

NIHR CLAHRC North Thames

Impacts and achievements

World class applied health research with direct impact on health and care

NIHR CLAHRC North Thames is a partnership of leading universities (UCL, LSE, QMUL, LSHTM and UEL), the NHS and Local Authorities, patients and industry across north central and north east London, south and west Hertfordshire, south Bedfordshire and south west and mid-Essex. We share a commitment to improving health and care and to reducing inequalities.

Over the past five years, we identified the problems that most concern everyone. We responded with innovative and high-quality applied health research that has addressed local needs and national priorities, then rapidly put findings into practice across our region and beyond. This is reflected in the volume, diversity and relevance of our research. Highlights are captured in this booklet.

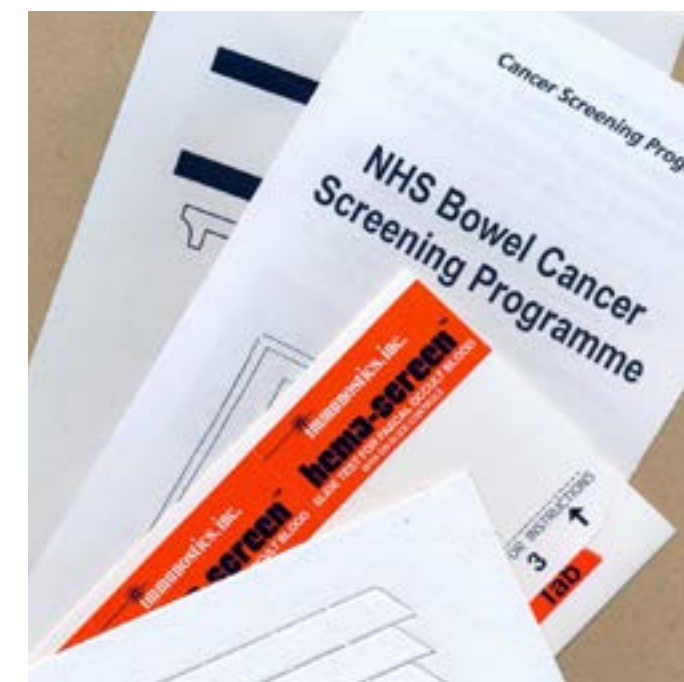
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Improving uptake of bowel cancer screening

We co-designed two simple, universally provided, zero cost interventions for use in the NHS Bowel Cancer Screening Programme: a GP endorsement to the screening invitation, and an enhanced reminder letter. The enhanced reminder letter reduced the socioeconomic gradient in screening uptake and, in common with general practice endorsement, increased uptake overall.

Our research has led to:

- Both GP endorsement and enhanced reminders being implemented across England
- Up to 59,000 more people taking a bowel cancer test in England each year
- Up to 91 additional people who have bowel cancer being identified each year
- High or medium-risk polyps being detected in up to 245 additional people
- Use of GP endorsed text messages in cervical cancer screening programmes, with plans to extend to breast cancer screening.



Co-locating welfare advice in primary care

Our research provided the first evidence-based data on the benefits of co-locating welfare advice services in GP settings, and showed significant improvements in patient mental health and well-being, reaching those most in need and supporting healthcare staff.

Advice recipients gained on average £15 per capita for every £1 spent by commissioners – averaging £2,689 per person.

Patients had up to 91% greater reductions over time in common mental disorder, improved mental well-being and 58% greater reduction in financial strain.

Nearly half of advice recipients would not have sought advice or would have turned to their GP had the service not been there.

Co-located services also reduce pressure on GPs and practice staff and increase their capacity to support patients.

Impact

Retention of co-located services in primary care (Haringey & Derbyshire) and establishment of a new service in a mental health-based setting (Haringey); The Ministry of Justice strategy on legal support¹ recommended exploring new ways of delivering legal support including embedding legal advice in other services, such as primary care.



Development and implementation of an app to help clinicians identify and manage acute kidney injury

We collaborated with Google DeepMind Health to develop and evaluate an app to help clinicians identify patients (in real time) at risk of acute kidney injury (AKI). The app significantly improved the recognition of AKI, the time required for review by a specialist (just 11 minutes) and to treatment of nephrotoxins, renal recovery and renal/intensive care unit admission. Staff using the app saved up to two hours of time every day by not queuing for a computer. Informed by our research, this innovation won the 2019 HSJ Patient Safety Award (Deteriorating Patients & Rapid Response Systems Award category).



Detection and management of Atrial Fibrillation



Our research has informed the UCLPartners quality improvement programmes for Atrial Fibrillation (AF).

- Innovations include:**
- Contributing to an AF toolkit for commissioners and clinicians
 - Implementing pulse checks in over 65s (found to improve AF detection) across all CCGs in North East London STP (and influencing CCG programmes in London more widely and nationally)
 - Implementing the AliveCor Kardia AF detection device
 - Leading development of an Active Patient Link AF 'virtual patient review' tool to identify patients who were not yet anticoagulated. GPs and in-practice pharmacists in Redbridge CCG used this tool in 2018, and subsequently become the second most improved of 209 CCGs in England in the national Quality and Outcomes framework 2018 for AF treatment
 - Informing a pan-London AHSN initiative to support digital integration, including developing a near real-time AF dashboard showing practice performance for AF anticoagulation and related measures
 - Contributing to the evidence base for the effectiveness of early detection and anticoagulation of AF patients, supporting national implementation.

Improvement in detection of AF has led to an estimated reduction of 45 strokes over three years due to anticoagulation. UCLPartners have a contract to deliver an AF detection/anticoagulation programme across all of North Central London STP, and are in discussions with our other STPs to roll this out further.

Cost-utility of mechanical thrombectomy for treating stroke

Our research² demonstrated the cost-effectiveness of mechanical thrombectomy (MT) for treating stroke within six hours of symptom onset, informing NICE (2018)³ and NHS England (2018)⁴ guidelines.

We also demonstrated cost-effectiveness of MT up to 24 hours⁵; this finding is cited in the latest NICE evidence review (2018)⁶, and underpins recommendations to extend the use of MT.





Can we improve the healthcare response to domestic violence and abuse?

IRIS (Identification and Referral to Improve Safety) is a primary care-based intervention to improve the health, safety and experience of women affected by domestic violence and abuse. We demonstrated that IRIS is a simple intervention that does not require major service redesign, is likely to be cost-effective and cost-saving to society, and cost-effective to the health service.

Our national analysis estimated a societal cost saving of £14 per woman registered in an IRIS practice.

Since 2007, IRIS has been commissioned in 40 CCGs nationally, including seven CCGs in the CLAHRC North Thames region. Approximately 800 general practices have been trained, with a reach of over a million women.

On average, 223 referrals were made yearly in IRIS-trained practices across Hackney. This scales to ~17,000 referrals nationally per year using the 2017 population statistics.

A GP described IRIS as: “...undoubtedly the most successful project of its kind...”.

Can we increase HIV detection by routinely screening people when they register at GP practices?



HIV remains underdiagnosed, and four in 10 people are diagnosed late. Early diagnosis saves lives and reduces onward transmission.

Our intervention – ‘RHIVA2’ – to implement HIV screening during general practice registration in Hackney led to a fourfold increase in detection of HIV, and was cost-effective in the medium term. City & Hackney CCG commissioned the intervention and found a sustained increase in HIV testing and new diagnoses during the following three years.

Newham CCG now implements HIV testing in general practice, while Waltham Forest and Lewisham CCGs are piloting the intervention. Barts Health NHS Trust have introduced a failsafe procedure to ensure prompt HIV clinic entry for people newly diagnosed with HIV in general practice.

Our research informs international guidelines (European Centre for Disease Prevention and Control (ECDC) Guidelines on HIV, Hepatitis B & C testing 2018)⁷ (INTEGRATE Joint Action: <https://integrateja.eu>).

What are the characteristics and patterns of use among Emergency Department attendees with mental health problems?

We conducted the first national analysis of Emergency Department attendance among patients with acute mental health problems and found differences with general attendance. Our findings have been received by the NHS National Medical Director and Director for Acute Care to inform the 14 pilot sites for the new NHS Access Standards.

Overall, 4% of all emergency department attendances are related to mental health.

Patients with acute mental health problems tend to be younger and from the most deprived areas. Their ethnic identity is more likely to be White and less likely to be Asian.

Emergency department visits are more likely to take place during the daytime and on the weekend. By contrast, attendances by patients with physical health problems are most likely to occur on a Monday. More than 60% of patients with mental health problems arrive by ambulance.



Compared to patients with physical health problems, mental health patients are more likely to be admitted, transferred to another hospital, discharged with or without follow-up, and refused treatment.

Young people's mental health

The NHS Long term plan endorses i-THRIVE as a key approach for shared mental health decision-making with children, young people and their families and for collaborative working across services. i-THRIVE was selected as an NHS Innovation Accelerator and is now in operation in 70+ sites across England. We have collected extensive and unique data from across England from all levels and branches of children and young people's mental health on the process of implementing the most radical transformation of children's mental health services since the establishment of Child Guidance clinics 70 years ago.

Progress:

- We are working with CCGs and clinical networks across the UK to fast-track model adoption
- One in three CCGs are now using i-THRIVE nationally
- With UCLPartners, North East London NHS Foundation Trust (NELFT), Tavistock and Portman NHS Foundation Trust and Anna Freud Centre we are examining model effectiveness against key performance outcomes, cost effectiveness and barriers/facilitators to implementation/dissemination
- Our researchers are working with the implementation team to support development and improvement of the programme as it evolves
- In-depth mapping of control and test site pathways will provide knowledge on variation in CAMHS pathways and the extent they are consistent with NHS England recommendations.

Involving young people in commissioning

Our Young Commissioners model involved young people with diabetes in the design of community-based diabetes services in East London. Our study demonstrated the benefits at an organisational level of involving young people in service redesign.

As a result of this work, we have:

- Shaped a new *How to Guide: How to develop NHS Youth Forums* (2016)⁸ to help commissioners and providers develop youth forums to support person-centred commissioning of health and care services
- Influenced policy and practice in a) London - Newham CCG Service Specifications (2016)⁹, Bart's Hospital Transition Care Plans (2016)¹⁰, *Healthy London Partnership's Guidance for Managing Diabetes in Schools* (2015)¹¹, and b) nationally - *Department of Health National Transitions Service Specifications for Diabetes* (2016),¹² *NICE Guidelines for diagnosing and managing type 1 and type 2 diabetes in children and young people* (2015)¹³

How can carers be better involved in inpatient treatment for psychosis?

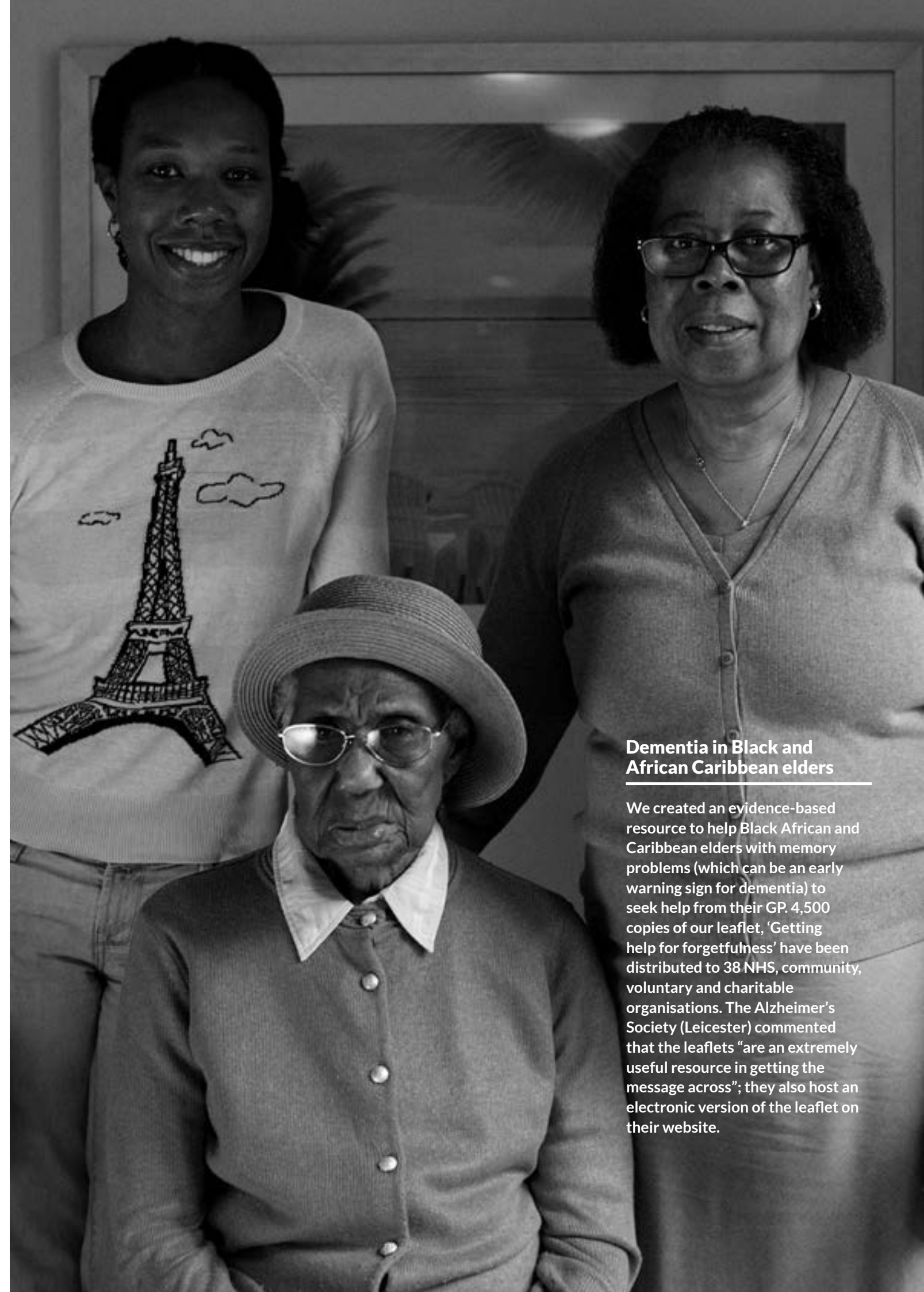
Carer involvement in treatment of people with severe mental illness is supported by decades of research evidence and recommended by national and international mental health care guidelines. However, it is inconsistently implemented, and carers often feel excluded from information and decisions about treatment in hospital settings.

With service users and carers, we co-developed a training programme and manual to improve involvement of carers in treatment of inpatients with severe mental illness.

We have trained 71 clinicians in East London NHS Foundation Trust (ELFT) and the programme is used as routine care at the Newham Centre for Mental Health. An online version of the training package that we are developing will extend access to this training to NHS professionals nationally. The training requires on average 90 minutes of clinicians' time with no additional costs.

- Achieved spread beyond our region - Dudley Council is using the "Young Commissioners" model to strengthen young people's involvement in their service design and commissioning.

A webinar series currently being developed will facilitate wider scale implementation of the model with commissioners and services.



Dementia in Black and African Caribbean elders

We created an evidence-based resource to help Black African and Caribbean elders with memory problems (which can be an early warning sign for dementia) to seek help from their GP. 4,500 copies of our leaflet, 'Getting help for forgetfulness' have been distributed to 38 NHS, community, voluntary and charitable organisations. The Alzheimer's Society (Leicester) commented that the leaflets "are an extremely useful resource in getting the message across"; they also host an electronic version of the leaflet on their website.

Multi-morbidity and social inequalities

Our analysis of linked records of >1m people revealed that the life expectancy gap between the most and least deprived is due to earlier onset of multimorbidity among the most deprived by two years for men and three years for women. On becoming multimorbid, there is a faster progression to death by one year for deprived men but not women. These gaps were attenuated by, but not fully attributable to, socioeconomic differences in smoking prevalence. Our results add weight to the call for a shift in the standard per head age-cost curve used in the national resource allocation formula to younger ages in deprived areas to reflect greater need earlier in the life course.

Can a workshop and theatre provocation piece improve asthma medication management in school children?

Using the asthma control test (ACT), we found that suboptimal asthma control and poor asthma knowledge were common in London secondary school children. We developed a workshop and a theatre provocation piece to help young people with asthma manage their medication better. The intervention has been seen by 1,800 school children and is being tested in 18 schools across London. We will report our findings on whether the intervention is effective at improving asthma control in young people in mid-2020.



Photo: Gerard Monaco

Informing the Greater London Authority’s (GLA) ‘Healthy Schools London’ programme

Our evaluation informed changes to the GLA’s ‘Healthy Schools London’ programme. Our recommendations included integration of an early years’ programme; establishment of mentoring between schools and stronger links with communities; and implementation of a programme to enhance health and wellbeing provision in early year’s settings. This programme could provide an additional mechanism for health improvement and promote school preparedness among children.

Can a community-led intervention improve infant feeding practices among Bangladeshi women?



We identified cultural beliefs (e.g. ‘chubby equals healthy’) and modifiable practices (e.g. bottle feeding whilst sleeping and a preference for sugary foods). Our research has influenced Tower Hamlets and Newham Local Authority early year programmes. Our film has been included in The Birthing a Better Future Art & Science Exhibition, aimed at raising awareness of the crucial first two years of life, currently touring the UK.

Can we improve the role of NHS Boards in quality improvement?

We examined how the boards of NHS Trusts in England govern for quality improvement (QI). NHS Improvement has taken up our ‘maturity framework’ as part of a Leadership for Improvement programme (including board-level training and development). This programme is being piloted and evaluated in 12 organisations in England.

An app to enable shared decision making in mental health therapy among young people

The Power Up app supports young people to make shared decisions in mental health therapy and to enhance their ability to self-manage emotional difficulties.

Can we implement a classroom-based mental health app for school-children?

The ReZone app aims to help students aged 10-15 years to manage their emotional wellbeing within the classroom setting using mentalisation-based and cognitive behaviour therapy techniques. Pupils and teachers use it to inoculate against stressful events at school.



Mapping patient flow to inform system design

Using complex mathematics, we produced maps to enable North East London Foundation Trust to design a single point of access system.

Improving quality of care

We will soon report on our national prospective evaluation of the *Getting it Right First Time* (GIRFT) initiative in orthopaedics. This will inform development and delivery of the programme as it is rolled out nationally across 37 other specialities.

Informing resource prioritisation

We are linking health and local government data to quantify the impact of the social determinants of health on health service use and help Local Authorities to better prioritise resources.

Diabetes prevention

Our data on prediabetes and diabetes prevention is being applied in Newham to identify and target gaps in their diabetes prevention programme.

Improving future Doctors’ decision-making

We developed and tested an online resource ‘eCREST’ (electronic Clinical Reasoning Educational Simulation Tool) to improve the decision making processes of medical students. eCREST is now participating in EDUCATE (<https://educate.london>), a training and development programme for companies and groups with promising online educational technology.



Building research capacity among frontline health and care staff

Our NIHR CLAHRC North Thames Academy has trained 769 NHS and Local Authority frontline staff in research methods to improve their practice and provide more evidence-based care.

- Courses include:
- Introduction to Evaluation
 - Understanding Patient Flow
 - Becoming Research Active
 - Economic Evaluation.

In addition to courses, our Academy’s Fellowship scheme aims to develop future research leaders. We have intensively trained 13 nurses, midwives and allied health professionals during their year-long academic secondment.

We have also funded 21 PhD students, creating a learning community training in applied health research.

“Really interesting and informative with excellent materials.”

Working in partnership with patients and the public

Our patient and public partners keep our research relevant, focused and patient-centred. They help us define the questions our research should answer and the outcomes that will most benefit patients, service-users and those close to them.

This brings real-world perspective to our work and helps us attract people and communities to take part in our research.

Our Research Advisory Panel of lay people also monitors how we are doing – holding us to the pledges set out in our involvement and engagement strategies.

Working closely with public contributors enables us to:

- Ensure we communicate clearly when we are recruiting participants, disseminating our findings or publicising who we are and what we do
- Shape and deliver our training – with public contributors co-delivering our Academy short courses to NHS and Public Health professionals
- Include their voice in our governance and decision-making, with patient representatives on our management board, and public contributors involved in strategic discussions.

Key impact figures



£10.5M awarded by NIHR + £35M in matched funding



>£129M in external funding awarded since 2014



5 Research Themes delivering 87 studies



>112 Publications

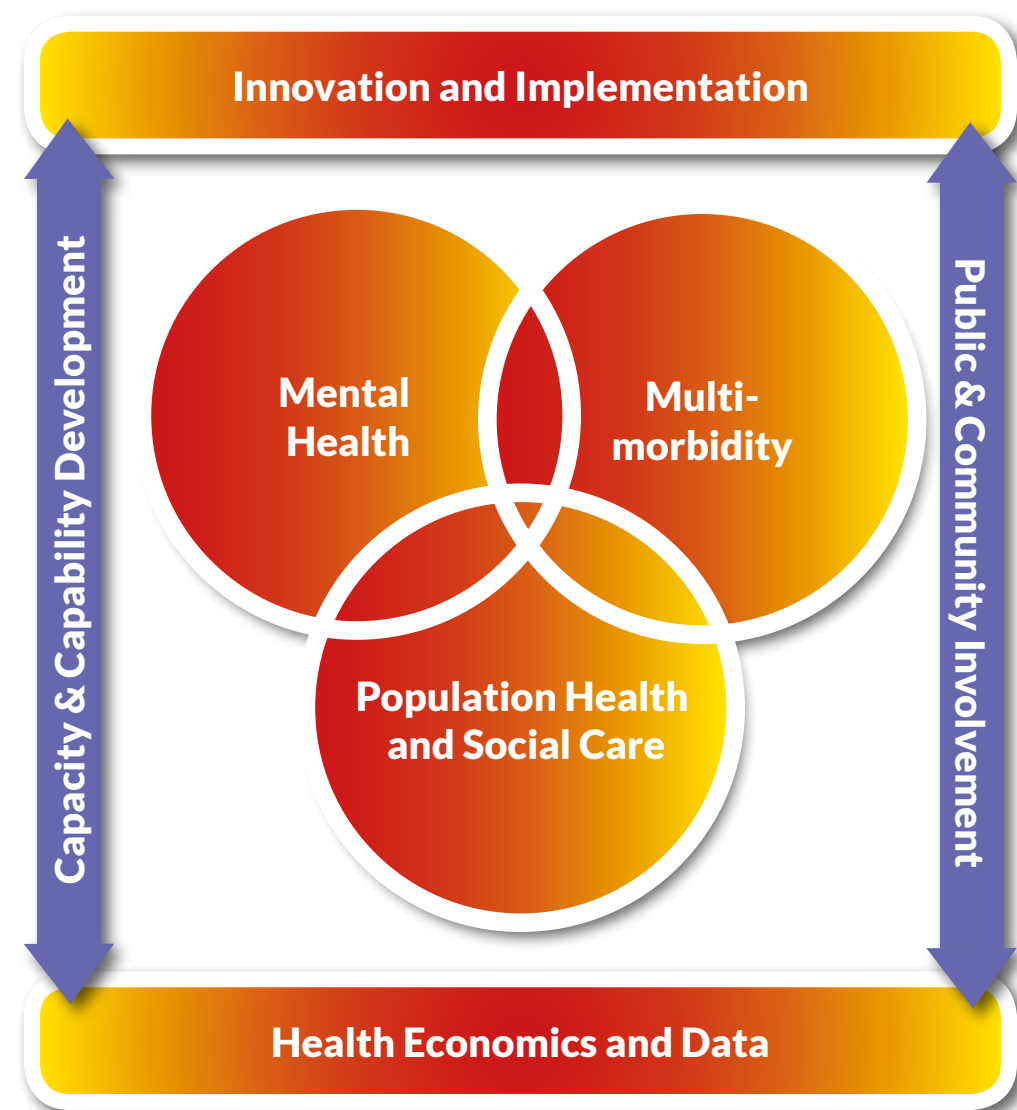


>55 Partners



769 NHS and Local Authority staff trained
21 PhD students
13 Fellowships awarded to Allied Health Professionals

Our vision: Launching NIHR ARC North Thames, 2019-2024



As we begin our programme of work as NIHR ARC North Thames, we will build on our current strengths to achieve significant advances in tackling the countries major health and care challenges. These include how to reconfigure services to achieve sustainability and improve outcomes within the context of austerity, widening inequalities, complicated digitisation and escalating demand driven by socio-demographic change, multi-morbidity and innovation.

We will focus on five research themes:

- Mental Health
- Multimorbidity
- Population Health and Social Care
- Innovation and Implementation
- Health Economics and Data.

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Glossary

- AHSN: Academic Health Science Network.
- CCG: Clinical Commissioning Group.
- HSJ: Health Service Journal.
- LSHTM: London School of Hygiene and Tropical Medicine.
- QMUL: Queen Mary University London.
- STP: Sustainability & Transformation Plan.
- UEL: University of East London.

