

## PUBLIC HEALTH AND WELLBEING IMPACT THROUGH PARTNERSHIP









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## **Essex Facts**

Top 25 in UK for research quality

(The Times and Sunday Times Good University Guide 2022)

## Good health and wellbeing for all

We face some seemingly intractable health challenges including rising obesity, infant and adult mortality, and a lack of sufficient access to mental health support.

At Essex, we believe good health and wellbeing for all is achievable by better addressing the multiple root causes of ill-health and by taking a collaborative interdisciplinary and global approach.

That's why in 2022 we launched our flagship research Institute of Public Health and Wellbeing.

Our researchers are committed to pushing boundaries, stretching across disciplines and providing authoritative research, policy recommendations and knowledge that improves lives.

Understanding societies and the global inequalities that shape them, coupled with the application of scientific, medical, and practice-based advances are the heart of our commitment to good public health and wellbeing for all.

We are keen to work with likeminded partners around the world who share our vision and want to join us in our journey.

Ja. 5.

Professor Anthony Forster Vice-Chancellor



## Public health and wellbeing ecosystem

Public health and wellbeing at Essex is local, regional, national and international in its research scope, collaborations and impact.

Our world-class research, health sector collaborations, internationally-recognised infrastructure, community facilities, and researchers working across disciplines enable us to help shape public health and wellbeing policies and practice.

#### **World-class research**

- We received a Queen's Anniversary Prize in recognition of social science research excellence in the Institute for Social and Economic Research (ISER).
- We are ranked in the top 25 in the UK for research quality (The Times and Sunday Times Good University Guide 2022).
- The concept of green exercise was coined by our Green Exercise Research team in 2003.
- Through the Global Challenges Research Fund we helped improve maternal health outcomes in India and Indonesia, and explored how violence in Cape Town's low-income neighbourhoods impacts access to healthcare.

#### **Health sector collaborations**

- The Essex Biomedical Sciences Centre promotes biomedical and health-related research through collaboration between researchers and clinicians in regional hospital NHS Trusts.
- Our School of Health and Social Care hosts the National Institute for Health Research (NIHR)
   Research Design Service for the East of England, supporting researchers across the sector.
- The Essex Autonomy Project Summer School offers researchers, clinicians, social workers, service-users and public officials a chance to work together on embedding autonomy and human rights in care practice.

#### Research infrastructure

- Our Institute for Analytics and Data Science connects our researchers with businesses and institutions to work on their data needs.
- The Institute for Social and Economic Research is a globally-recognised centre for authoritative research informing government policies.
- The UK Data Archive is a global centre of excellence in acquiring, curating and providing access to social science and humanities data.
- Our Human Rights Centre boasts a global reputation for excellence in world-leading interdisciplinary human rights education, research and practice.

#### **Community facilities**

We have a number of clinics and labs open to the public including:

- Our Sports Therapy Clinic supports people with musculoskeletal injuries and offers teaching for students in a clinical environment.
- Our Human Performance Unit supports elite sport professionals and amateurs providing bespoke coaching and sports science testing.
- In our BabyLab we work with families to study how infants and children learn and develop.

#### **Research groups**

Researchers across all three faculties have formed groups, to tackle key health and wellbeing challenges, including:

- The Centre for Intimate and Sexual Citizenship is an interdisciplinary space for cutting-edge research on contemporary intimate life.
- The Health, Exercise and Active Lifestyle group produces research relating to health, exercise and activity.
- The Health Law cluster explores mental capacity and disability, sexual and reproductive health, and legal and social determinants of health.
- The Health and Medical Humanities group explores how the arts, humanities and social sciences can be applied to understandings of medicine, health and wellbeing.
- The Protein Structure and Mechanisms of Disease Group explores how proteins are critical for human health, the environment and biotechnology.
- The multidisciplinary Smart Health Technologies Group applies information and digital technologies to improve health.



# Our foundations in public health and wellbeing

Professor Chris Greer, Pro-Vice-Chancellor Research, heads up a research community dedicated to making a difference. He explains the solid foundations of our expertise in public health and wellbeing.

"Even when Essex was a relatively small university, we consistently punched above our weight.

"For decades Essex researchers across science and health, social sciences, and the arts and humanities have turned their attention to public health and wellbeing. We have a proven track record in developing high-impact, world-class research that informs policy and practice, shapes public understanding, and improves people's lives.

"Perhaps our greatest achievement, certainly our best known, is the 'green exercise' revolution – a term coined at Essex by researchers who transformed global understanding of the value of exercising in natural surroundings."

### Our research community

"Today we're on a strategic growth trajectory which has enabled us to more than double our number of researchers since 2014. We are recruiting the very best research and education talent, and it's these people – our research community, working in collaboration with partners and stakeholders – that are at the heart of our success.

"Essex researchers are bold changemakers, innovators and reformers. We exist to make the world a better place though research, knowledge exchange and impact. Our work is driven simultaneously by values unchanged since the University's creation more than 50 years ago and the very latest theories, methods and technologies."

#### Collaborating to make change

"The complexity of today's public health and wellbeing challenges require an interdisciplinary, collaborative approach.

"We already have fantastic, longstanding relationships with health academics, local and regional government, health providers and service users across Essex and beyond.

"Our Institute of Public Health and Wellbeing (IPHW) adds even more value to our work by providing a strategic focus, an intellectual home and critical mass. It is a public health and wellbeing hub – created for, occupied and used by a diversity of academic, professional and community stakeholders to share their experience, expertise and ambition to create something bigger than the sum of the parts.

"Our collaborative, partnership-based approach ensures we are networking with the right people, and that our research reaches the right audiences and has the greatest impact on policy, practice, public understanding and health and wellbeing."





## We believe Essex has a unique perspective on the public health and wellbeing challenges we face.

Two cross-cutting themes underscore the research strengths of our Institute of Public Health and Wellbeing, complimenting the four research themes where we focus our work.

### **Tackling inequality**

The first highlights the pervasive impact of inequality and seeks to find solutions.

Researchers across the social sciences, arts and humanities, and science and health are revealing the influence of inequality in society and how it impacts health and wellbeing.

We recognise the impact of inequality is inescapable and our concern with social justice and health equity is reflected in many aspects of our work. Injustice, inequalities and inadequate exercise of democratic and human rights exist in the UK as well as globally and impact significantly in many ways on health, mental health and our quality of life.

### **Cutting-edge methods**

Our second cross-cutting theme highlights the value of cutting-edge approaches and methodical rigour.

Our strength in data science, quantitative and qualitative research methodologies and artificial intelligence techniques can make a significant impact on improving health and wellbeing.

This includes drawing on our influential expertise in large-scale longitudinal survey methodology, which has an international reputation for delivering health-related insights and evidence.

Essex research, particularly in the Institute for Social and Economic Research, is identifying the inequalities which are not just associated with poor health and wellbeing, but actually driving the problems we see.

In Essex, for example, researchers in the School of Health and Social Care are undertaking a longitudinal evaluation of the 'A Better Start Southend' programme to understand how to address the link between economic deprivation and poor life chances.

## **Essex Facts**

Home to the ESRC-funded Understanding Society, the UK's largest longitudinal household panel study of its kind, which provides vital evidence on life changes and stability

## Leading our health and wellbeing response

Global health expert Professor Mariachiara Di Cesare is Founding Director of our Institute of Public Health and Wellbeing (IPHW). She explains why she believes Essex can change lives for the better.

"The IPHW is timely and ambitious – launched in response to the needs of a generation which has experienced first-hand how vulnerable we are.

"The depth and breadth of the four research pillars on which it is based — social, biological and environmental determinants of health; interventions, outcomes, evaluations and policy; wellbeing and health promotion; human rights, community participation and voice — highlight how the IPHW embeds complexity and interdisciplinary research in its foundations. Instead of sitting in silos, we work together to further understanding of interconnections and potential advances.

"My research in population health integrates concepts, data and methods from demography, epidemiology, statistics, and social science. I have experience working with researchers from academic and non-academic institutions and in different contexts.

"I have been lucky to work with colleagues who have challenged my views and pushed me from my comfort zone, towards more impactful research. With a multidisciplinary team and in collaboration

with the World Heart Federation I helped ensure non-vitamin K anticoagulants were included on the 22nd WHO Essential Medicine List, benefitting over 40 million people and reducing stroke associated morbidity and mortality.

"I joined the national scientific effort against COVID-19 contributing to government-commissioned technical reports, and leading a project tracking SARS-CoV-2 in wastewater in schools and prisons.

"I am bringing my experience of working at the intersection of and across traditional boundaries to find solutions for complex problems while fostering the creation of an exciting and ambitious community of researchers moved by the common goal of ensuring the right to health for all people.

"The IPHW, is an inclusive space, fostering dialogue across a community of researchers, stakeholders and interested parties, bringing new potential to advance on the most important challenges ahead and contributing towards improving the health and wellbeing of many."



## Getting under the skin with biomarkers

## **Essex Facts**

4,357 papers published relating to healthy living and wellbeing since 2010 (based on SDSN keyword set search on Scopus)

Both the world around us and our genetic makeup affect our health but it's a complex, twoway relationship. That's why Essex researchers are analysing socio-economic characteristics, behaviours and biomarkers to answer fundamental questions about nurture and nature.

The Essex-based longitudinal survey Understanding Society, in the Institute for Social and Economic Research (ISER), is a vital tool in collecting data about the objective indicators of our biological processes, known as biomarkers.

The biomarkers collected from participants include everything from height and blood pressure to genomics helping us identify health risks before symptoms arise.

Because Understanding Society also collects information about people's social and economic circumstances, attitudes, behaviours and health, Essex researchers can examine not only how the environment and our genes impact our health, but also how the environment modifies the way our genes operate.

Between 2009 and 2010 the survey collected blood samples from its 40,000 participants, and now has more than 14,000 samples measuring epigenetic markers in over 3,100 samples, making socialepigenetic research possible.

By gathering the data, we can better understand the causes of health problems and collaboration between ISER and the School of Life Sciences enables our biosocial researchers to reveal the impact on the human genome of many aspects of modern life.

The team has already shown that the process that governs when genes are turned on and off, or dialled up or down, is affected by circumstances when we are young, ultimately impacting how we age. Their findings strengthen the case for ensuring all children are properly supported.

"We know that disadvantaged groups have poorer health but we don't know why. Epigenetic measurements represent a new possible avenue by which the environment 'gets under the skin'. Traditionally these questions have been examined in medical studies but these tend not to measure the social environment very well." **Professor Meena Kumari, Institute** 

for Social and Economic Research

Understanding Society is funded by the Economic and Social Research Council (ESRC).

## Stemming the tide of childhood obesity

## How do we solve the growing crisis of childhood obesity? Essex research has shown that free school meals have to be part of the solution.

Dr Birgitta Rabe and Dr Angus Holford, from the Institute of Social and Economic Research (ISER), unpicked the data from thousands of schools to reveal that giving all infant schoolchildren balanced free school lunches works.

Funded by the Nuffield Foundation, they explored the difference made to children by Universal Infant Free School Meals (UIFSM) - a Liberal Democrat policy introduced during the Coalition government.

They were the first to address the question using national administrative data on children's height, weight and school absence rates.

They found that providing nutritionally-balanced school meals improves children's health and makes more of a difference to obesity levels than the 'Daily Mile' or other exercise projects, warning letters to parents, or encouraging healthy eating through other methods; and that they reduce health-related absences from school. Their research is the only evidence that policymakers can rely on to inform policy and demonstrate the value of the expensive UIFSM initiative.

The findings have been used by School Food Matters, Obesity UK and Jamie Oliver, and were included in the briefing for the Opposition Day debate on holiday food provision which informed the government's decision to extend the scheme.

A councillor in Newham, London used the findings to campaign, successfully, to retain the borough's Universal Free School Meal programme for 35,000 children.

"We rely on research like this to support our policy and advocacy goals and are pleased to testify to its impact with policymakers."

Stephanie Slater, Chief Executive, **School Food Matters** 

"This intervention has a significant impact by reducing Reception children's obesity rates by 7%. It's a small impact but it's fast and it's more effective than other school based initiatives." Dr Birgitta Rabe, ISER

## **Essex Facts**

In 2017 Essex was awarded a Queen's Anniversary Prize for world-leading social science research



# Revolutionising prostate cancer treatment

Researchers are testing a method that uses adult stem cells to deliver a cancer-killing protein directly to prostate cancer cells. If successful, it could revolutionise treatment for advanced prostate cancer.

Prostate Cancer UK has set out a ten-year goal to tame prostate cancer so it becomes a disease that doesn't pose the same threat to men's lives that it does today.

The charity has funded Essex research to test whether adult stem cells can be used as a "Trojan horse" to smuggle a protein called TRAIL to the prostate cancer cells, causing the cells to die.

Our Cancer and Stem Cell Biology Group studies the therapeutic use of mesenchymal stem cells (MSC) in prostate, colon and pancreatic cancer. Researchers are interested in how tumour cells respond to treatment and find better diagnostic tools and new therapies.

The protein TRAIL is quite unstable and breaks down before it has the chance to reach the cancer and do its job.

However, research led by Dr Ralf Zwacka, from the School of Life Sciences, has found a possible way to overcome this problem by using adult stem cells as a "Trojan horse" to smuggle the TRAIL protein to the primary cancer cells but also help it to "seek and destroy" secondary cancers growing elsewhere in the body.

The Essex team aims to develop a new type of treatment for advanced prostate cancer and carry out robust pre-clinical testing to build the evidence needed to take it through to clinical trials.

"Pioneering research like this from Dr Zwacka is going to play a key role in helping us to achieve our ten-year goal and we're looking forward to seeing how this research progresses."

Dr Iain Frame, Director of Research at Prostate Cancer UK





It's estimated 6% of the UK's military veterans live with post traumatic stress disorder (PTSD). An Essex-designed programme is improving their lives and a documentary has shown how talking can help them heal.

Over 100 veterans have benefitted from a programme – developed by Dr Nicholas Cooper, Professor Sheina Orbell, and Dr Mark Wheeler from the Department of Psychology – which draws on psychological research from our Green Exercise Research Team

It incorporates fishing trips with helping veterans to share their experiences and on-going peer support.

Analysis has shown the psychological wellbeing of participants has improved and the veterans themselves have reported a dramatic reduction in their symptoms, setting them on the road to recovery.

The programme's success has been recognised by the NHS, the armed forces and charities, including Veterans First, Combat Stress and the Invicta Foundation.

On learning about the programme, filmmaker Nic Blower, from the Department of Literature, Film, and Theatre Studies wanted to go one a step further.

He joined one of the fishing trips so he could get to know three men, capture on film how the programme was helping them and explore how the filmmaking process could further improve their wellbeing.

Nic allowed the veterans to shape the direction of the film with him.

*LIFTED* has been shown to members of the military community, veterans, prisoners, medical professionals and students, with the men featured often joining Nic for audience discussions.

The effect has been profound with the three men, and PTSD-sufferers who have seen it, reporting a positive impact on their wellbeing.

"The visible benefits of the study were clear to see in every single participant. The programme is unique and is head and shoulders above the rest."

Major Stuart Lennox, Royal Air Force

"All military mental health clinicians should see this to gain understanding of effects of PTSD post-military."

A British Army mental health practitioner

## Informing policy and improving lives

Researchers at the Institute for Social and Economic Research (ISER) are providing key insights on COVID-19 and their research is informing policy at a national level.

ISER's research into the impact of school closures on children's wellbeing informed advice from Chief Medical Officer Professor Chris Whitty to government as they considered vaccinating 12–15-year-olds.

Other work has been cited in key government reports and the government's Open Innovation Team is working with ISER, and other Essex teams, to bring further research evidence into government decision-making, including around public health and wellbeing.

#### **Understanding changing lives**

The work of the ESRC Research Centre on Micro-Social Change (MiSoC), based at ISER, was viewed as so important that the MiSoC team were part of a four session 'take-over' of the government's own internal COVID-19 Recovery Seminar Series.

MiSoC is one of the ESRC's longestrunning investments looking at how people's lives are changing using longitudinal data and innovative methods, for over 30 years. The MiSoC team of multi-disciplinary experts collaborate with researchers at the Universities of Bristol, Warwick, Bologna and Sydney, working on cutting-edge research which is policy-relevant.

The team's new studies looking at the impact of COVID-19 are relevant to all of the government departments looking at recovery plans post-pandemic, including the Department for Health and Social Care, Department of Work and Pensions, HM Treasury and the Department for Levellingup, Communities and Housing.

Key issues MiSoc is looking at include mental health impacts, the financial situation faced by women, increases in domestic abuse, an up-surge in racist incidents, ethnic differences in protected health behaviours and social distancing practices, young people in the labour market, the impact of education and the implications of poor housing.

## **Essex Facts**

ISER researchers are helping to implement the first Europe-wide longitudinal study to track the wellbeing of children as they grow up.



## How we started the green exercise revolution

Our Green Exercise Research Team includes specialists in sports science, physiology, health and wellbeing, environmental sustainability, community engagement and behaviour change. They first formally linked the benefits of physical activity whilst being directly exposed to nature in 2003. Since then, the concept has captured the interest of people around the globe as a solution to improve mental wellbeing for all.

Today everyone understands the benefits of

being outside in the natural environment but it

### Thinking green, changing lives

The Team has worked with national charities like Mind, RSPB and the Wildlife Trusts through to Care Farming UK, Trust Links and the Wilderness Foundation. Their research helped secure Big Lottery funding for Mind which led to Ecominds, a £7.5 million, five-year programme supporting 130 environmental projects that have improved the mental health of participants.

was Essex researchers who coined the phrase 'green exercise' and evidenced the positive impact on mental wellbeing. These projects have introduced people with, and at risk of developing, mental ill-health problems to green

exercise initiatives such as gardening,

food growing or environmental

conservation work.

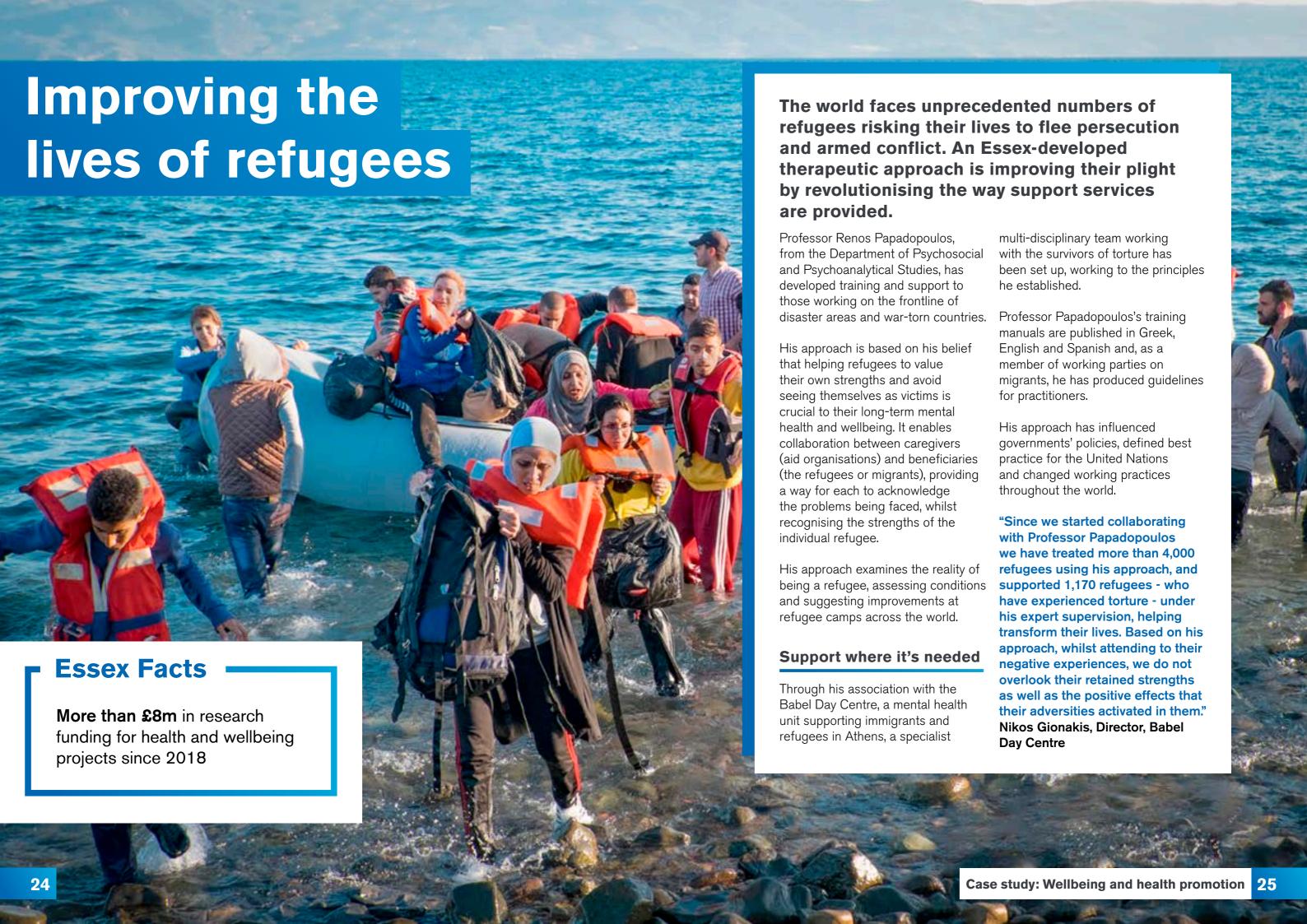
**Sciences** 

This has helped more than 12,000 people living with mental ill-health to get involved in nature-based activities to improve confidence, self-esteem and their physical and mental health so they can then return to work and reduce feelings of social isolation.

"Having had the privilege of engaging with multiple external partners, I have experienced first-hand the remarkable impact participating in nature-based activities has on the health and wellbeing of community groups, especially those vulnerable cohorts who benefit the most." Dr Jo Barton, School of Sport, Rehabilitation and Exercise

## **Essex Facts**

99.418 citations for Essex papers relating to healthy living and wellbeing (based on SDSN keyword set search on Scopus)



# Protecting rights in mental health and social care

Protecting the rights of service users in mental health and social care settings is a moral imperative and a legal obligation. That's why the Essex Autonomy Project conducts multidisciplinary research to help shape law reform, policy development, and professional practice.

For over ten years the Essex
Autonomy Project (EAP) team, in
the School of Philosophy and Art
History, has investigated the notion
of autonomy as it applies to situations
of care influencing policy and
practice in the UK and around the
world and informing ongoing global
reform of mental health and mental
capacity legislation.

The team previously hosted the UK's first public debate examining whether the Mental Capacity Act complied with the UN Convention on the Rights of Persons with Disabilities (CRPD). Although that first debate proved inconclusive their further research has not.

They have shown that Section 1 of the Act – which states that "a person is not to be treated as unable to make a decision unless all practicable steps to help him to do so have been taken without success" – is critical

in protecting autonomy and vital to achieving full CRPD-compliance but poorly implemented in practice.

The EAP team has sought to improve practice by delivering specially-designed research-informed training to judges, legal professionals, Best Interest Assessors, doctors, mental health professionals and independent mental capacity advocates.

Their work has been cited in the courts, by the Law Commission and in the ongoing Scott Review in Scotland.

"We are living through a period of extraordinary change in the practices of care. It has been a privilege to help embed principles of autonomy and human rights at the heart of the care relationship." Professor Wayne Martin, Director of the EAP





## Health is wealth

Partnerships and collaboration with health sector professionals enable our research to guide national health policy and potentially save lives, as well as millions of pounds of public money in the case of one partnership with Active Essex.

Working with Active Essex, researchers from the School of Sport, Rehabilitation, and Exercise Sciences are using their lab-honed expertise to guide high-level decision-making as part of a £100m national scheme.

Their work will underpin once-in-ageneration work by Sport England, which will inform decision-making and could save taxpayers in Essex more than \$58m.

In collaboration with Active Essex, councils, and public bodies our academics will find out why 27 per cent of the county's residents are inactive and carry out less than 30 minutes of physical exercise each day.

They have already examined 27 different community projects to see how residents can get active.

Focusing on three test areas - Basildon, Colchester and Tendring - studies are focusing on families with dependent children, the over 45s and people with mental health issues.

The research is already proving vital as Active Essex help struggling families to stay fit.

## **Essex Facts**

Ranked 12th in the UK for nursing

(The Guardian University Guide 2022)



