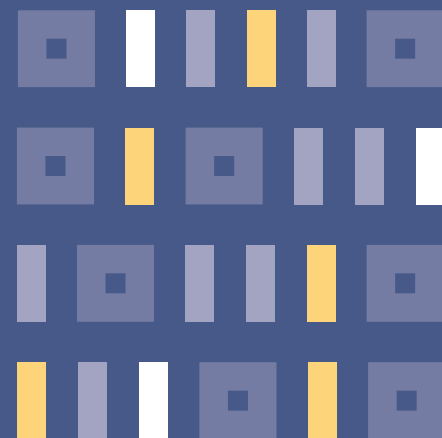


# 10 Years of PenCLAHRC

Highlights from 10 years of applied health  
research in the South West



**250**

research projects



**1,200+**

research papers



**25**

PhD students



# Welcome to 10 Years of PenCLAHRC

The Collaboration for Leadership in Applied Health Research and Care South West Peninsula (PenCLAHRC) was created by the National Institute for Health Research in 2008, with a brief to bridge the translational gap between research and healthcare delivery.

In the 10 years since our formation we have worked closely with our University, NHS and community partners, plus the emerging South West Academic Health Science Network, to understand and address the healthcare needs of people across the South West. We are committed to improving the capacity of the NHS workforce to use and generate research evidence to support their decision-making and practice. Core to all of this, however, has been the involvement of patients and the public in everything we do. Meaningful engagement has been crucial to our success because implementing best practice and redesigning services is pointless if it doesn't reflect the real-life needs and concerns of those who use our healthcare services.

As we stand at the beginning of a new period as an Applied Research Collaboration (ARC) it's a good opportunity to reflect on the successes of PenCLAHRC, just some of which are included in these pages. We are proud of everything that we have achieved over the last 10 years but realise that this is just the foundation for what we hope that we can achieve together over the next five years as PenARC.

**Professor Stuart Logan**  
Director

**Professor Richard Byng**  
Deputy Director

**Professor Ken Stein**  
Deputy Director

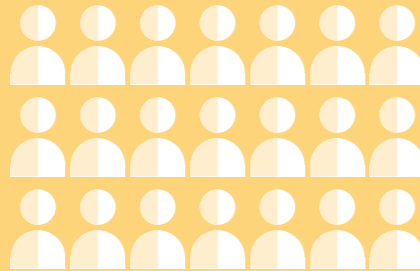
**5,000+**

Making Sense of Evidence course attendees



**21**

partners



**5**

successful bids with members of the public as co-applicants in 2018-19



**£22 million+**

external grant funding awarded



**3,000+**

followers on Twitter



**800+**

newsletter subscribers



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## Using Tranexamic Acid to reduce the risk of death from bleeding

**We worked with the South West Ambulance Service (SWAST) to implement a cost-effective drug which, when administered by ambulance staff, can reduce deaths from bleeding in trauma patients.**

Tranexamic Acid (TXA) is a drug that inhibits fibrinolysis, the breaking down of blood clots, which can worsen bleeding in situations like major trauma.

The National Institute for Health Research (NIHR) funded CRASH-2 trial, involving 20,000 trauma patients from 274 hospitals in 40 countries, showed that, if used within three hours after trauma, TXA can reduce the risk of death from bleeding by as much as 30 per cent. These findings suggested that getting the drug to trauma patients could save around 400 lives per year in the UK.

The drug was quickly moved into routine practice by trauma teams in the military but the challenge was how best to get TXA used in the NHS ambulance service and in hospital trusts.

We worked with NHS Trusts and the South West Ambulance Service to facilitate the introduction of TXA for use by paramedics, nurses and doctors in the South West all within 18 months of the research being published. All ambulance services in England are now using TXA and the National Guidelines for the Joint Royal Colleges Ambulance Liaison Committee now include guidance for its use across the UK.

- [arc-swp.nihr.ac.uk/research/txa-in-trauma](http://arc-swp.nihr.ac.uk/research/txa-in-trauma)



## Improving patients' access to specialist clinics

**We evaluated a patient-initiated clinics (PIC) approach to managing long-term conditions, which allowed rheumatology patients to decide when to see their consultant, reducing waiting times.**

Many patients with long-term conditions are offered follow-up appointments with a consultant on a regular basis. However, patients might feel well when attending a scheduled routine appointment, rendering it unnecessary to see a consultant – an inefficient use of resources for patients and the NHS. Should their condition deteriorate or change, they might be unable to see the clinical team at short notice.

We evaluated Direct Access, a patient-initiated clinics (PIC) scheme for rheumatology patients at Derriford Hospital, Plymouth. This system gave patients access to a telephone support line run by specialist nurses and allowed patients to arrange appointments only when they needed them. We found that the PIC system was a safe and cost-effective alternative approach to managing clinical care for patients with long-term chronic conditions.

Additional systematic reviews of PIC have found that it can result in improved quality of life, increased patient and clinician satisfaction, and reduced healthcare resource use.

- [arc-swp.nihr.ac.uk/research/ahsn-penclahrc-project-patient-initiated-clinics-pic-for-people-with-long-term-conditions](http://arc-swp.nihr.ac.uk/research/ahsn-penclahrc-project-patient-initiated-clinics-pic-for-people-with-long-term-conditions)



## Helping healthcare professionals to use quality research evidence to support clinical practice

**Our Making Sense of Evidence programme offers a range of workshops, teaching healthcare professionals how to find and use research evidence to support their clinical decision-making.**

We believe that better health care can be provided to patients by making decisions that are based on evidence. Our Making Sense of Evidence (MSE) programme offers workshops that are designed to teach healthcare professionals and members of the public across the South West how to find and use evidence to make effective health and social care decisions.

Since 2015, over 5000 healthcare professionals have taken our clinician- and researcher-led training covering critical appraisal of randomised clinical trials, systematic reviews, qualitative and diagnostic studies, how to use databases and search for information.

The MSE programme helps participants to characterise the uncertainties they face in their clinical practice, which in turn supports the identification of uncertainties for our research prioritisation process.

The MSE team also supports healthcare professionals who are interested in developing a career in research.

- [arc-swp.nihr.ac.uk/making-sense-of-evidence](http://arc-swp.nihr.ac.uk/making-sense-of-evidence)



## Supporting people before and after leaving prison to help them break the cycle of reoffending

**Prisoners experience a high incidence of mental health problems and many face difficulties upon release with family relationships, employment, health and reoffending. We worked with people with experience of prison sentences to develop a package of care to help improve their mental health and wellbeing for prison leavers.**

Between 50% to 90% of the prison population experience mental health problems. These are often a complex mix of depression, anxiety, substance misuse and problematic personality traits. Those leaving prison often experience difficulties with family relationships, employment, long-term illness, self-harm and re-offending. The risk of suicide for male prison leavers is eight times the national average, and over a quarter of fatal suicide attempts happen within a month of release.

Our previous research has found that distrust of medical professionals and other authority figures contributes to prisoners not seeking help when experiencing problems. The aim of the Engager project is to find ways to support offenders, both before and on release from prison, to help them to rebuild their lives in a meaningful way, become part of society and break the cycle of mental illness and re-offending.

The Engager team have worked with local men with experience of serving prison sentences to develop a care package for prison leavers. These 'peer researchers' used their experiences of being in prison, and the challenges faced when released, to make sure the care package was suitable for others leaving prison. So far it has been delivered to 40 prison leavers with mental health problems and includes therapy, medication, housing, training and links with employers.

- [arc-swp.nihr.ac.uk/research/engager](http://arc-swp.nihr.ac.uk/research/engager)
- [www.plymouth.ac.uk/research/primarycare/engager](http://www.plymouth.ac.uk/research/primarycare/engager)







## Rehabilitation training for people who have had a stroke

**We worked with a stroke survivor to answer a question about their stroke rehabilitation training.**

Strokes are the third largest cause of death in the UK with around 110,000 people experiencing a stroke each year, leaving 300,000 people with moderate to severe disability.

The ReTrain (Rehabilitation Training) project investigated the effectiveness of a community-based rehabilitation training programme for people who have had a stroke. It was developed following a question raised by a stroke survivor who wanted to know whether he should be following a popular, though untested, approach to stroke rehabilitation called ARNI (Action for Rehabilitation of Neurological Injury).

This question was submitted to the PenCLAHRC Research Prioritisation process in 2009 and voted on by NHS stakeholders as a topic to develop further. A group of stroke survivors and their families advised the team on the development of the project over a period of four years. This resulted in research funding from the Stroke Association to conduct a feasibility trial to test whether ReTrain could help support stroke survivors' recovery after discharge from NHS services.

The trial found that the ReTrain intervention was acceptable for participants and maintained excellent levels of recruitment and retention, supporting the development of a larger trial of ReTrain. The team were awarded the Stroke Association's 2016 Patient, Carer and Public Involvement Award for their approach to public engagement across the course of the research.

- [arc-swp.nihr.ac.uk/research/retrain](http://arc-swp.nihr.ac.uk/research/retrain)



## Involving the public in research

**Our Patient and Public Involvement (PPI) team have lead the way in supporting meaningful involvement of the public in health and social care research.**

The PenCLAHRC PPI team have been leaders in developing and supporting public involvement in research – giving the people who are meant to benefit from research a say in shaping the research agenda.

Patients and members of the public provide a different perspective to research that can help ground discussions in practical experience. A lay perspective can help to remind healthcare professionals about details they might have stopped noticing, or to think about 'naive' but important questions that encourage a questioning of research ideas and helps to keep research relevant to public needs.

Patient involvement was key in the Hemi-SPAiRE (Save Piriformus and Internus, Repair Externus) project, which aimed to improve post-op function after hip fracture through choice of surgical treatment. Alex, a service user and carer, helped to shape the project's aims, was involved in its management and worked to ensure that the patient and carer experience was heard. Andrea, a member of our public involvement group (PenPIG), co-authored a research paper and helped to develop a training programme to help improve public and patient involvement in research.

The PPI team also conduct research on how best to involve members of the public in health policy and practice, help members of the public to develop ideas for research, teach and support students, and support researchers to understand how to involve the public when conducting their own research.

- [arc-swp.nihr.ac.uk/patient-and-public-involvement-in-research](http://arc-swp.nihr.ac.uk/patient-and-public-involvement-in-research)
- [arc-swp.nihr.ac.uk/research/hemi-spaire](http://arc-swp.nihr.ac.uk/research/hemi-spaire)





## Redesigning stroke treatment pathways

**Operational researchers, PenCHORD, have worked with colleagues across the South West and nationally to redesign stroke treatment pathways and revolutionise the delivery of stroke treatments across the UK.**

Our operational research team, PenCHORD, have been at the forefront of research leading to the redesign of stroke treatments across the South West and beyond. They have worked collaboratively with services and charities to use ground-breaking computer modelling and data science techniques. This has resulted in positive impacts on availability of stroke services and speed of access to treatments.

Working with the South West Academic Health Science Network (SW AHSN), South West Cardiovascular Strategic Clinical Network and clinicians at the Royal Devon and Exeter NHS Foundation Trust, PenCHORD were able to accelerate the implementation of thrombolysis (a clot-busting drug) for treatment of acute ischaemic stroke, which significantly reduces disability after stroke.

PenCHORD have also worked with the Stroke Association and NHS England to identify where and how to provide mechanical thrombectomy, a new clot removal treatment for severe stroke. The team identified the number of treatment centres needed and where they should be located to ensure the quickest possible treatment time, maximising patient access and evaluating how it should interact with existing acute stroke services to best effect. This work has supported NHS England's Long Term Plan priority to reconfigure stroke services across Wales, Northern Ireland and England and is informing national and local commissioner and provider plans for the reconfiguration of stroke treatment services.

- [arc-swp.nihr.ac.uk/research/stroke-thrombectomy](http://arc-swp.nihr.ac.uk/research/stroke-thrombectomy)
- [arc-swp.nihr.ac.uk/research/ahsn-penchord-project-achieving-step-change-in-the-emergency-stroke-pathway-across-the-south-west-peninsula](http://arc-swp.nihr.ac.uk/research/ahsn-penchord-project-achieving-step-change-in-the-emergency-stroke-pathway-across-the-south-west-peninsula)



## Making care person-centred and coordinated

**We have been working with care providers and commissioners across the South West to ensure care is centred around, and responsive to, individual needs to achieve better patient outcomes and more efficient services.**

It is widely recognised that care provided by the NHS, social services and other associated community services should aim to be more centred around and responsive to, the needs of the individual. For this to be achieved effectively, services need to be better co-ordinated and, in some circumstances, integrated fully as fragmentary and poorly coordinated care often has the greatest impact on individuals who rely on healthcare services the most.

We have worked with the South West Academic Health Science Network (SW AHSN) and local NHS care providers on the Person-Centred Coordinated Care (P3C) project, which builds theory, develops metrics, supports implementation and shares learning to improve the coordination of care for people with multiple long-term health conditions.

We have developed a programme of person-centred coordinated care to build practical theory about how to provide and implement P3C. We have developed support for bottom-up service redesign and implementation and evaluated system redesign and new services to contribute to both local service improvement and international knowledge. P3C also promotes a philosophy of empowerment, dignity and respect, recognising that good quality care is tailored to the needs and preferences of the individual.

We have developed a theoretical framework for P3C, as well as a range of metrics to measure patient experience and measure practitioner communication, available via a 'one stop' information gateway tool aimed at commissioners, health managers and researchers.

- [www.p3c.org](http://www.p3c.org)
- [arc-swp.nihr.ac.uk/research/person-centred-coordinated-care-p3c](http://arc-swp.nihr.ac.uk/research/person-centred-coordinated-care-p3c)





## Increasing the capacity of NHS staff to address organisational issues using Operational Research

**We developed the Health Service Modelling Associates (HSMA) programme to offer NHS staff the opportunity to use operational research to make a real difference to NHS service delivery.**

Our Operational Research team, PenCHORD, have developed the Health Service Modelling Associates (HSMA) programme, an innovative scheme that works with NHS staff across the South West to increase the use of Operational Research for decision-making and health service development.

Associates on the HSMA programme have been given training and mentoring from PenCHORD to develop skills in computer modelling, simulation and analysis. They are supported to develop and conduct a modelling project to address a specific need in their own NHS organisation.

The HSMA programme has made a real impact on service delivery across the South West and the ability of NHS organisations to develop the capacity to address issues that are important to them. Devon Partnership Trust Commercial and Operational Lead, Karl Vile, completed the HSMA programme, during which he mapped the Trust's urgent care pathway and the various demands on this system. He calculated that the pressure in the pathways equated to the need to have 47 additional beds. This analysis supported a successful application for £8million to provide a new adult mental health ward at Torbay Hospital, thus reducing the number of people being sent away from Devon for treatment.

- [arc-swp.nihr.ac.uk/health-service-modelling-associates-programme](http://arc-swp.nihr.ac.uk/health-service-modelling-associates-programme)
- [health-modelling.org](http://health-modelling.org)
- [bit.ly/DPTnewMHward](http://bit.ly/DPTnewMHward)



## Improving the experience of people living in care homes

**We are working with care home providers and healthcare professionals to understand how to improve the care and wellbeing of people living in residential homes.**

The population of the South West is older than the England average, with a large number of the local population living in residential and nursing homes and being more likely than the general population to have complex additional care needs. PenCLAHRC has worked closely with care home providers and healthcare professionals to improve the quality and appropriateness of care for people living in residential care.

Our Evidence Synthesis Team have been at the core of our work in care homes and dementia, conducting reviews on mealtimes in care homes, antipsychotic prescribing, the use of gardens and green spaces for care home residents, hospital care for people with dementia, and the impact of robotic pets on health and wellbeing. The 'Robopets' project explored whether the therapeutic benefits of animal interactions could be found when interacting with robotic animals and identified potential health and wellbeing benefits to older people living in care homes, attracting an assurance that the government would be investing £98 million to develop innovative new products, services and treatments for an ageing population.

Our Implementation Science team have worked on projects such as the Care Home Implementation and Knowledge Mobilisation Project (CHIK-P) to develop an understanding of how to implement best practice and share knowledge to improve the health and social care of residents.

- [arc-swp.nihr.ac.uk/research/the-care-home-implementation-and-knowledge-mobilisation-project-chik-p](http://arc-swp.nihr.ac.uk/research/the-care-home-implementation-and-knowledge-mobilisation-project-chik-p)
- [arc-swp.nihr.ac.uk/est-reviews](http://arc-swp.nihr.ac.uk/est-reviews)





## Improving the mental health of children and young people with long-term conditions

**Living with a long-term health condition can cause feelings of anxiety and depression in many children. We examined the effectiveness of interventions to improve mental health for young people with chronic physical conditions.**

Services aimed at supporting children and young people with long-term health conditions often struggle to manage associated mental health issues. Integrated healthcare is required to deal with their physical and mental health needs but it has not been clear which interventions may work best.

Our Evidence Synthesis Team conducted a number of systematic reviews to understand the experiences of children and young people with long-term conditions and assess the effectiveness of mental health interventions to manage them. By looking at the available research and talking to young people, their families and the practitioners who worked with them, they were able to identify the factors that can enhance or limit the success of treatments and where the gaps in the evidence lie.

The team found that good relationships and social support were particularly important to young people but that, in general, there was a lack of evidence about how well certain interventions work, something which requires further study.

Throughout the project the team worked closely with young people and their families and involved them in making the research findings as accessible as possible through podcasts, blogposts, conference presentations and plain language summaries.

- [arc-swp.nihr.ac.uk/research/improving-the-mental-health-of-children-and-young-people-with-long-term-conditions](https://arc-swp.nihr.ac.uk/research/improving-the-mental-health-of-children-and-young-people-with-long-term-conditions)
- [bit.ly/2Xb77cg](https://bit.ly/2Xb77cg)



## Reducing avoidable hospital admissions for children

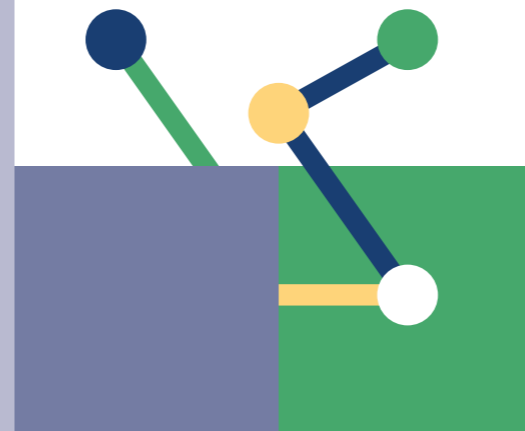
**Recent years have seen an increase in emergency admissions to hospital for children. We worked with hospital Trusts across the South West to improve emergency paediatric care and reduce the number of children visiting A&E.**

The rate of admissions amongst children rose 28% between 1999 and 2010 despite declining risk of serious illness and death in the same period. Many of these admissions last less than 24 hours and there is a belief that many could be avoided, reducing the risk of unnecessary psychological and physical harm for children and making better use of resources.

We worked with local clinicians and NHS managers to design and establish a Paediatric Admissions Unit (PAU) to manage cases within Accident and Emergency (A&E) departments. Staffed by senior paediatric nurses and a consultant paediatrician, the PAU enabled children to receive appropriate care in an appropriate environment, reducing the amount of time spent in A&E. This change was associated with a rapid 19.2% fall in the admission rate compared to the previous four years at the Royal Devon & Exeter Hospital.

Following this, we worked with the South West Strategic Clinical Network and the South West Academic Health Science Network to extend the project to include all 14 paediatric units across the region. The results of the study have provided evidence to inform service delivery across the UK.


- [arc-swp.nihr.ac.uk/research/paediatric-acute-care-project](https://arc-swp.nihr.ac.uk/research/paediatric-acute-care-project)
- [penclahrc.exposure.co/child-admissions](https://penclahrc.exposure.co/child-admissions)





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