a role as Lecturer in the School of Medical and Health Sciences **teaching health economics**.

REINVIGORATING HEALTH ECONOMIC WORKFORCE

We are delighted to welcome a new group of talented researchers to reinvigorate our community of health economic expertise, 'home-grown' within HCEC:

- Jacob Davies, previously at Welsh Government, has joined us as the new Impact Lead for HCEC.
- Kalpa Pisavadia joined Dr Berni Sewell as Communications and Engagement Co-Lead.
- Research Officers Dr Holly Whiteley and Abraham Makanjuola joined our team of HCEC early career researchers (ECRs).
- Dr Pippa Anderson has joined Bangor's Pharmaceutical Economics, Policy and Prescribing Research (PEPPER) Group under Professor Dyfrig Hughes' direction and will contribute to the PEPPER methodological research initiatives by undertaking research in prioritisation and resource allocation in genetic testing and medicines optimisation.

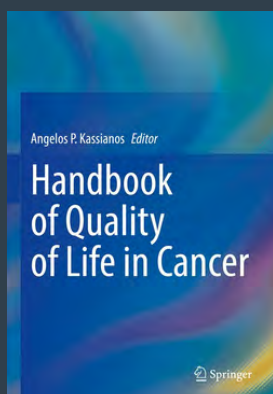
OUR KEY PUBLICATIONS

During 2021/22, we continue to support and lead high-quality evidence generation and dissemination. We increased our total number of publications and improved the average impact factor from 6.167 in Year 1 to 8.365 in Year 2. A complete list of our publications can be found on the [HCEC website](#).

Examples of key publications 2021/22 include:

- Spencer, A., Rivero-Arias, O., Wong, R., Tsuchiya, A., Bleichrodt, H., **Edwards, R. T.**, et al. (2022). The QALY at 50: One story, many voices. Social Science & Medicine, 296, 114653.
- **Hughes, D. A., Skiadas, K., Fitzsimmons, D., Anderson, P.**, & Heald, A. (2021). Liothyronine for hypothyroidism: a candidate for disinvestment or in need of further research? A value of information analysis. BMJ Open, 11(12), e051702.
- Moriarty, Y., Lau, M., **Sewell, B.**, Trubey, R., Quinn-Scoggins, H., Owen, S., et al. (2021). Randomised controlled trial and economic evaluation of a targeted cancer awareness intervention for adults living in deprived areas of the UK. British Journal of Cancer, 125(8), 1100-1110.
- **Ezeofor, V. S., Spencer, L. H.**, Rogers, S. N., Kanatas, A., Lowe, D., Semple, C. J., et al. & **Edwards, R. T.** (2022). An economic evaluation supported by qualitative data about the Patient Concerns Inventory (PCI) versus standard treatment pathway in the management of patients with head and neck cancer. PharmacoEconomics-Open, 6(3), 389-403.

AN ESSENTIAL RESOURCE FOR RESEARCHERS USING QUALITY OF LIFE ASSESSMENT TOOLS



Prof. Deb Fitzsimmons, in collaboration with Dr Sally Wheelwright, University of Southampton, contributed the chapter 'Developing Cancer Quality of Life Assessment Tools' to the 'Handbook of Quality of Life in Cancer', published by Springer Nature Switzerland in spring 2022. The handbook aims to develop and further understanding of how to utilize quality of life and how it is important in clinical practice and decision making to improve cancer patients' wellbeing, response to treatment and mortality.

I presented the health economics findings in the symposium 'Web-assisted Guided Self-help for Post-Traumatic Stress Disorder: The RAPID Trial' on the 3rd of November 2021 at the 37th Annual Meeting of the International Society for Traumatic Stress Studies. Also, the main trial paper which reports a summary of the health economic analysis, has been accepted for publication in the British Medical Journal.



*Dr Katherine Cullen,
HCEC Researcher*

OUR COLLABORATIONS

Improving access for patients with post-traumatic stress disorder: the RAPID trial

What was the question that HCEC could help with?

Current treatment for post-traumatic stress disorder (PTSD) is individual face-to-face therapy for 12 to 16 hours. This leads to long waiting lists and puts pressure on patients to find the time for weekly appointments on top of their work and caring responsibilities. A guided self-help intervention delivered through a website or app, combined with face-to-face catch-up sessions, phone calls and emails could offer a valuable alternative.

What did we do?

HCEC researchers delivered the economic evaluation component of the NIHR HTA funded RAPID pragmatic randomised controlled trial of a trauma-focused guided self-help programme versus individual cognitive behavioural therapy for PTSD in collaboration with Professor Jon Bisson at Cardiff University and the National Centre for Mental Health and the Centre for Trials Research. The trial demonstrated that the guided self-help intervention was considerably cheaper than individual face-to-face therapy and its outcomes, measured by the Clinician Administered PTSD Scale, were non-inferior at 16-weeks.

What is the expected impact?

The guided self-help intervention is expected to become an option within the NHS for people with mild and moderate PTSD. This will address a pressing need within mental health services in Wales, and the rest of the UK, where limited numbers of therapists are available, and given the length of current face-to-face treatment required, has led to NHS waiting lists of up to 18 months for people with PTSD. The promotion of this work across Wales will lead to increased options of therapy for people with PTSD.

SOME OF OUR COLLABORATORS



GIG
CYMRU
NHS
WALES



Technoleg Iechyd Cymru
Health Technology Wales

Ysgol
Ymchwil
Rhagnodi
Cymdeithasol
Cymru



Wales
School for
Social
Prescribing
Research



AWTTC
All Wales Therapeutics
& Toxicology Centre



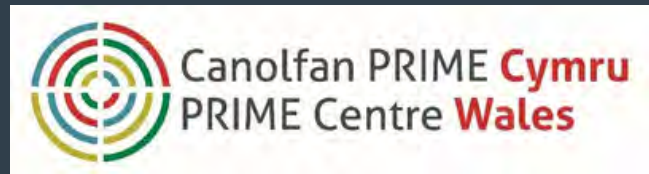
Swansea
University
Prifysgol
Abertawe

Swansea Trials Unit
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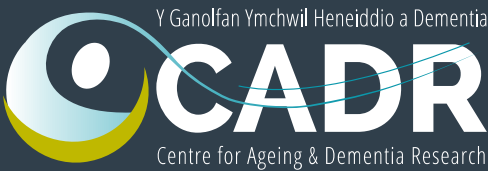


Wales COVID-19
Evidence Centre
Canolfan Dystiolaeth
COVID-19 Cymru

We have a number of ongoing collaborative projects with PRIME, including EVITE Immunity, GPs in ED, STRETCHED and the recently awarded NIHR-funded PRISMATIC 2 study.



We collaborate closely on several NIHR and Health and Care Research Wales funded studies and funding bids, including research on rare dementia support, the impact of COVID-19 on dementia patients and a falls research collaboration.



Y Ganolfan Ymchwil Heneiddio a Dementia

Centre for Ageing & Dementia Research

We are collaborating with the SAIL Databank as partners through the Wales COVID-19 Evidence Centre 2021-2023 and on several studies using linked routine data.



Centre for
Trials Research



Canolfan
Ymchwil Treialon



CONCLUSIONS - WHERE WOULD WE BE WITHOUT HEALTH ECONOMICS?

Our achievements during 2021/22 prove our agility and resilience as a Health and Care Research Wales infrastructure group to be research-ready in light of the needs for prevention against the backdrop of overstretched health and social care services. We have stabilised major risks identified in Year 1, have shown progress with our action plan and demonstrated ambition in expanding our collaborations to major funding bodies including NIHR and Horizon Europe.

Our report highlights our improved conversion rate from application to award, our increased contribution to income into Wales and our increase in proportion of funding from NIHR/UKRI which sets us up for success going forward.

In our third year as HCEC, we will:

- Focus on further opportunities to leverage high-quality awards
- Ensure prominence on the UK and international stage and strong publications
- Work on strategic opportunities with our stakeholders and further develop our role in bringing health economics to the public, our stakeholders and policy across Welsh Government.

Resource scarcity and the need for choices about how we use these resources is evident now both in our homes, our hospitals and across the economy.



Our HCEC Co-Directors' first face-to-face meet up after the pandemic on a sunny but windy beach on Anglesey, 28th March 2022.

We face a time of rising cost of living, adjustment to Brexit, war in Europe, and have a health and social care system that has been stretched as never before through the pandemic. Evidence on relative value for money in terms of the costs and benefits of using resources in different ways is crucial. As health economists, we continue to support decision making about current and future health and social care policy and service delivery to patients across Wales.

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/>

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CONTACT US

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

For South Wales - HCEC@swansea.ac.uk (Swansea University)

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