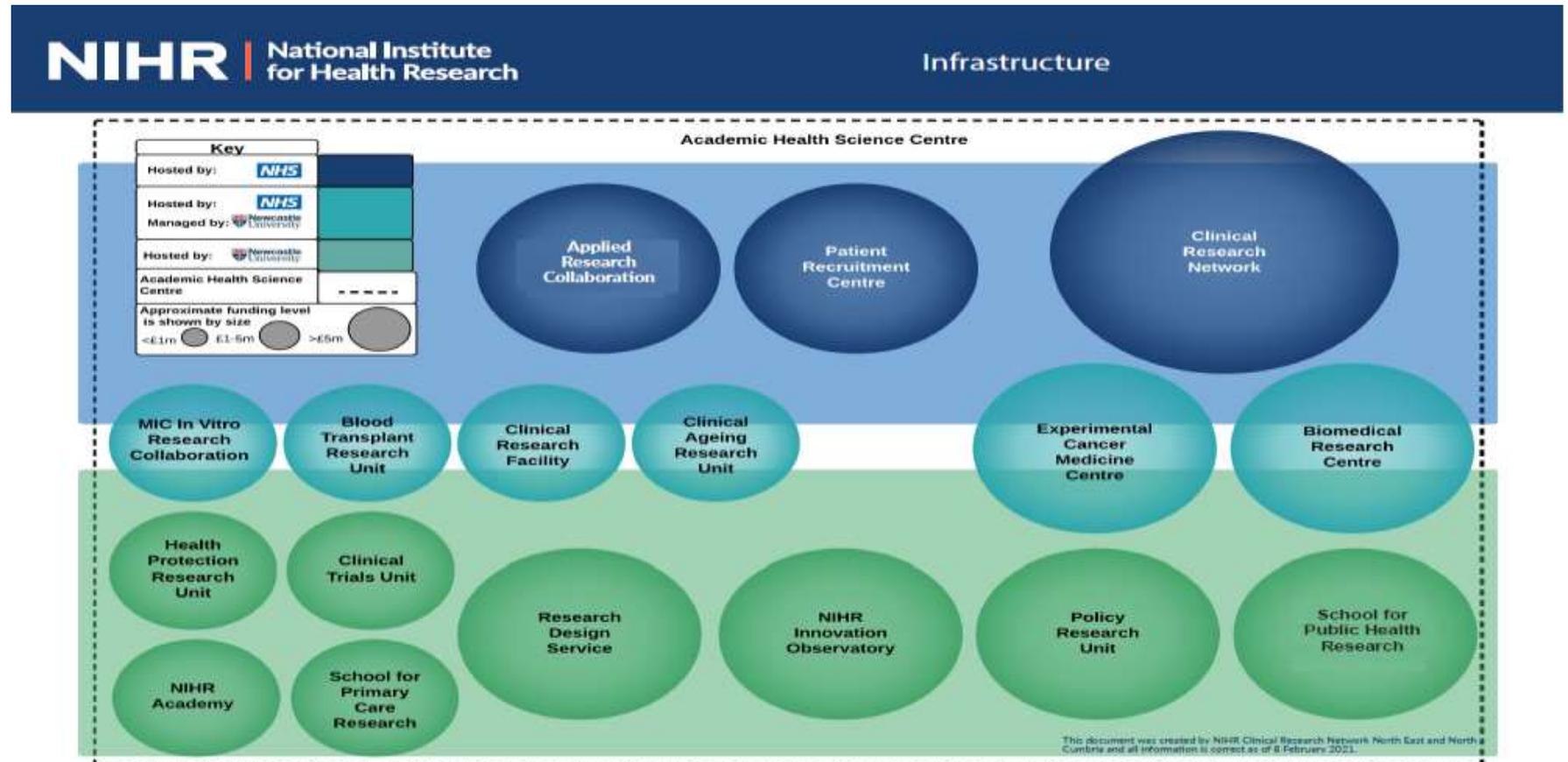


Understanding the Research Infrastructure in the North East & North Cumbria

Eileen Kaner – Director, Applied Research Collaboration





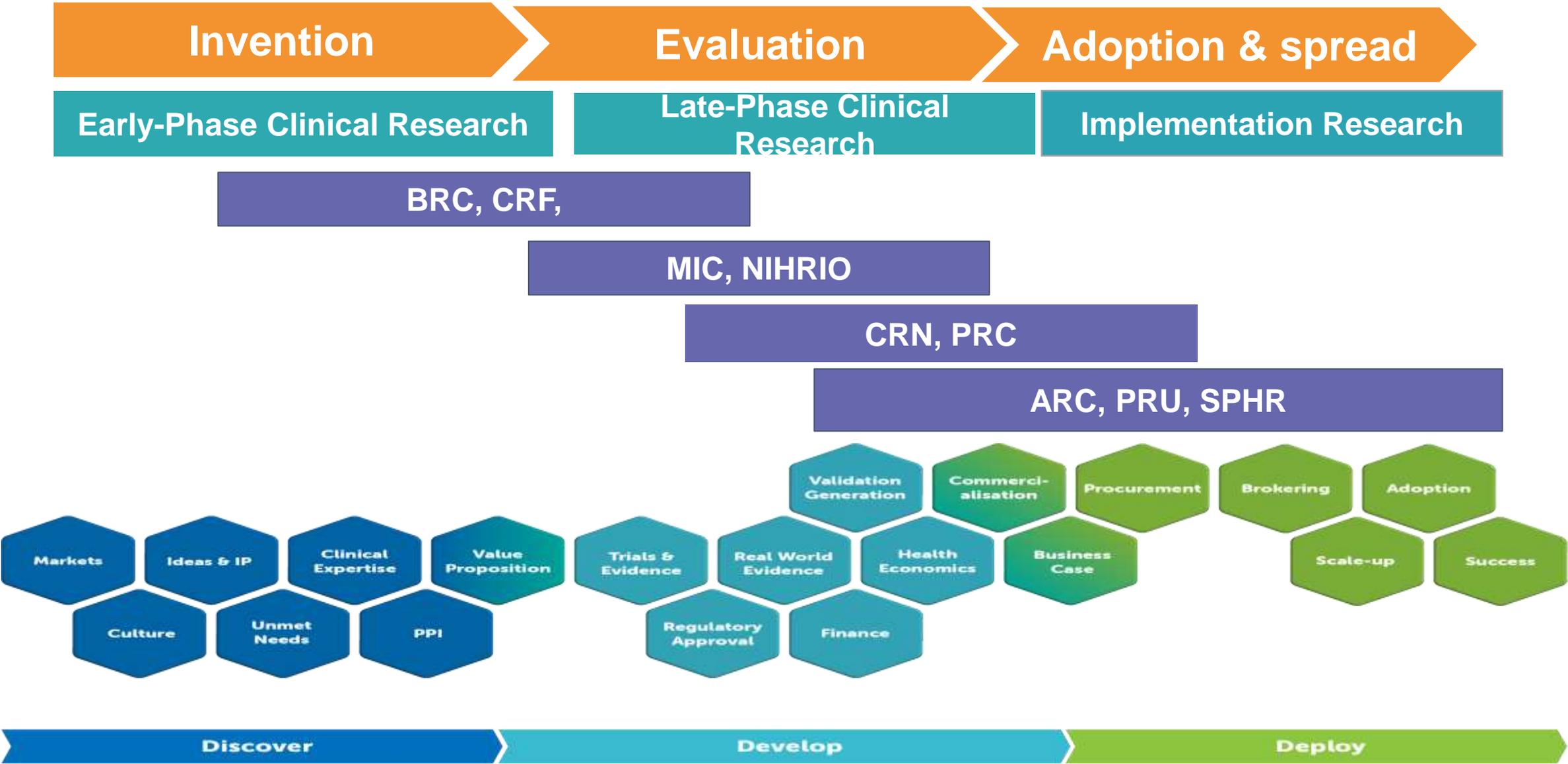
What is infrastructure?

Infra- means 'below'



- Infrastructure is the "underlying structure" of an organization or system or country – the basic facilities needed for it to function.
- Can be visible or invisible – or so familiar they are just not noticed
- A country's infrastructure includes roads, bridges, dams, the water and sewer systems, railways and subways, airports, and harbors and telecommunications networks.
- **Research infrastructure** refers to the facilities, resources and services that are used to help generate evidence to inform and support (*for this talk*) health and social care systems.

Research/Innovation road maps – translational pathway



Applied Research Collaboration (ARC):



@NIHR_ARC_NENC

<https://arc-nenc.nihr.ac.uk/>





- 15 ARCs in England
- £9M over 5 years to 2024
- ARC NENC, £6.9M matched funding
- Links 6 Universities
- Works with all health & care system
- Vision:

‘Better, fairer health and care at all ages and in all places’

What do ARCs do:

- Conduct research on regional priorities
- Provide practical, timely, useable evidence
- Increase capacity - future researchers
- Train practitioners – build research skills
- Mobilise evidence to inform decisions/care
- Evaluate new models of care
- Engage and involve public members

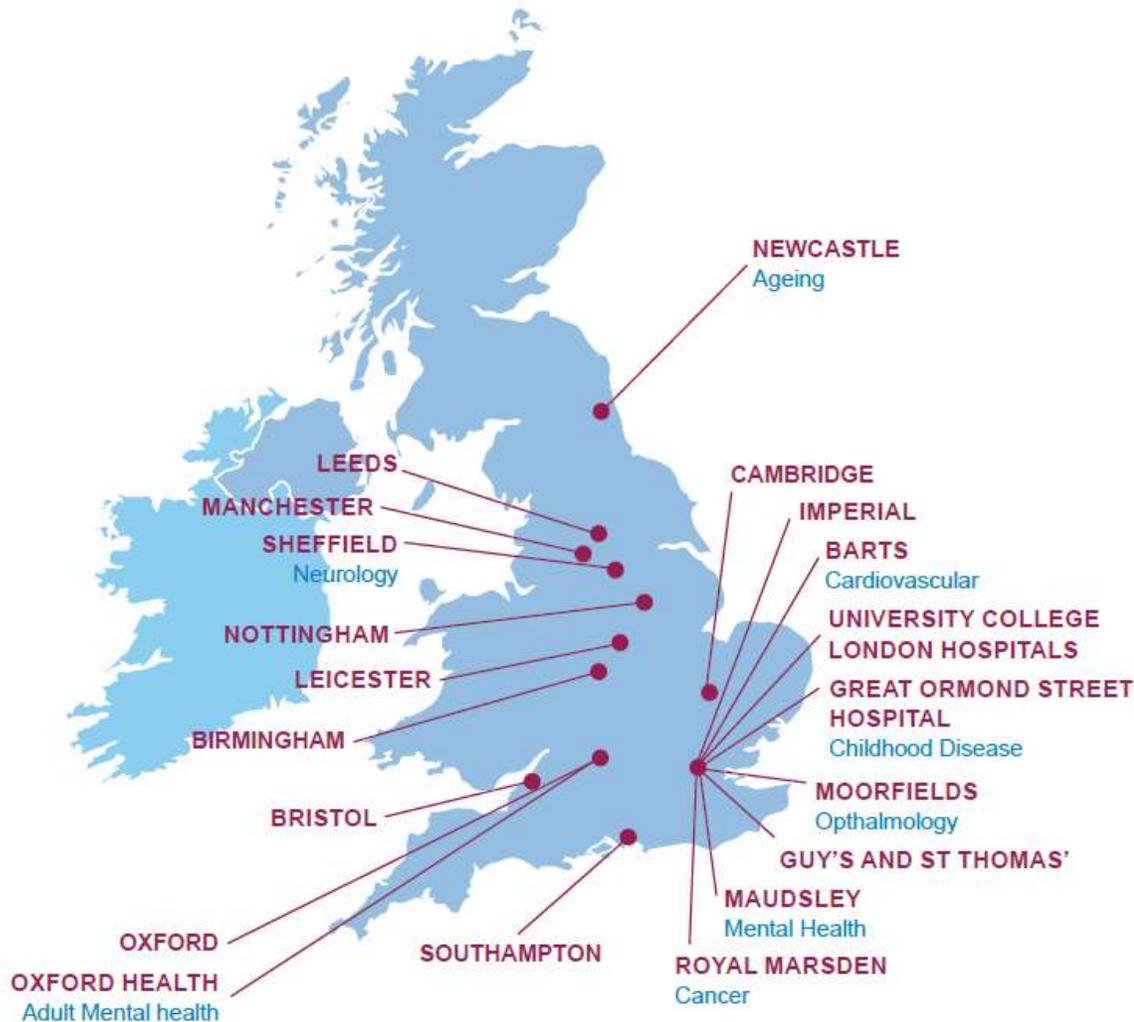


Biomedical Research Centre 2017 – 2022 £16.2M

A partnership between the Newcastle upon Tyne Hospitals NHS Foundation Trust and Faculty of Medical Sciences Newcastle University



NIHR Biomedical Research Centres (BRC)



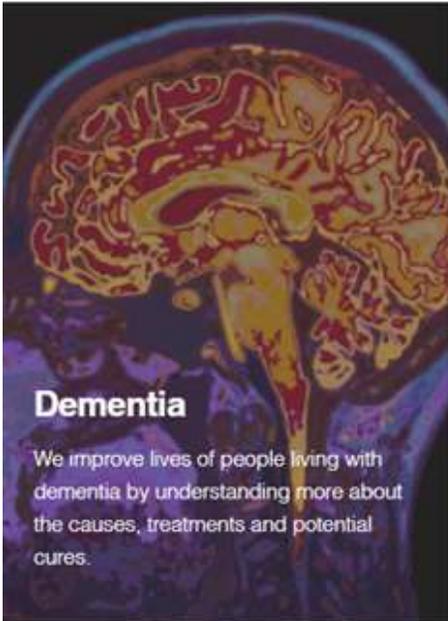
- Focus on taking scientific discoveries into the clinic to develop better diagnosis, treatment and prevention.
 - BRCs awarded by national competition on a 5 year cycle since 2007
 - All Trust/University Partnerships in England are eligible to apply
 - Currently 20 BRCs – the new competition for BRCs launched in April 2021
-

Newcastle BRC

Improving lives through world-class research in **ageing and long-term conditions**

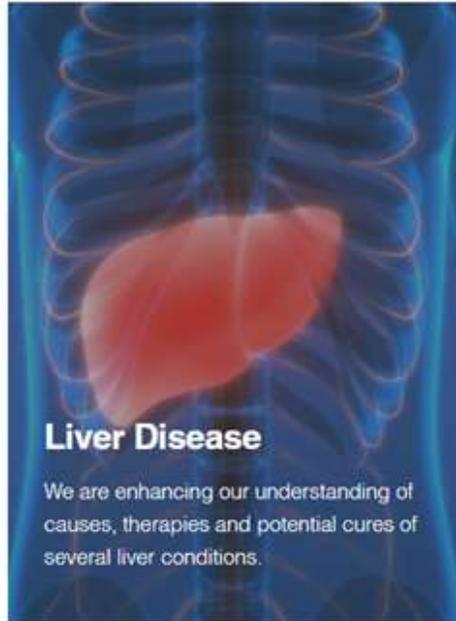
Ageing Syndromes

We build on and harness experimental medicine expertise in each theme to advance the diagnosis, treatment and prevention of ageing syndromes such as sarcopenia, frailty and multimorbidity.



Dementia

We improve lives of people living with dementia by understanding more about the causes, treatments and potential cures.



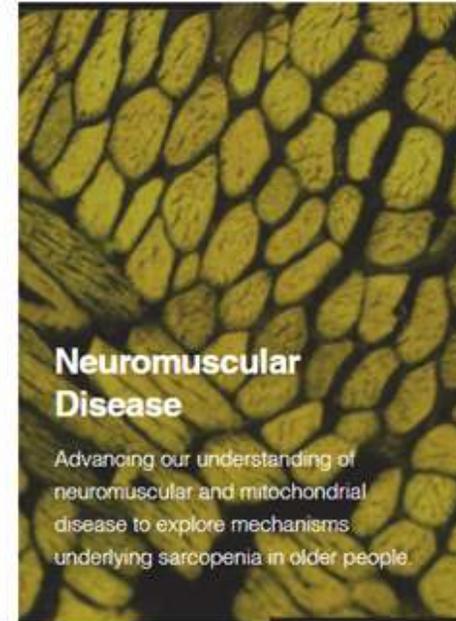
Liver Disease

We are enhancing our understanding of causes, therapies and potential cures of several liver conditions.



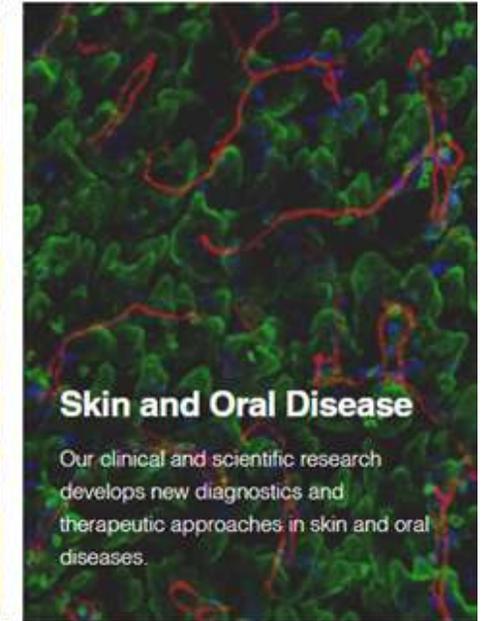
Musculoskeletal Disease

We are committed to improving lives for patients with musculoskeletal disease through translational research.



Neuromuscular Disease

Advancing our understanding of neuromuscular and mitochondrial disease to explore mechanisms underlying sarcopenia in older people.



Skin and Oral Disease

Our clinical and scientific research develops new diagnostics and therapeutic approaches in skin and oral diseases.

NIHR Newcastle Training

Bringing together and supporting the career development of NIHR Trainees to develop research leaders of the future in long-term conditions and ageing syndromes.

training

BTRU - Blood and Transplant Research Unit

- Strategic partnership between Cambridge and Newcastle Universities.
- £4.91M to underpin world-class **transplant** research from 2015-2022.
- Develops/evaluates novel approaches and technologies to increase the availability of suitable donor organs and improve graft survival.
- To date has led to a further £18M in funding for related research.
- 2019 Review - 'the research is at the forefront internationally'
 - research quality/impact 9/10 and relevance 4.75/5.

BTRU – Training and Public Involvement:



Liny Wang



Tom Adams



Poppy Aldam



Jenna DiRito



Nikola Dolezalova



John Ferdinand



Morvern Morrison



Rodrigo Figueiredo



Nikitas Georgakopoulos



Chaises Griffiths



Anja Gruszczyk



Akimichi Inaba



Tom Pither



Alex Riding



Avinash Sewpaul



Emily Thompson



Patrick Trotter



Georgina Wilkins

Training high quality clinicians/scientists to lead the field for decades to come. Many have had their work recognised through publications and award of prestigious prizes.

Emphasis on engaging with patients and the public. Achieved by regularly organising/attending events and by establishing a panel who regularly meet to feed back and participate in the design of our research.





Clinical Research Network

CRN



Clinical Research Networks (£300M per annum)



1. North East and North Cumbria
2. North West Coast
3. Yorkshire and Humber
4. Greater Manchester
5. East Midlands
6. West Midlands
7. West of England
8. Thames Valley and South Midlands
9. Eastern
10. Kent, Surrey and Sussex
11. Wessex
12. South West Peninsula
13. North Thames
14. South London
15. North West London

- Main role – Supports delivery of NIHR research across health and social care

CRN in numbers...

- Funded to 2024
- Works with 11 Hospital Trusts and 8 Clinical Commissioning Groups
- Supports research in 30 clinical specialties
- Employs about 800 wte staff
- In a typical year, supports over 800 studies
- Since 2014, 330k people were recruited into research
- 5 COVID-19 vaccine trials have been run in the region
- Over 2200 people have taken part in these trials



Patient Recruitment Centre (PRC)

- Established by Newcastle Hospitals NHS Foundation Trust – based at CAV
- Dedicated centre to set up and deliver late phase commercial clinical trials in NHS
- Research participants often recruited to trials via specialist clinics in hospitals
- But patients with common chronic conditions often managed outside hospitals, either by their GP or through self-care.
- PRC tries to empower these patients to put themselves forward and be part of research community
 - boosts work on overlooked conditions e.g. headaches, asthma, IBS, depression, common skin conditions.

Clinical Research Facility

- A collaboration between Newcastle University and Newcastle Hospitals NHS Foundation Trust
- Delivers high quality medical research via three locations
 - The RVI Clinical Research Facility (CRF)
 - The Clinical Aging Research Unit (CARU)
 - The Dental Clinical Research Facility
- Each Unit has a dedicated team of staff to assist in the set up and delivery of research with access to clinical staff and facilities

Clinical Aging Research Unit (CARU)

- Based at the Campus for Ageing and Vitality
- Focus on ageing and age-associated degenerative conditions:
 - Dementia, Parkinson's Disease and other Neurodegenerative Diseases
 - Liver Disease
 - Musculoskeletal and Neuromuscular Disease
 - Skin and Oral Disease
- Research facilities include:
 - Human Movement Laboratory – investigation of gait, balance and mobility
 - Visual Perception Laboratory – a state-of-the-art visual perception laboratory
 - Centre for In-Vivo Imaging - for biomedical research & biomarker development

Clinical Trials Unit

CTU

Email: nctu-enquiries@newcastle.ac.uk

Phone: (0191) 208 2522

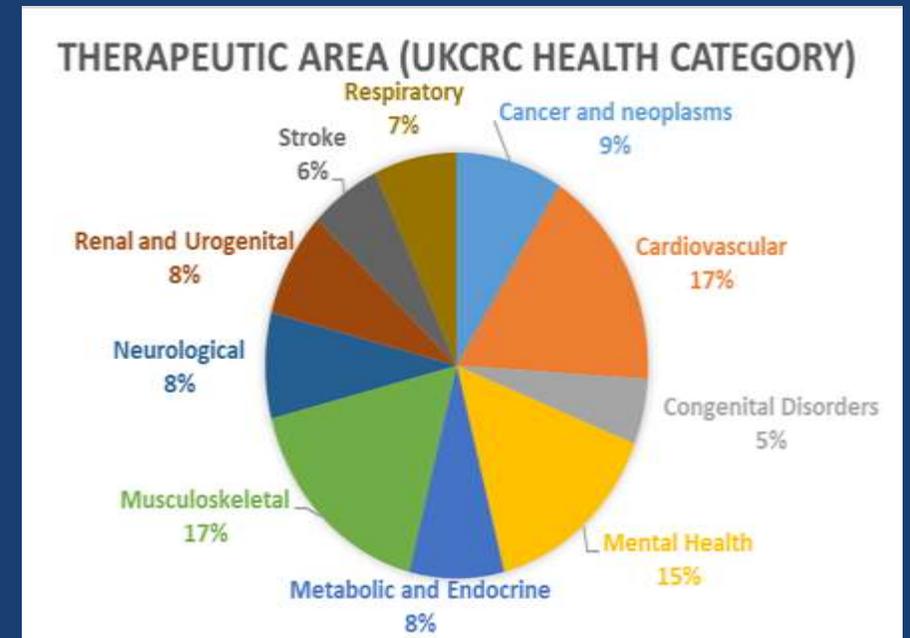
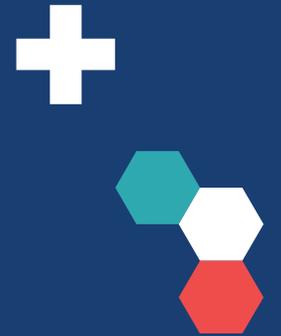


UKCRC Registered CTU

Focus on pull-through from experimental medicine to clinical practice

Expertise in designing, developing and delivering trials across a range of therapeutic areas, settings, and designs

Expertise in novel and efficient designs



Medical Technology and In Vitro Diagnostics Co-operative



MIC

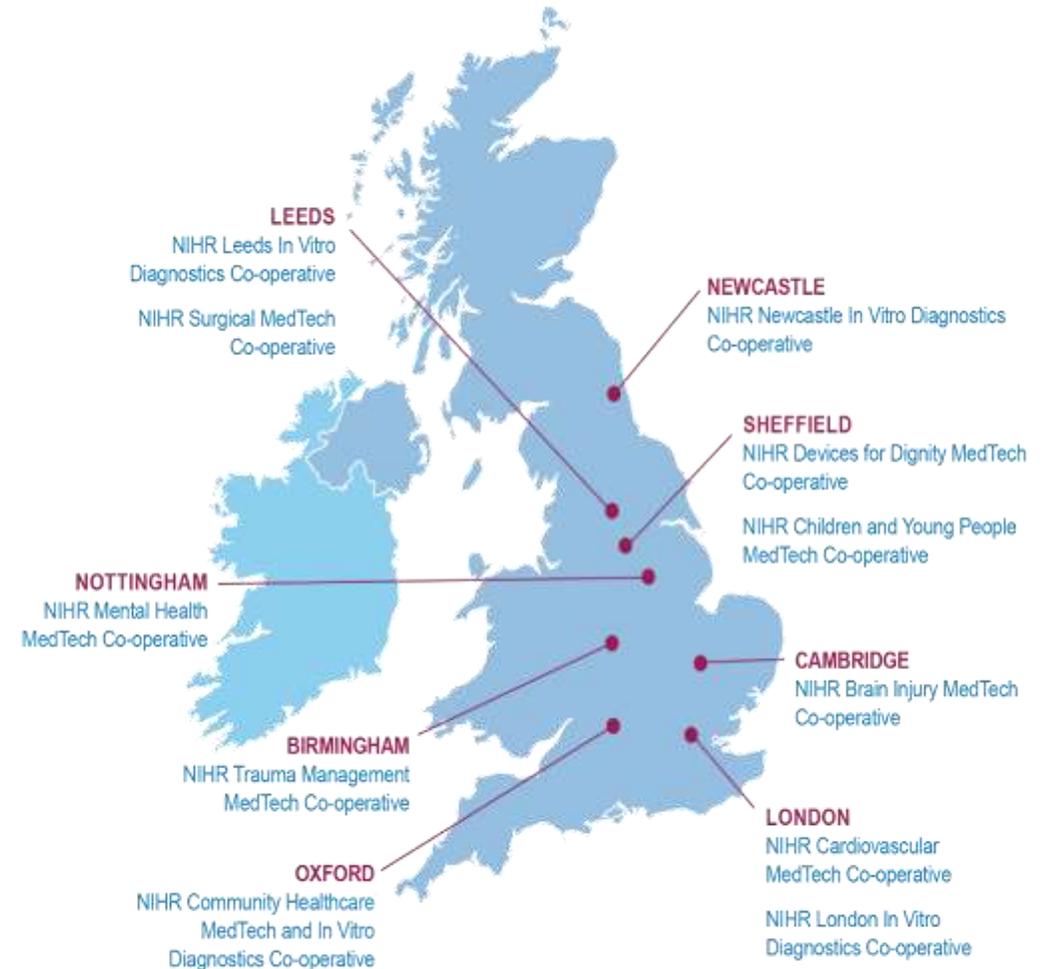
@NIHR_NCL_MIC

<http://newcastle.mic.nihr.ac.uk/expertise/>



MIC

- Network of 8 MICs in England
- Funded for 5 years (to 2022).
- Partnership between Newcastle University and Newcastle Hospitals NHS Foundation Trust.
- Aims to ensure better diagnostics are delivered more quickly for the benefit of patients and their health.



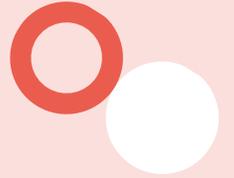
MIC focus

Design and analysis of:

- Care pathways (patient journey through the healthcare system);
- Health economics;
- Studies that demonstrate the validity and utility of the new tests.
- Themes - Infectious disease, Ageing and LTC, Personalised medicine

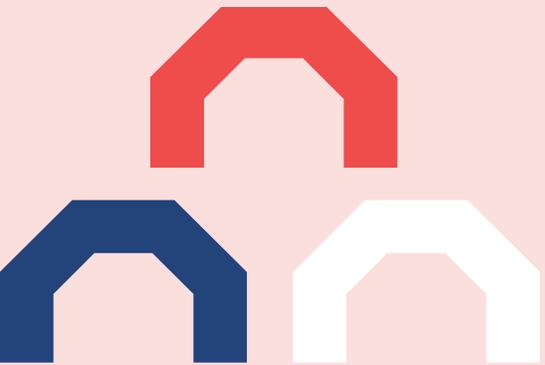


Innovation Observatory - NIHRIO



captures current trends in health innovation, through horizon scanning a wide range of intelligence/evidence sources and guides national agencies on areas of future promise

Funded to March 2024



NIHRIO focus

- **Medicines** - *timely data and intelligence on what is in the pipeline for human use*
- **Devices & Diagnostics** – *new MedTech to address unmet health needs*
- **Insights** – *patient, public and practitioner insights to inform innovation*
- **Industry** – *engaging the SME community to enable innovation into the NHS*
- **Digital & IT** – *cloud-based IT systems & AI tools to ensure fit for purpose*
- **Information** – *robust evidence, data identification and retrieval methods*

Research Design Service - RDS

Email: rds.nenc@nihr.ac.uk

Website: <https://rds-nenc.nihr.ac.uk/>

RDS NENC Twitter: [@NIHR_RDSNENC](https://twitter.com/NIHR_RDSNENC)

www.rds.nihr.ac.uk ... 'Contact us'

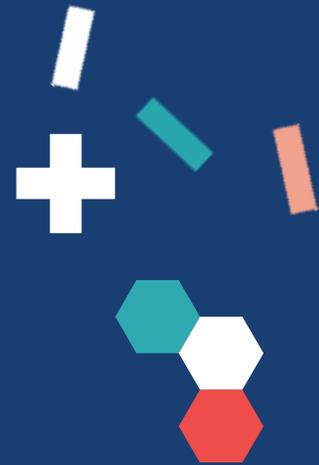


RDS Advice and Guidance

“all aspects of research design and conduct”

- Formulating research questions
- Research design
- Applied health and social care research
- Experienced and inexperienced researchers
- Clinical and academic investigators
- Support to develop grant applications to NIHR/UKRI





School for Public Health Research

www.sphr.nihr.ac.uk



School for Public Health Research

- Established in April 2012 and renewed 2017 and 2021 (national competition)
- Budget of >£20 million over five years (now ~£25M)
- Partnership of 8 academic centres - excellence in applied public health research
- Aims to build the evidence base for effective public health practice



Research programmes & cross-cutting themes

- Three research programmes
 - Children, young people & families
 - Public mental health
 - Places & communities
- Three cross-cutting themes
 - Health inequalities
 - Efficient & equitable public health systems
 - Changing behaviour at population level



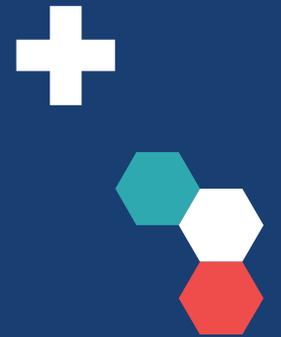


Fuse

- Centre of excellence in public health research
- A virtual centre, operating across 5 NE universities
- USP - Translational Research in Public Health
- Capacity building for Public Health Research
- UKCRC funded until 2018 (began 2008 £3.9M; renewed 2013 £3.6M)
- Sustained by partner Universities until at least March 2022



Public Health Interventions Responsive Studies Team (PHIRST)



PHIRST North



University
of Glasgow



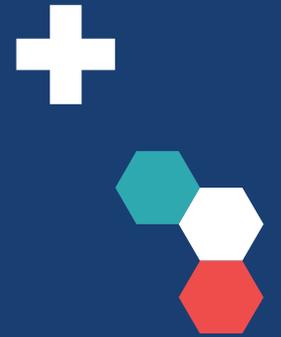
About NIHR PHIRST

- Funded from 1st August 2020 for 3 years (option to extend to 5 years)
- New experimental scheme (~ £1.8M per team)
- Supports co-production of responsive research with focus on local governments
- Research to inform the delivery and implementation of current or future public health interventions to improve the health of the public and reduce inequalities
- Projects allocated by NIHR PHP following calls to LA's, ~ 6 projects per team over 3 years

4 National PHIRST Teams

- North - Ashley Adamson, Fuse, Newcastle University
- Bristol & Cardiff PHIRST - Rona Campbell, University of Bristol
- Central - Katherine Brown, Wendy Willis, University of Hertfordshire
- London – Susie Sykes, London South Bank University

Policy Research Unit - PRU Behavioural Science



Contact us:

nhrpru.behsci@newcastle.ac.uk

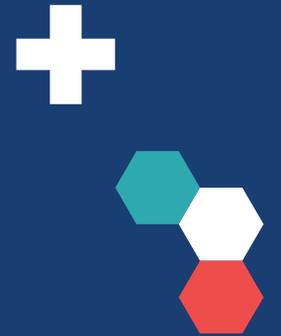
Find out more:

<https://research.ncl.ac.uk/behscipru/ourresearch/>



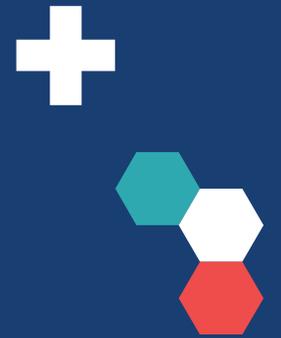
Background

- One of fifteen PRUs funded in 2019 by the DHSC and NIHR Policy Research Programme.
- Funded for 5 years, 2019-2023, ~ £5M each
- Work directly with policy decision makers to:
 - Use behavioural science to inform high quality care
 - Assess how people's behaviour affects demand for services
 - Research the behaviour of health care staff
 - Public involvement embedded in all areas



Policy Research Unit - PRU Older People and Frailty

- A collaboration of 3 universities:
Newcastle, Manchester and the
London School of Economics
- Funded 2019-2024
- <https://www.opfpru.nihr.ac.uk>



PRU OPF: Key themes & approaches

Key Themes

- Impact of population change
- Ageing better across the life-course
- Frailty, disability, multi-morbidity and personalised care
- Equality and diversity
- Ageing, frailty and end-of-life-care; Long term care
- Equitable spread of health technology to promote healthy ageing

Approaches

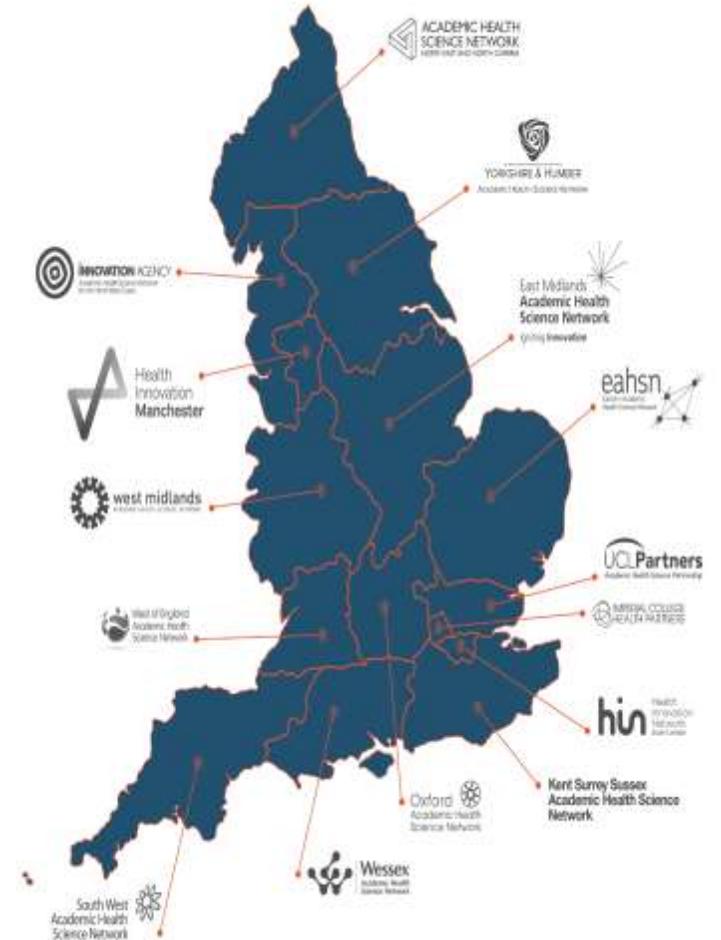
- Responsive – answering urgent questions from DHSC
- Big data – analysis of existing datasets
- Evidence synthesis – bringing together findings from existing research
- Listening to voices – experiences from service users, carers, the public

The **AHSN** Network

15 regional AHSNs

Established by NHS England in 2013 to spread innovation at pace and scale.

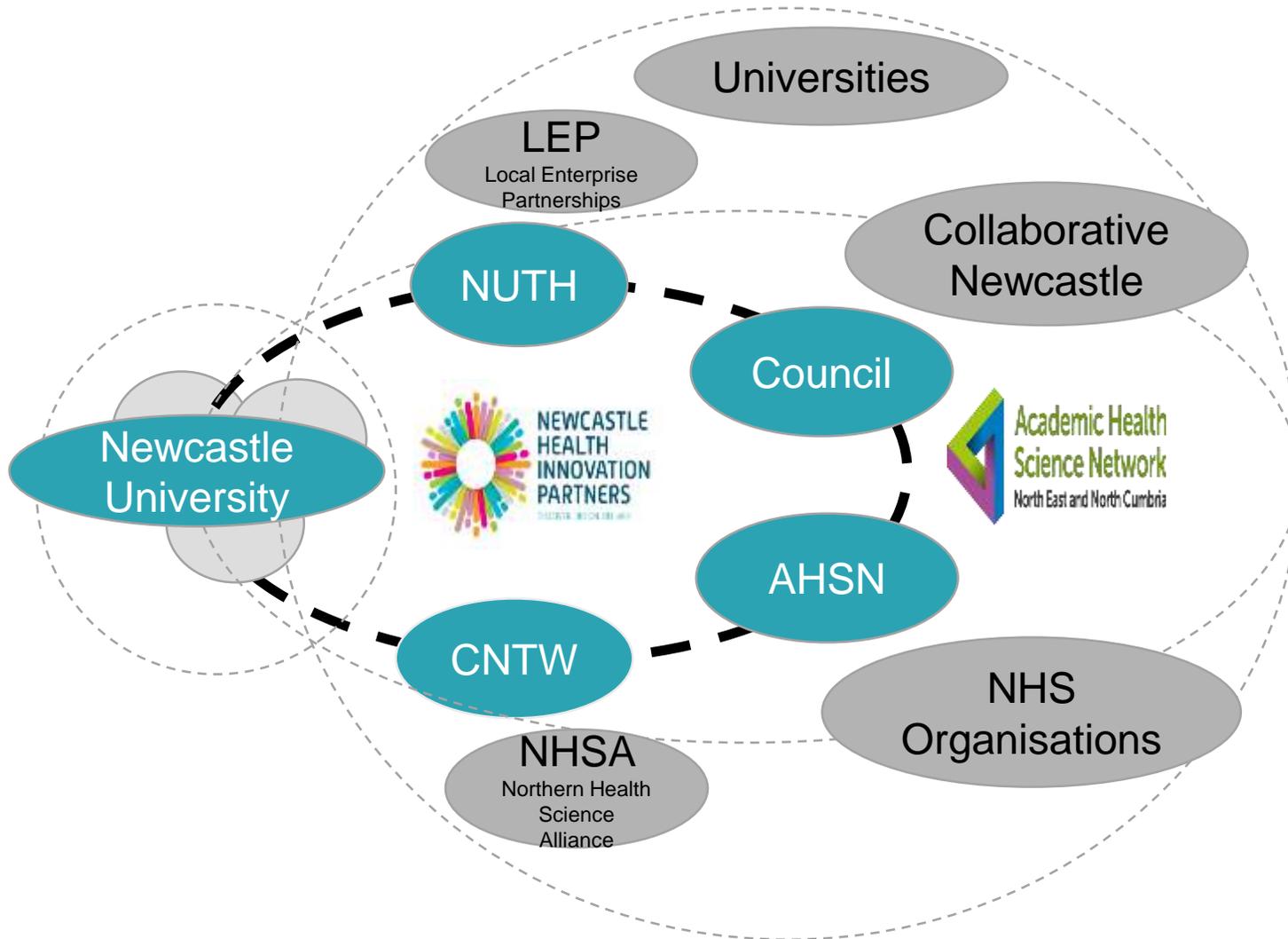
Each AHSN serves a distinct geography to improve population health, generate economic growth and transform patient safety.



AHSN NENC

- Help identify, develop, evaluate, adopt and spread innovative technologies and service improvements into clinical practice.
- Leads initiatives such as The Innovation Pathway and Patient Safety Collaborative and supports flagship programmes like the Great North Care Record and HealthCall.
- Facilitates collaborations including with third sector, patients, the public and the healthcare industry members to help introduce innovations into care system.
- Delivers national programmes and regional initiatives for its three major funding bodies: - NHS England, NHS Improvement and The Office for Life Sciences.

Academic Health Sciences Centre - AHSC



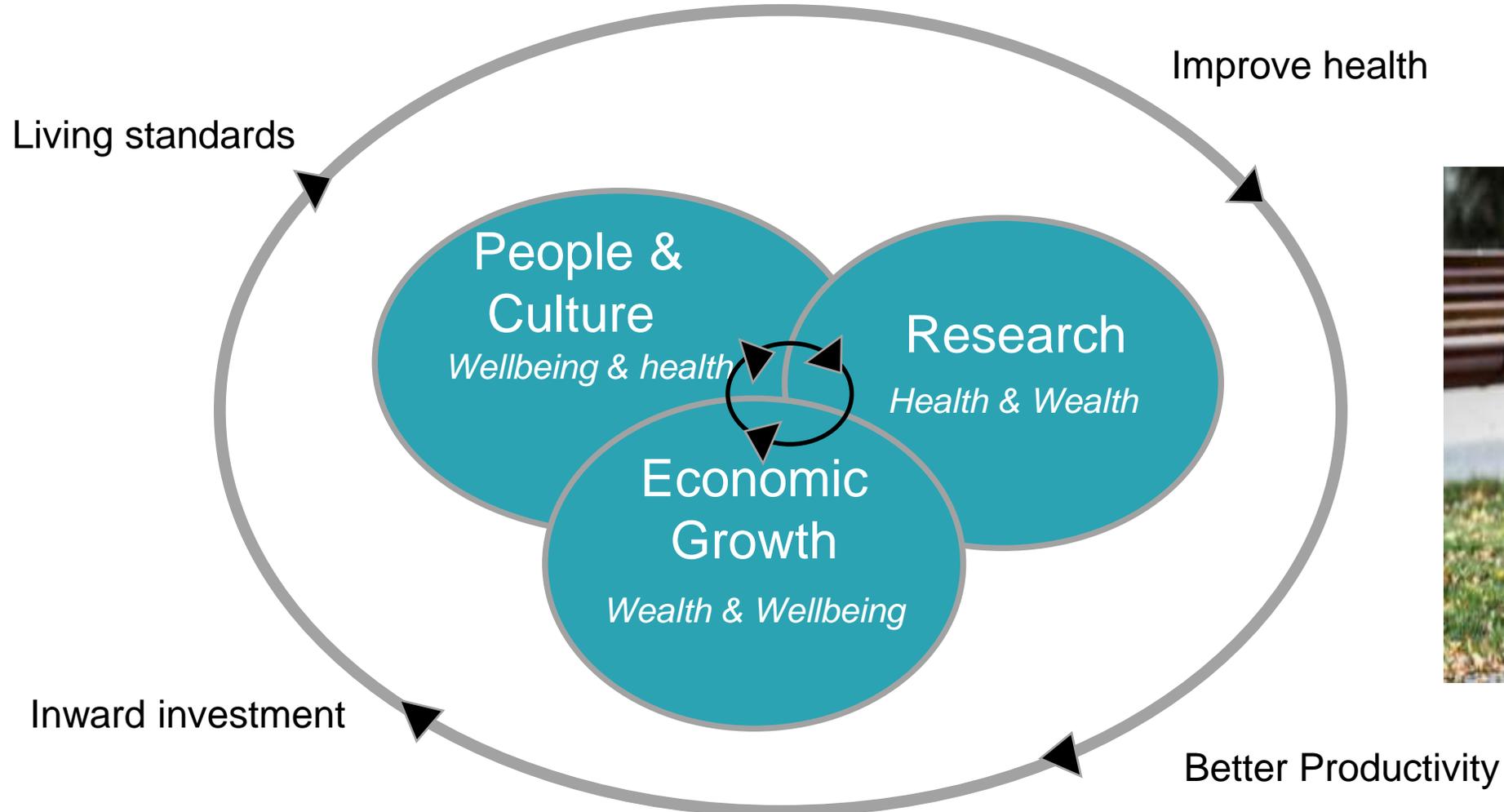
Accredited: NIHR & NHSE/I

8 AHSCs in England

Bristol
Cambridge
Imperial College
King's
Manchester
Newcastle
Oxford
UCL

**Newcastle Health
Innovations partnership**

Ultimately what infrastructure is for?



We need to be mindful of inequity

