Our mission is to improve the health and well-being of people in Wessex, across the life course, undertaking and supporting implementation of leading edge applied health research for patients, community and population benefit.

**Introduction**

**ARC Projects**

From April 2021 until March 2022 we directly funded 34 projects, and supported a further 18 (adopted) projects via access to ARC Wessex skills and expertise.

Co-Funding, the amount of money put forward by partners to support our work, training and research totalled £2,700,207.
Our website was viewed 65,000 this year

25,000 people using the website, 12,000 being new visitors to the site

On social media channels like Twitter, we had 650,000 views in 2021-2022 (total of just under 4,000 followers)

ARC Academy Members grew by 37 in the last year to a total of 77, and include people with internships, PhD studentships and Post-doctoral fellowships

We have 150 ARC Faculty Members, who offer support, expertise and collaborate with us on research

In July 2021 we launched a series of ARC webinars. They happen every 2 months and examples include How has COVID-19 changed the way we do research and Improving the Wellbeing of the Health and Care Workforce. Our audience has grown from 42 to 68 participants

www.arc-wx.nihr.ac.uk
@arc_wessex
Working together to meet local health needs

We secured £750,000 to create a Mental Health Research Hub over the next two years. We were able to achieve this through the significant support of Wessex organisations in developing the bid.

One of our Healthy Communities theme researchers Dr Sarah Morgan is leading national research on domestic violence. The project called Cautioning And Relationship Abuse (CARA) works with domestic violence charities across the UK.

We lead the National Programme for Healthy Ageing, Dementia and Frailty which launched in October 2021. We work with other ARCs across England and have started 3 programmes of research and implementation.

Long Term Conditions theme lead Professor Portillo is jointly leading on research across England on Personalised Primary care for Patients with Multimorbidity.

National Priorities
Building research capacity through our Academy

We have continued to grow our Academy forming a vibrant community of 77 members (25 interns; 8 PhD Students; 4 post-doctoral fellows; and 40 post-doctoral researchers).

We have invested more than £600,000 in the last 12 months.

The Florence Nightingale Foundation is helping develop and deliver our post-doctoral leadership programme.

Our PhD students have a member of the public to help mentor them.

Just three who have joined us:

- Justin Strain (Internship)
- Qian Yue Tan (PhD Student)
- Dr. George Hong (Post-doctoral fellow)
There is some public concern about NHS hospital nurses’ capacity to provide compassionate care, but very little research about how to improve this situation.

We have developed and piloted a programme called Creating Learning Environments for Compassionate Care (CLECC). In CLECC, all registered nurses and health care assistants from participating wards attend a study day, with a focus on team building and understanding patient experiences. A nurse educator (who is not usually part of the ward team) supports the team to try new ways of working on the ward, including regular supportive discussions on improving care. Ward managers attend learning groups to develop their leadership role. Volunteer team members receive training in observations of care and feeding back information to colleagues.

This was adapted for nursing teams in mental health hospital settings who are now using CLECC for the first time.
Moving into a care home is a significant and often life changing transition. Everyday objects can make this easier. Whilst it is widely believed that care homes encourage new residents to bring personal possessions with them, a recent study found this not to be the case. Only certain objects are encouraged in care homes and people with a dementia are often excluded from deciding which objects they take with them.

Material citizenship is a concept that focuses on the interactions people have with objects, for example, access to a preferred coffee cup or being able to use a hairdryer or a pair of hair straighteners. Material citizenship emphasises the use of objects as way of enabling staff to support residents live a meaningful life.

We collaborated with Brendoncare to develop a training programme for staff on the importance of objects in everyday life and how to include objects in care assessments and care planning.

Material Citizenship was introduced in two Brendoncare care homes with a view to rolling out to further eight by the end of 2022.

Hallmark Care rolled Material Citizenship out to 20 care homes in England and Wales from April 2022.

Material Citizenship is also being included in the NHS Somerset Dementia Wellbeing model and written into two other care organisations’ strategies.
The team has developed an automated decision support tool (DST) to determine efficient routes and schedules for domestic care visits. They have partnered with Abicare, a major social care provider in South of England, and tailored prototype software to work with the company’s data and developed a user-friendly interface. The software is being made publicly available online.

The project has brought an understanding of the practical requirements of planning faced by health and social care teams. Accurate mathematical models to represent this problem are now present, alongside an efficient solving algorithm.

During the project, we were able to implement them in a software tool, which is currently being tested with a social care provider. Early results have shown potential to save travel and waiting time for carers, as well as the time of the planners themselves.

Our District nurse scheduling project has been expanded and adapted to address complex scheduling in social care.
Where we are working

Work on Predicting Patient Deterioration Risks in COMmunities (PPDRCOM) though routinely available patient data like temperature, respiration rate, and blood oxygen levels was established in Hampshire, and is the basis for the evaluation of an NHS care innovation called COVID oximetry @ home. Evidence from this project could be applied to other health conditions and lead to the development of Artificial Intelligence-based illness and disease models.

Covid Oximetry @ home allows Covid patients to be safely monitored at home using a simple device. The data from this study has helped create the safe monitoring system.
The ImPACt study explored the feasibility of training volunteers at Brendoncare community clubs to lead online group exercise classes for older adults attending social clubs.

Training package has been developed for Brendoncare community and online clubs with membership of approximately 1,400 people across Hampshire and Dorset.

Working with Brendoncare the researchers have been supporting the roll-out of these exercise classes in social clubs across region.

Physical activity is important for older people. It has many benefits including maintaining older people’s ability to perform activities of daily living, be independent, and improve their well-being. However, many older adults living in the community do not engage in regular physical activity.
The number of people living with the impact of multiple long-term health problems during working age is a major, growing and complex problem in the UK population, driven by multiple influences across the whole of the life course. The NHS and Social Care will not cope if we do nothing to prevent this growing burden.

The NIHR-funded MELD-B project will use cutting edge artificial intelligence and statistical methods on large datasets covering people's whole life course to identify key moments and the most important issues to target for the greatest prevention benefit; from things in early life, like breast feeding, to those coming in to play later on, such as mental health and alcohol.

Two of our lead researchers have built a multidisciplinary, multicentre Research Collaboration called 'MELD-B' with expertise in Public Health, Primary Care, Computing Science, Maths, and Artificial Intelligence (AI) to examine the key factors influencing the development of multiple long-term conditions across the life course. The team successfully bid for this NIHR grant of more than £2 Million based on their 'MELD' study which used data from 700,000 people and a birth cohort to undertake the necessary proof of principle AI work.

Where are we going next?
Find out more at:

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@arc_wessex