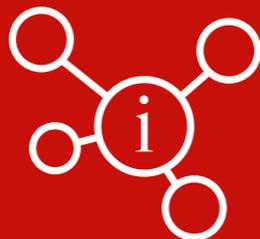
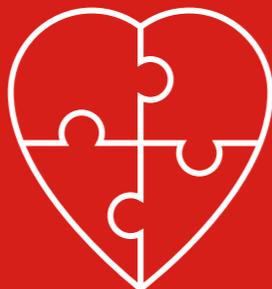
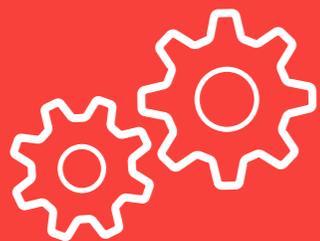


# Collaboration for Leadership in Applied Health Research and Care North West Coast



## Researching Innovation, Reducing Health Inequalities

Universities, local authorities, NHS organisations and the public working together to research innovation and deliver projects that will improve public health, wellbeing and quality of care across Cheshire, Merseyside, South Cumbria and Lancashire



## 1. Introduction

With so many factors affecting health and wellbeing beyond the power of healthcare, only a collaborative approach can hope to tackle inequalities.

For decades, healthcare professionals and politicians have battled to bridge the gap in health status between groups, populations and individuals that results from unequal distribution of social, environmental and economic conditions and the effect these have on people becoming ill and being able to prevent or treat illness.

Despite these efforts, it is an unpalatable truth, and one that is hard to excuse in the 21st century, that a child born in parts of the North West of England could expect to enjoy a healthy life for 17 years less than another child born just streets away. This is the reality of the health inequality in the region, where the chasm between standards in the richest and poorest wards is at its widest in the UK.

The National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care North West Coast (NIHR CLAHRC NWC) brings together NHS organisations, local authorities, the public and academic leaders from the Universities of Liverpool, Lancaster and Central Lancashire to accelerate the translation of research findings into service improvements.

The NIHR CLAHRC NWC's overarching aims are:

- ensuring our outputs are contributing towards reducing health inequalities by a collaborative approach
- ensuring our work is based upon the best available evidence
- knowledge exchange supported by engagement and effective implementation

The work of CLAHRC NWC is taken forward through:

- four programme themes (Delivering Personalised Health and Care, Improving Mental Health, Improving Public Health and Reducing Health Inequalities, Managing Complex Needs), each with a dedicated portfolio of applied health research projects
- a Partner Priority Programme dedicated to research and implementation projects identified as being relevant to Partner services and practice

And supported by:

- The Evidence Synthesis Collaboration which works with our teams to produce the best available evidence to inform our activities
- A Capacity Building programme to equip our Public Advisers, NHS & Local Authority Partner staff to conduct and use applied health research focused on reducing health inequalities

CLAHRC NWC works with other CLAHRCs nationally and regional organisations such as Innovation Agency (Academic Health Science Network for North West Coast) and Clinical Research Network North West Coast, on shared projects, supported by a multidisciplinary team including health economists, health service researchers, engineers, statisticians, lab scientists, psychologists and sociologists and staff of Partner organisations.

CLAHRC NWC is proud to have an active Public Engagement team which ensures public engagement and service user involvement is at the heart of all of its work.

### CASE STUDY



#### Gene testing first for warfarin patients in North West

Health staff in Merseyside and Cheshire are using gene testing to prescribe individualised dosages of a commonly used, lifesaving drug, thanks to a unique collaboration of CLAHRC NWC, Innovation Agency, University of Liverpool, NHS and Industry Partners.

Genes are part of our DNA and this testing examines specific genes which influence the body's response to the drug warfarin. It is the first time genotyping by front-line staff has been used in the provision of drug dosing to patients in the UK, heralding a new era in personalised medicine.

Clinics in the Royal Liverpool University Hospital, Warrington Hospital and the Countess of Chester Hospital are genotyping new patients with atrial fibrillation before prescribing warfarin.

The aim is to introduce it routinely throughout the UK.

## 2. Partner Priority Programme (PPP)

Hosted by the CLAHRC NWC's Knowledge Exchange Theme, the PPP's overall aim is to share knowledge and experience in order to identify which of the new healthcare models being developed by Partners are most effective in reducing health inequalities, improving population health and wellbeing and reducing emergency admissions.

Over 30 Partners including Local Authorities, Hospitals, Clinical Commissioning Groups and Universities are developing evaluation plans with support from CLAHRC NWC. The groups have access to specialists to assist with research methods, developing implementation plans and learning about transformation in organisations. Service Users and Public Advisers attend a series of workshops in conjunction with Partners to develop and feed input into their plans.

Partners are also developing capacity to embed evaluation as an integral part of change and transformation. Participants are being encouraged to think of their evaluation projects as a tool to work out what needs to change within their service and to take away from the PPP programme the-know-how to do it.

Final plans of evaluated services, presented internally or to Commissioners, can also be a lever to securing an improved system for quality within organisations.

Partner Initiatives which feature in the PPP cover subjects such as falls prevention, enhanced primary care provision, evaluation of clinical services in the community, rehabilitation services, transitional care, mental health and condition-specific support e.g. for cancer, cardiovascular disease and diabetes.

### CASE STUDY

"I've joined the (Partner Priority Programme) PPP to evaluate our Knowsley Community Cardiovascular Service," says Zoe McIntosh, a Cardiopulmonary Rehabilitation Facilitator at Liverpool Heart & Chest Hospital.

*"The Service was implemented to reduce health inequalities by being community based and manage early diagnosis and self-management of Cardiac Rehabilitation across the borough. We need the evidence to prove how effective the service is and I want from the CLAHRC NWC the skills to do that by assessing and quantifying the data we have collected already on usage, population, service model, patient feedback etc. The CLAHRC NWC programme has taught me initially the value of public involvement and its importance in the evaluation and our Public Advisers have been coming to the workshops with both me and the Head of our Clinical Trials Unit.*

*The biggest benefit of being part of the PPP though has been able to register with CLAHRC NWC's Internship programme. I am hoping to gain analytical skills and specific training in data analysis as the evaluation project report I compile will go to my own Trust Board and local Clinical Commissioning Group for benchmark model comparison with other services. "*



### 3. Evidence Synthesis Collaboration (ESC)

'Evidence Synthesis' is a key strength of researchers, academics and healthcare professionals working along the North West Coast (NWC).

For many years, review teams have been examining the world's literature on a variety of health related topics, testing published research against set criteria, summarising results and publishing key findings. The vision of the Evidence Synthesis Collaboration is to establish a collaborative, leadership-enhancing programme of activities that contribute to the use of evidence synthesis by CLAHRC NWC partners and encourage consideration of the effects of evidence synthesis on health inequalities.

The goals of the NWC Evidence Synthesis Collaboration are twofold.

- To encourage, facilitate and support specific requests for evidence synthesis from CLAHRC stakeholders, partners and themes to inform policy and/or develop future research projects.
- To support stakeholder and partner teams, through continuing professional development programmes, to address current programme delivery issues.

All forms of data are considered for use in the synthesis of evidence and application of the full range of synthesis methods is always encouraged (e.g. quantitative, qualitative, realist).

The ESC also forms a key role in the work of the Partner Priority Programme (PPP) with its Systematic Review Advisory Panel, providing guidance on Systematic Reviews to Partners and advising on how systematic reviews can support evaluation and consideration of health inequalities.

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*Members of the Systematic Review Advisory Panel in action, presenting to Partners in Preston at a PPP workshop.*

### 4. Knowledge Exchange, Engagement and Effective Implementation

We are maximising the engagement of and knowledge exchange with Partners to drive the programme of research and implementation across our Themes, and our innovative Partner Priority Programme, to effect real step changes in health and care.

We are integrating knowledge exchange through all areas of our work, developing and delivering effective implementation with inbuilt evaluation, and supporting new projects initiated by our Partners.

A key area of our work is embedding engagement into all activity of the CLAHRC NWC, involving active participation of

partners, patients, the public and professional stakeholders such as front-line clinicians and local authority public health officers in processes of co-production and delivery of our programmes, from planning, through design to delivery and implementation. This will ensure that all applied research and implementation activities delivered by CLAHRC NWC are designed to facilitate use by care providers and users.

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## 5. Improving Public Health and Reducing Health Inequalities

Our public health theme has been co-designed by and is directly managed by our local authority (LA) partners to support them to deliver their statutory responsibilities to improve the health of their populations and reduce inequalities in health. The theme management group is jointly chaired by an LA representative and the theme's academic lead. The theme's neighbourhood resilience programme is based in our network of 10 relatively disadvantaged neighbourhoods for learning and it aims to enhance resilience in these neighbourhoods by using evidence from research alongside the experiential knowledge of the people who live and work there to address upstream social, economic and/or environmental drivers of health inequalities. The CLAHRC NWC Improving Public Health Programme provides a valuable opportunity for joint working between residents, local workers and policy makers and other local stakeholders.

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### CASE STUDY

#### Central Southport Video

The CLAHRC NWC Improving Public Health Theme Resilience Programme is working to reduce health inequalities and improve public health through targeted action to improve local policies and initiatives (aimed at enhancing resilience by targeting social determinants of health) in 10 disadvantaged neighbourhoods (or Neighbourhoods for Learning - NFL).

In Central Southport NFL early work has focused activities towards improving aspects of local economic systems. One such area is action against loan sharks. Out of early discussions, an initiative to raise awareness of the impact of money lending from loan sharks was developed. Local authority partners working with the Migrant Workers Sefton Community organisation have produced an on-line video in seven languages highlighting the negative impact of money lending from loan sharks and providing direction to further help and resources.



## 6. Improving Mental Health

Our focus in this area is to understand and reduce the burden of mental ill health and wellbeing by delivering effective interventions involving the NHS, local authorities and the third sector.

We have identified neighbourhoods with low mental wellbeing and high need for mental health services and, within these areas, factors that are associated with risk of mental illness (common psychiatric disorders, alcohol abuse, perinatal mental ill-health, severe mental illness). We will evaluate a range of community-based mental health

interventions for North West Coast residents including those with common psychiatric disorders; people suffering from the psychological consequences of stroke; people misusing alcohol; women with perinatal mental health problems; and people with mental illness living in the community.

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### CASE STUDY

#### Bringing public led research ideas to life

The project aims to develop a high quality public-led mental health research proposal, primarily designed to secure funding from the National Institute for Health Research (NIHR).

The participants receive training and support from experienced applied health research professionals to help them plan and write the proposal. It is very unusual for members of the public to be involved in all stages of a research project, from conception to completion. This project will change that. Including members of the public in research and implementation leads to benefits not only for patients but also for health service providers and society in general.

The project is the culmination of a series of public engagement events titled "Research: Have Your Say" held during 2015/16 and funded by CLAHRC NWC. The aim of the events was to initiate research into inequalities in mental health care led by service user groups and the public across the North West region. A broad area of concern was identified and agreed as the focus of ongoing activity which relates to improving communication and increasing understanding between mental health service users and mental health care professionals so that the nature and type of care provided can be negotiated and agreed in a way that is sensitive to the wider determinants of mental distress.



## 7. Managing Complex Needs

Through this theme, we are implementing a step change in the delivery of care for people with complex needs arising from long-term conditions (LTCs).

This will result in services that are more person-centred, cost effective and that will improve quality of life for patients and their ability to undertake gainful employment. Initially, the theme will focus upon musculoskeletal and neurological conditions as exemplar LTCs that may run throughout life, and which are associated with the development of complex physical, psychological and social needs arising from the diseases themselves or as a consequence of therapy. Both conditions have a serious negative impact on health and quality of life, need long-term therapy with a variety of medicines (each with many potential major side effects) and require care to be delivered between hospitals and the community.

Lessons learnt about the organisation and delivery of services for these conditions will directly inform changes needed in service delivery for other complex neurological and rheumatological LTCs that will then be addressed.

### Theme Leader

**Professor Tony Marson**

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### CASE STUDY

#### Care After Presenting With Seizures (CAPS)

*Dedicated Nurses in the Accident & Emergency Departments of three Merseyside hospitals are identifying those who attended in the previous 24 hours with a seizure and offer them an appointment at a seizure clinic within the following fortnight.*

*Consent is also being sought from the patients to complete questionnaires related to outcome measures that will allow us to analyse the patient's views on the appropriateness and benefits of the new scheme in action.*

*We want to find out if actively helping patients to attend an early appointment at a neurology clinic will make the changes that reduce readmissions, reattendances and improve quality of life. If the new care pathway proves successful, it could be implemented more widely across the North West Coast.*



## 8. Delivering Personalised Health and Care

### Delivering Personalised Health and Care Theme

Through this theme, we are working to improve self-care by patients, improving access to care in the community, and enabling its integration in complex chronic conditions with a personalised approach.

We are providing NHS practitioners and patients with innovations in personalised medicine, medical devices and diagnostic tools that genuinely add value but not cost.

Research is focusing on individual variability in drug response, both safety and efficacy, with a view to

evaluating the mechanisms, and identifying strategies to personalise healthcare in order to optimise drug efficacy and minimise toxicity. The theme also has continuous activity to evaluate and optimise the effectiveness of assistive technologies which have the capacity to improve outcomes for patients and to help deliver more efficient care healthcare across the wider healthcare systems.

### Theme Leader

**Professor Sir Munir Pirmohamed**

*David Weatherall Chair in Medicine at the University of Liverpool and a Consultant Physician at the Royal Liverpool University Hospital*  
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### CASE STUDY

#### Personalised Renal Monitoring Guidance

*We are developing personalised kidney function monitoring guidelines based on the characteristics of individual patients (for example: severity of heart failure, drugs being taken and other diseases that they might have). The availability of such monitoring protocols would change clinical care pathways, and potentially reduce hospital admissions, reduce cost and improve patient quality of life.*

*Once a personalised guidance system has been developed, we aim to pilot the system out in primary care practices across the UK, using feedback from patients and clinicians in order to improve the design. This system is anticipated to set a precedent in machine learning based guidelines for the use of personalised medicine within the UK.*



## 9. Be Involved – Ensuring Public Involvement

As our work is specific to the North West Coast, our activities always involve members of the public who are living in or using health and social care services in this region. Members of the public work with us in a variety of different ways such as joining a research project to advise on a personal experience of using a service or helping to share knowledge about our work with different groups and partners. We think that people who could be affected by our work should be able to influence it. We call members of the public involved in our work public advisers, and for those public advisers (recruited through the Public Health theme's 'Neighbourhoods for Learning' activities) who are helping to influence changes in their own neighbourhoods, we call these resident advisers.

All CLAHRC NWC projects have public/resident advisers, researchers and partners involved in them. We work with a wide range of partners including healthcare commissioners,

health and social care service providers and public health workers. Each team is shaped around the particular people needed for the topic and all of the activities aim to improve the health of people in the region and reduce health inequalities.

Public Advisers play a critical role in everything CLAHRC NWC does including research and implementation projects, capacity building activities and the wider governance of CLAHRC NWC.

Together, advisers have a collective voice through the Public Reference Panel, which links in to the central governance groups of CLAHRC NWC. Advisers can get involved in many different ways, from attending occasional open meetings to becoming a more active member of a group that has special responsibility for an area (governance, training or engagement for example). Collectively, the

groups are responsible for providing a strategic steer to public engagement in CLAHRC NWC and how the public engagement policy is delivered.

There are regular meetings and training sessions organised throughout the year and each adviser can decide what and how much they would like to get involved in. For those advisers interested in finding out more or for members of the public who would be interested in becoming an adviser, contact Jenny Irvine at [j.irvine@lancaster.ac.uk](mailto:j.irvine@lancaster.ac.uk) or Abigail Oyston on 01524 593 313.

We think that whatever the activity, especially research or developing capacity to do research, it's essential to work with the people that have first-hand experience of that topic. When research or implementation activities are carried out with or by the public, it makes them more relevant and useful to the people who can benefit from it and because of this it will be better research. If research could change the way something is run or delivered (for example a change to a policy or health service), it's vital that the people who could be affected have a chance to influence the research.

### CASE STUDY

#### Keith Holt

##### *What motivated you to become a Public Adviser?*

*I became involved with the CLAHRC NWC as it provided me with an opportunity to express my opinions and use my own experience of local services. As a Public Adviser I regularly attend the events facilitated by the Improving Mental Health Theme Team and am a regular member of the Senior Management Team, which is not just a learning curve for my own development, but enables me to work with others to generate research ideas that will be considered seriously by Partners of the CLAHRC NWC who are delivering front-line services. I feel like I'm a very lucky person to be helping advise on future research projects that will improve the population's health!*



## 10. Capacity Building

CLAHRC NWC is building research capacity in the North West Coast region by supporting and developing research ideas, projects and individual researchers in its partner organisations. This is being achieved in a number of ways including a research internship scheme, supporting postgraduate research degrees and furthering career development through the three partner Higher Education Institutions (HEIs).

Partners including NHS Trusts, Local Authorities and Clinical Commissioning Groups are supporting their staff to undertake a research internship with CLAHRC NWC, developing research ideas that are important to their patients, clients and communities whilst developing valuable research skills.

CLAHRC NWC is also supporting over twenty full-time PhD studentships that span its research themes. These projects address health inequalities and support the vision of the CLAHRC NWC. Projects are focused on health and wellbeing issues that affect patient populations, neighbourhoods and individuals. Students are well supported and encouraged to engage with the National Institute for Health Research, in addition to ensuring public engagement is an integral part of their research.

Capacity Building events, for interns, students and Partner staff, are held to showcase research and its potential impact on the frontline service whilst building networks for future research collaborations.

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### CASE STUDY

*Jayne Vincent, Consultant and Engagement Lead, of Sefton Council (pictured) is taking part in the CLAHRC NWC Research Internship Scheme. Jayne is leading research into whether there are differences in access to and outcomes of the Youth Employment Gateway (YEG) between socio-economic groups (and why these may occur) in the Sefton area. Jayne says, "There are differences in life expectancy across the borough, between Bootle and Formby for example, and I am researching how a key initiative can impact on this gap in terms of youth employment. I am really interested in finding out whether participants improve their chances of employment by completing the programme.*

*"Getting to meet people, gaining research skills such as regression analysis modelling and having access to a research supervisor has been great. Taking the findings back to my employer when the research is complete is something I am looking forward to."*



## 11. Health Inequalities Assessment Toolkit (HIAT)

Much of the responsibility for reducing health inequalities and their socio-economic causes lies with central government. However, a lot can be done locally. Together with academic staff and representatives from CLAHRC NWC Partners, the HIAT was developed to ensure that all our activities have the potential to reduce inequalities in health.

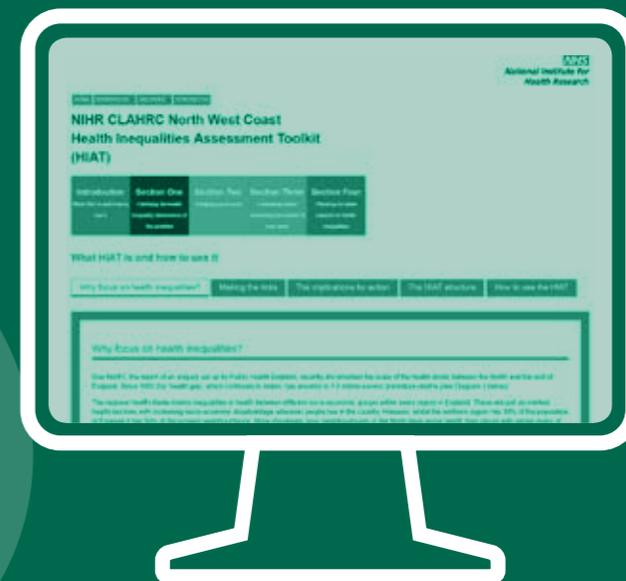
The uniqueness of the tool is that it is relevant to applied research, evidence synthesis, capacity building, knowledge exchange, implementation and evaluation. It includes questions to help professionals to assess whether the work they want to carry out considers the causes of health inequalities and how they can be addressed through applied health research and partnership building.

The tool has already been used extensively for assessing all of CLAHRC NWC's Partner Priority Programme research proposals, individual internships and PhD studentships. This has ensured reducing inequalities in health has been positioned at the heart of CLAHRC NWC's research portfolio and that health inequalities thinking is embedded across all of its Themes.

The HIAT and accompanying materials are tools to help 'infusing' health inequalities into existing ways of thinking, planning and organising within Universities and Partner organisations across the North West –and by doing so to maximise the positive effect of our work.

The toolkit is available free online at [www.hiat.org.uk](http://www.hiat.org.uk)

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Professor Mark Gabbay, Director of CLAHRC  
North West Coast, says:



CLAHRCs are all about applied research that will make a difference to the quality of the patient experience and health. They are geared towards the end result for the patient, not towards the lab."

"Every piece of work will engage stakeholders of public involvement - patients or service users, carers or members of the public from local communities. We will always relate it back to what it feels like as a service user."

"This isn't going to be a bunch of university people saying, 'do it this way', it will be a true collaboration from the beginning." 



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If you would like to work with us and make a difference to the lives of millions of local people, please get in touch.