



nesta

The Future of Health Research & The Nightingale: What next?

27 November 2019

[nesta.org.uk](https://www.nesta.org.uk)

 [@nesta_uk](https://twitter.com/nesta_uk)

Welcome

Christina Cornwell
Sally Zlotowitz

#NestaHealthResearch

OBJECTIVES

- Discuss and capture views on Nesta's Nightingale proposals
- Showcase examples & develop thinking about future research to address the wider determinants of health
- Identify research priorities and hopes from the frontline of research and practice
- Encourage interdisciplinary and inter-sector collaborations

Who's here?

How should it feel?

- Informative
- Interactive
- Inclusive

Please help us with this

Overview

12:30	Welcome
12:45	What's at stake?
13:00	Introduction to Nesta & The Nightingale
13:20	Discussion
13:55	Break
14:05	Bringing the proposals to life
15:00	Visioning the future
16:10	Next steps and getting involved
16:25	Thank you & reflections

What's at stake?

Complete exercise 1 on your own on your personal 'table mat'

Share your stories as a group & introduce yourselves

Introduction to Nesta & The Nightingale

Nesta is the
UK's
innovation
foundation

We bring
bold ideas
to life to
change the
world for
good



Health



Education



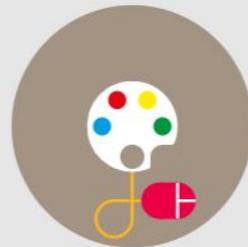
Government
Innovation



International
Growth



Innovation
Policy



Creative Economy
& Culture



Spreading
Innovation Methods



Futures

A focus on real-world solutions



A focus on evidence



Alliance for
Useful Evidence



THE
**BEHAVIOURAL
INSIGHTS
TEAM**

Creative Industries
Policy & Evidence Centre
Led by **nesta**

What
Works
Network **W
W**

A CENTRE FOR
**AGEING
BETTER**



What Works *for*
**Children's
Social Care**

A focus on new innovation methods



A focus on evidence-based innovations to improve health and well-being



“People Powered Health”

The Biomedical Bubble

James Wilsdon



The Biomedical Bubble

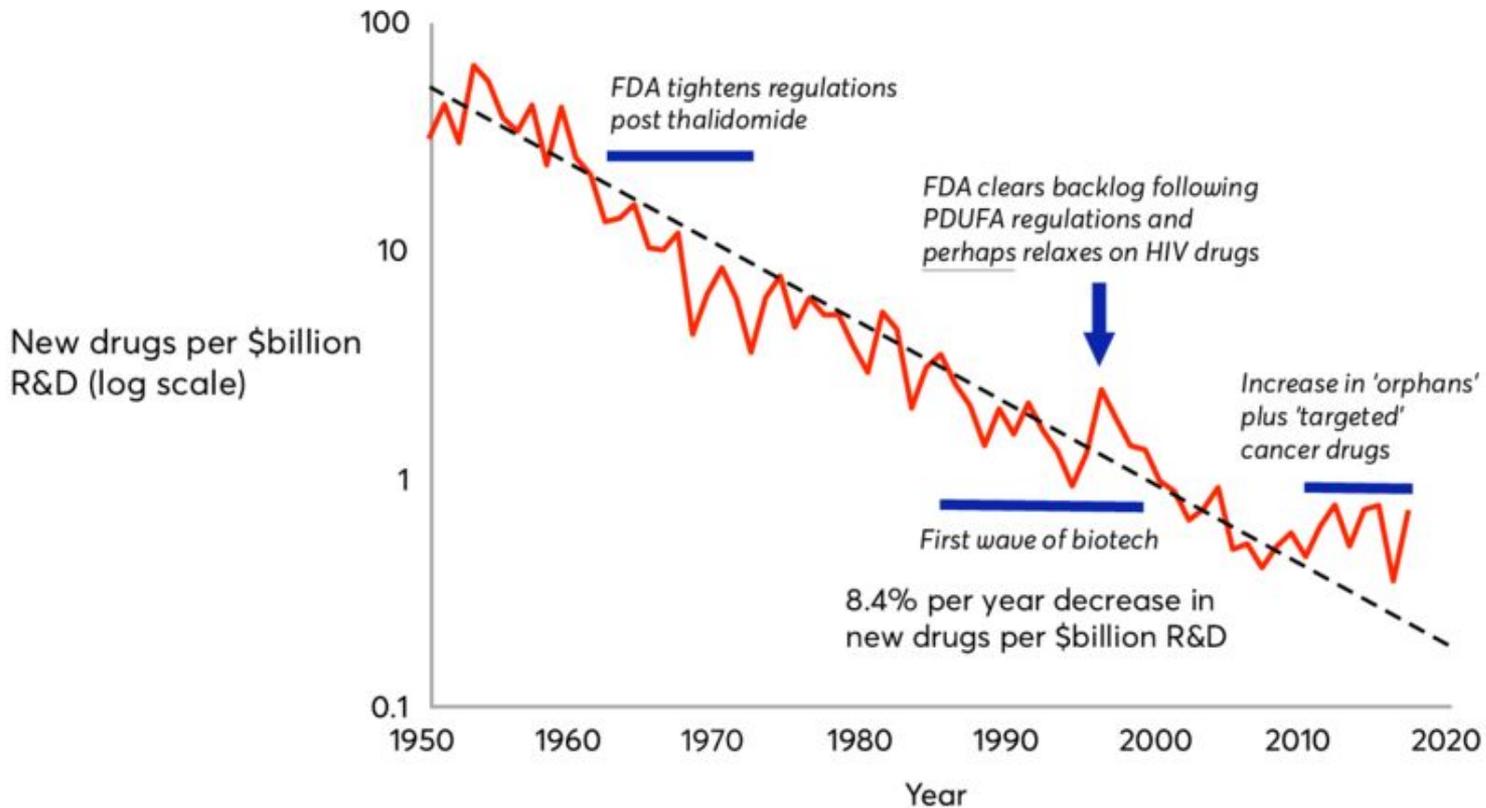
Why UK research and
innovation needs a greater
diversity of priorities, politics,
places and people

Richard Jones and James Wilsdon
July 2018

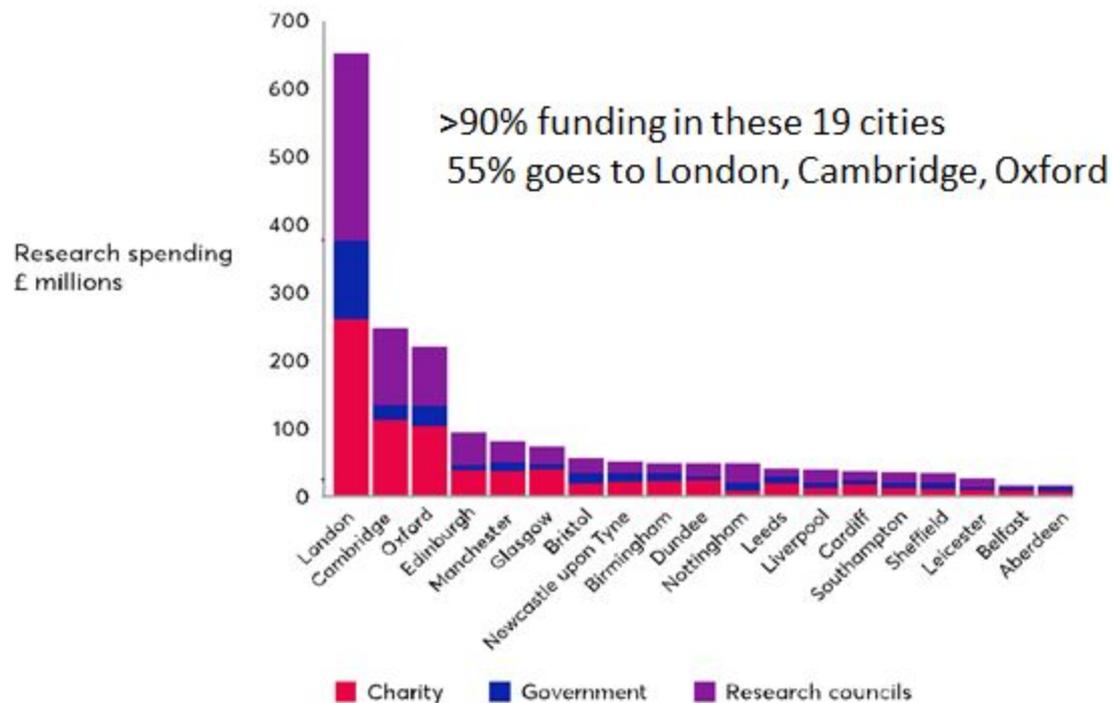


Questions of balance

- Between disciplines
 - “Pure” vs “Applied”
 - Undirected vs goal/mission-driven
 - Between different “goals” or “missions”
 - Across support for different economic sectors
 - Across the regions and nations of the UK
- What is the right balance between health research and research in support of other strategic goals?
 - What is the right priority to attach to the pharmaceutical and biotech industries, compared to other industrial sectors?
 - Within the envelope of health research, what is the right balance between biomedical life sciences and other approaches to improving health?



Regional concentration of health related research funding

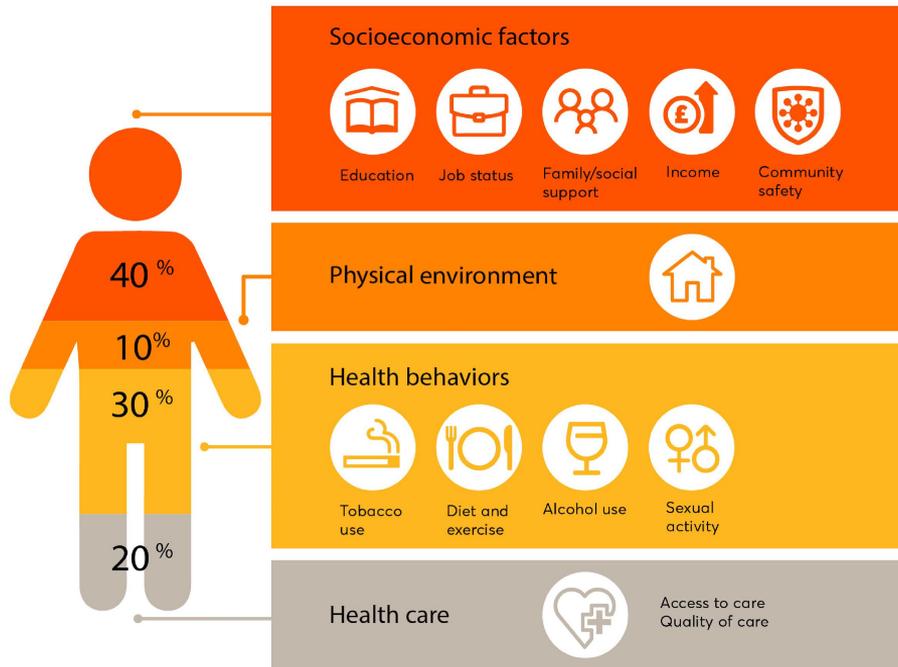


The Nightingale

The background of the image is a clear, vibrant blue sky filled with numerous white, puffy cumulus clouds of varying sizes. The clouds are scattered across the frame, with some larger, more prominent ones in the lower half and smaller, more delicate ones in the upper half. The overall atmosphere is bright and airy.

We
want to
see...

Much greater proportion of R&D spend on addressing the root causes of health and well being



Source: Social Determinants of Health – University Wisconsin Population Health Institute

We
want to
see...

A step-change in approach

From:	To:
Measurement	Experimentation
Interventions to address isolated risk factors	Interventions to address complex systems
Randomised Control Trials as default	Rigorous evaluation and learning techniques designed for complex social interventions
Research on/for communities	Research with communities
Research by public health specialists	R&D by transdisciplinary teams: <ul style="list-style-type: none">• public health, behavioural and social scientists• community developers and community members• design, data and digital• health, education and other practitioners
Undervalued (VCSE) expertise in participatory research and community development	

We
want to
see...

A highly-networked and
distributed organisation with the
**profile, leadership and
coordination** needed to
accelerate progress at scale

SHAPE

- Horizon scanning
 - Key challenges and goals
 - New innovation and research methods
 - Emerging solutions
- Best practice R&D
 - Transdisciplinary
 - Participatory
 - Experimental approaches & evaluation methods for complex interventions
- Partnerships with communities
 - Coproduction of priorities & approaches
 - Scale up best practices from participatory research & community development

SUPPORT

- Building networks and collaborations
- R&D funder

Share ideas, knowledge & expertise
Support capacity building

Collaborating centres and other R&D organisations
Potential investment in sustainable test-beds

SHARE

- Evidence hub
 - Collect, synthesise & disseminate evidence
 - Develop tools & actionable insights for decision makers - based on behavioural science
- Promote and implement solutions
 - Promote evidence-based solutions
 - Champion health in all policies approaches & ambitious long-term goals

INVEST BIG!

Discussion

In pairs discuss the questions on the whole group table mat

Join as a group to discuss the questions & write some themes onto the table mat

Feedback key points to wider group

Break

Bringing the proposals to life

Professor Kate Pickett - ActEarly

Professor Rob Copeland - Advanced
Well-being Research Centre

Southampton Collective

ActEarly: a City Collaboratory approach to early promotion of good health and wellbeing



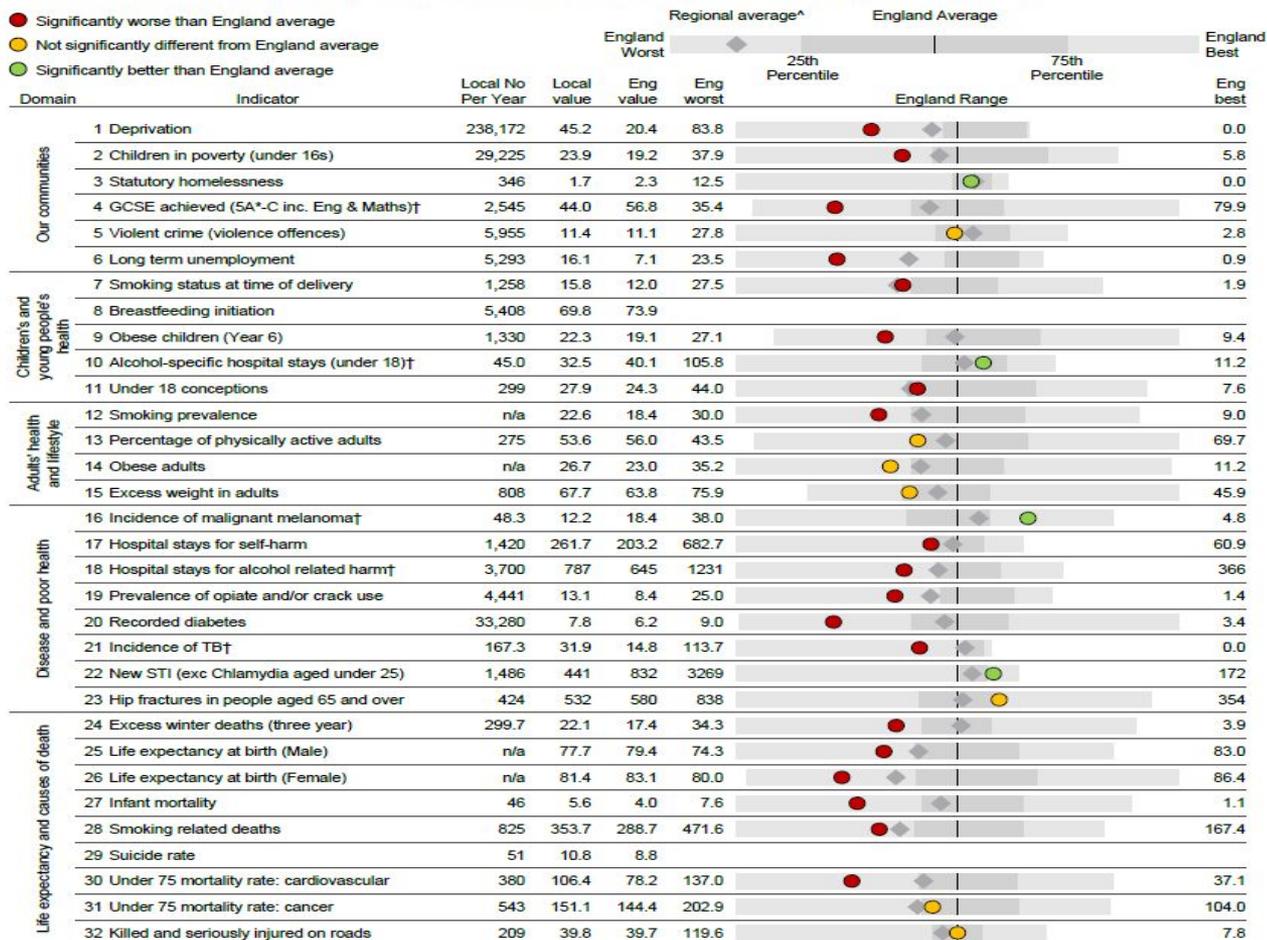
City of Research ■ City of Research ■ City of Research



Health summary for Bradford

The chart below shows how the health of people in this area compares with the rest of England. This area's result for each indicator is shown as a circle. The average rate for England is shown by the black line, which is always at the centre of the chart. The range of results for all local areas in England is shown as a grey bar. A red circle means that this area is significantly worse than England for that indicator; however, a green circle may still indicate an important public health problem.

- Significantly worse than England average
- Not significantly different from England average
- Significantly better than England average

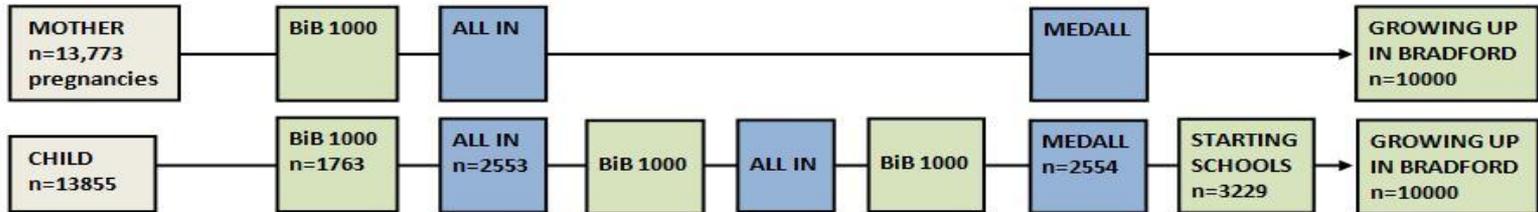




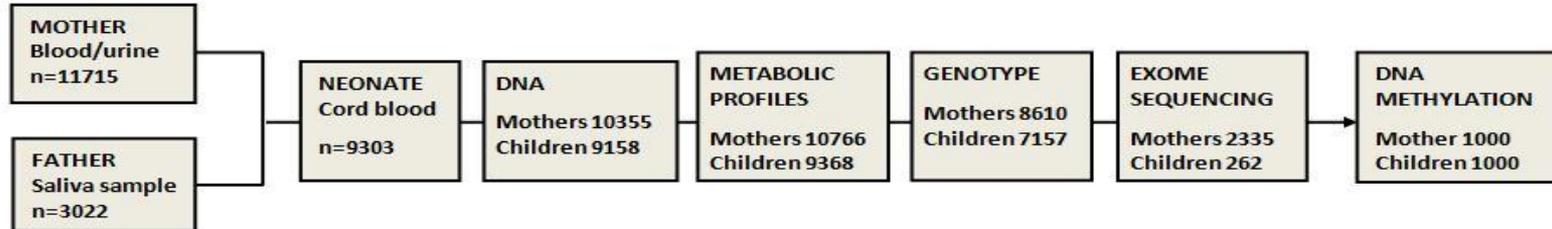
- Describe health and ill-health and their causes
- Design and evaluate interventions to promote health
- Provide a model for integrating research into practice



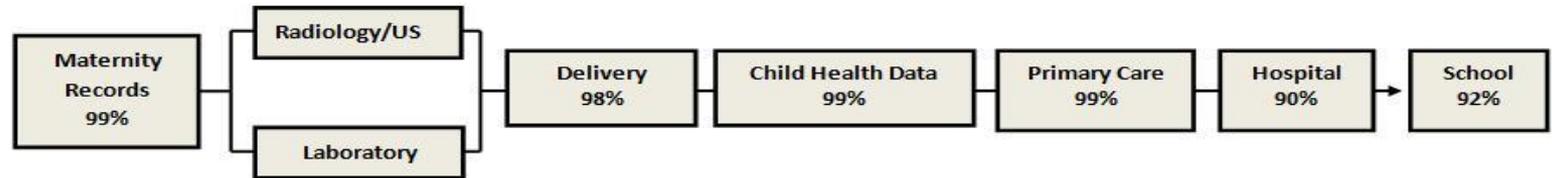
RESEARCH DATA



BIOBANK



ROUTINE DATA











2009



2010



2011



2012



2013



2014



2015



2016



2017



2018



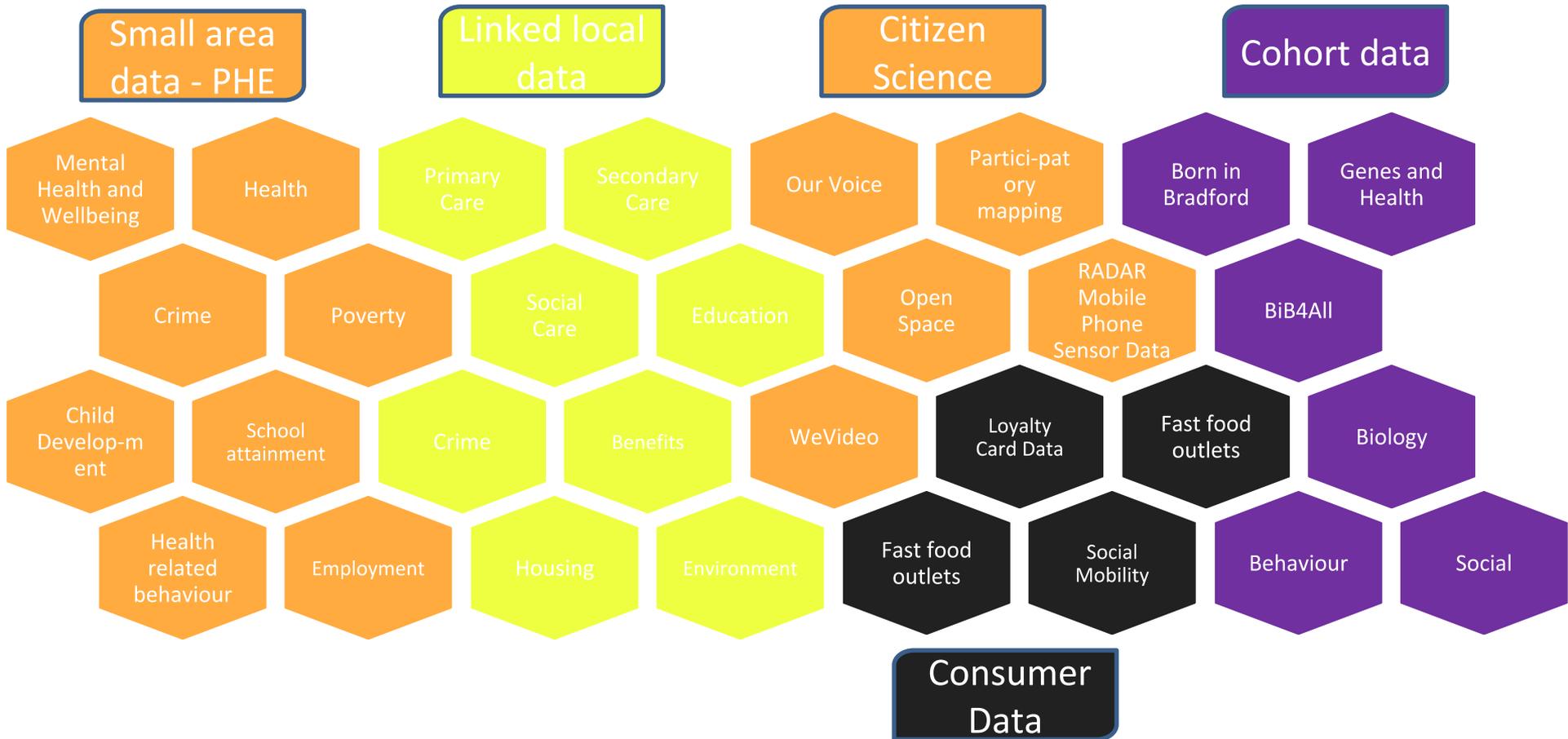
2019

Born in Bradford

Novel cohorts



Connected Bradford data tapestry



GOVERNANCE - CURATION - DATA SCIENCE - MONITORING - EVALUATION -



Born in Bradford Research Programme: McEachan (Director) | Wright (Chief Investigator)

Wolfson Centre for Applied Health Research

Centre for Applied Education Research (Mon-Williams)

NIHR Applied Research Collaboration (ARC): Bridges

APPLIED HEALTH RESEARCH

Better Start Bradford Innovation Hub: **Dickerson**

City CCG Inequalities Research Unit: **Dickerson**

JU:MP Sport England Research: Barber
Delivery: Burkhardt

RESEARCH ANALYTICS AND CITY OF RESEARCH DATA INFRASTRUCTURE: MASON

BiB Family Cohort 12,500 families Waiblinger	BiB4All Research data linkage for all pregnant mums: Bridges	BiBBS 5000 Better Start families : Dickerson/Bridges
Connected Bradford: 700,000 linked records: Sohal		EU research: Helix , Athlete Yang

Early Life and Prevention (Yorkshire and Humber ARC)
McEachan | Pickett (Research manager: – Cartwright)

Healthy Weight: Yang Barber	Healthy Schools: Mon-Williams	System Change Sohal Dickerson	Minority Ethnic Health Dickerson	Oral Day Marsh-ma	The Best Start Bywater	Health inequality Prady
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Linked Bradford Council Projects

Creative People and Places: Barber	Bradford Clean Air Zone: McEachan	Obesity Trail-blazer: Dogra
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ACT EARLY: WEST

Healthy Places

Healthy Schools

Healthy Live-likelihoods

Co-production

Citizen Science

Evaluation

ActEarly: a City Collaboratory approach to early promotion of good health and wellbeing



Whole system approach

Healthy Places

- Healthy Streets
- Clean Air Strategy
- School Super zones
- Park Redesign
- Traffic calming
- Gamification
- Housing advice
- Incredible edibles
- Fast-food outlets



Healthy Learning

- Active travel
- Free school meals
- Healthy vending machines
- Sing Up
- Glasses for Classes
- Immersive technology
- ABRACADABRA
- #50thingstodobeforeyou're5
- Enhanced learning locations



Healthy Livelihoods



Early education & care • Welfare advice • Universal basic income • Participatory budgeting

Pollution
Traffic
Green space

Inactive travel
Sedentary days

Fast food outlets
Unhealthy school meals

SCHOOL SUPER ZONE



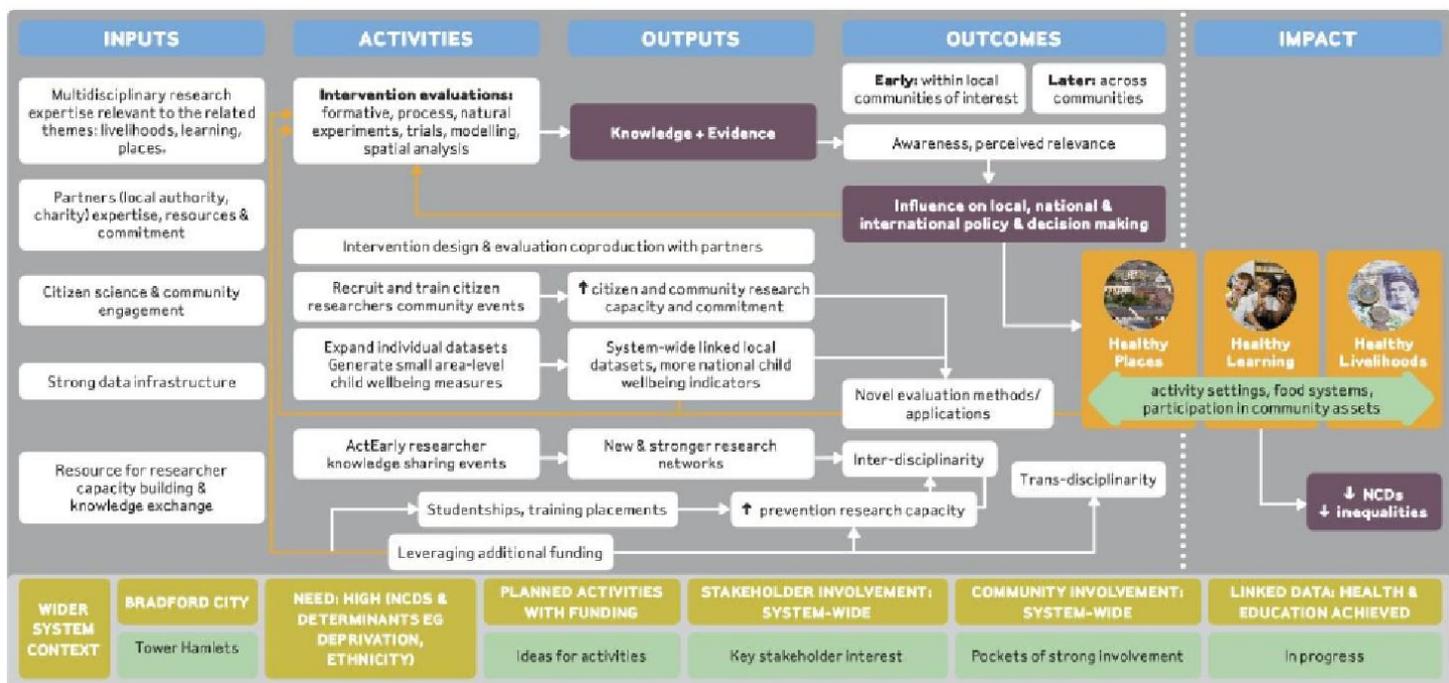
Physical activity

Attainment

Mental Health

Obesity





World domination



ESTABLISHED 1825

BRADFORD 2017

BRADFORD

CITY OF RESEARCH

EVERYTHING IS CONNECTED



Born in Bradford

Radio 4 has been given exclusive access to research involving the families of children born in Bradford 2007-2009. Winifred Robinson charts their progress over the years.



Subscribe



Share

Diabetes and Tooth Decay

Winifred Robinson's latest report on the families of children born in Bradford 2007-2009.



Listened

Child development and attainment

Winifred Robinson tracks the lives of the 14,000 families taking part in Born in Bradford.



28 mins | 14 Dec 2018

Academic achievement and child health

Winifred Robinson reports on the Born in Bradford research involving thousands of babies.



28 mins | 30 Jun 2017

Support for new mothers

Winifred Robinson reports on the lives of thousands of families being tracked in Bradford.



28 mins | 23 May 2016

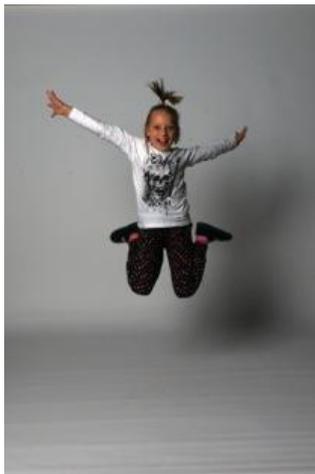
Air pollution and child health

Winifred Robinson follows health research into the lives of thousands of Bradford babies.



28 mins | 16 May 2014



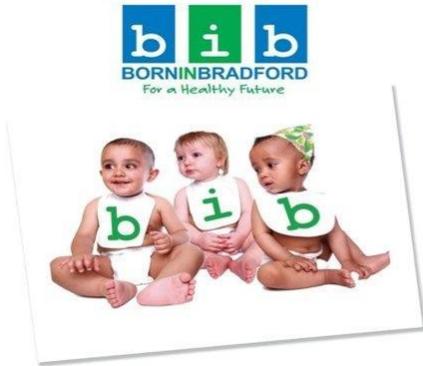




The Determinants of Health (1992) Dahlgren and Whitehead



Born in Bradford: can a research study change a city?



Email us: borninbradford@bthft.nhs.uk



Documents & Data

Home / Research / Documents & Data

[Data Dictionary](#)

[Participant Information](#)

[Questionnaires](#)

NMR METABOLOMICS PREGNANCY SAMPLES

NMR metabolomics pregnancy samples

Database ID for source: [metnms](#)

This source is measured at the **pregnancy** level. It contains data from 11479 pregnancies with one observation per pregnancy. There are 2 variables with a total of 11479 observations.

Description

Metabolomics assays by nuclear magnetic resonance (NMR) spectroscopy on all available maternal pregnancy serum samples. Where serum samples were not available, EDTA plasma was provided.

Variable	Variable Label	Details
metabolmsbarcode	NMR metabolomics sample barcode	Administrative: Text value NMR metabolomics - originating lab sample barcode 11479 unique values 11479 non-missing values
metabolmsbarcode	NMR metabolomics sample lab ID	Administrative: Text value NMR metabolomics - assay lab sample ID 11479 unique values 11479 non-missing values

BIB Data Summary (slide deck)

BIB data summary slide deck. Basic descriptions and counts for all data sources. Best for on-screen viewing, particularly small screens.

BIB Data Summary (printable)

Printable BIB data summary. Similar to slide deck; basic descriptions and counts for all data sources, but formatted for printing.

Baseline questionnaire

Baseline questionnaire data dictionary

Questionnaire completed by mothers at baseline recruitment. Also a shorter version completed by fathers at baseline recruitment.

Child Growth

Child growth (all sources) data dictionary

Child growth data from all sources, including primary research and routine data linkage.

Child growth (BIB 1000) data dictionary

Child growth data from all BIB 1000 follow-ups.

School nurse measured blood pressure and growth

Observations of blood pressure, height and weight taken in school by school nurses.

Child growth (HCR) data dictionary

Child growth data from various healthcare record sources.

Education Record

Education record data dictionary

Standardised assessments and contextual data from the school education record.

Starting School

Starting School data dictionary

Data from cognitive and behavioural assessments in the child's reception year at school. Measures included CMAI, SQI, SPQI and Letter ID. Starting School included many children who were not in Born in Bradford. This data dictionary counts pregnancy children who were in the Born in Bradford cohort and the total in Starting School.

ALL IN

ALL IN 12 month data dictionary

ALL IN 12 month questionnaire

ALL IN 24 month data dictionary

ALL IN 24 month questionnaire

Cohort administrative information

Information about the cohort and the participants from various research and administrative sources.

Subcohort indicators: who has what data

Indicators of which data types are present for each person and each pregnancy.

Biobank material indicators

Indicators of which biobank sample types are held for each person and each pregnancy.

Bioinformatics linkage information data dictionary

Indicators for linking cohort data records to data held in bioinformatics data files.

Pregnancy & neonatal

Pregnancy Eclipse data dictionary

Pregnancy data obtained from the Eclipse electronic maternity record.

Neonatal Eclipse data dictionary

Neonatal data obtained from the Eclipse electronic maternity record.

Maternity records data dictionary

Data from a manual abstraction of blood pressures, maternity hospital admissions and other information from the written maternity notes.

Pregnancy ultrasound data dictionary

Observations from ultrasound scans taken during pregnancy.

Fetal renal ultrasound data dictionary

Ultrasound scan observations from the Fetal Renal Ultrasound study.

Pregnancy blood biomarkers data dictionary

Blood biomarkers obtained from blood sample taken at recruitment during pregnancy.

Baby bloods biomarkers

Blood biomarkers obtained from blood sample taken from umbilical cord.

Healthcare record linkage

Yorkshire and Humber Congenital Anomalies Register

BIB data linked from the Yorkshire and Humber Congenital Anomalies Register.

BIB 1000

BIB 1000 6 month data dictionary

BIB 1000 6 month questionnaire

BIB 1000 12 month data dictionary

BIB 1000 12 month questionnaire

BIB 1000 18 month data dictionary

BIB 1000 18 month questionnaire

BIB 1000 24 month data dictionary

BIB 1000 24 month questionnaire

How Amsterdam is reducing child obesity

By **Dominic Hurst**
BBC News

🕒 02 April 2018 | **Health**



Why kids in Amsterdam are getting slimmer

Childhood obesity rates are rising in many parts of the world - but in Amsterdam they are

The Upside **Obesity**

Leeds becomes first UK city to lower its childhood obesity rate

City's Henry programme gives children choices while helping parents maintain boundaries



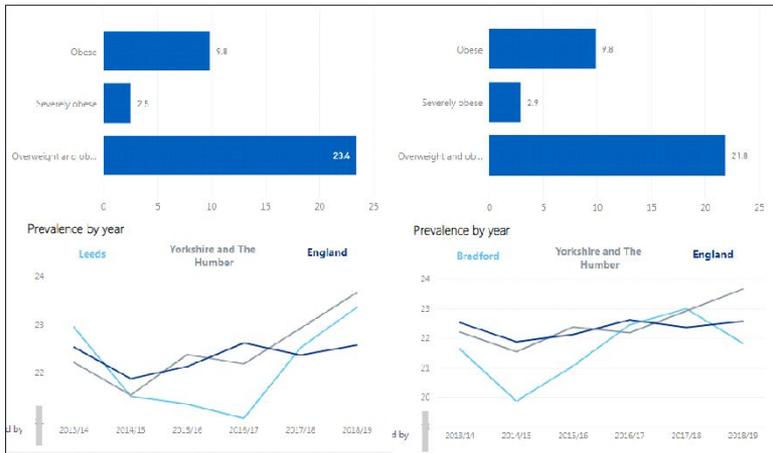
▲ The Henry programme uses 'authoritative parenting', giving children choices while keeping parents in charge. Photograph: Alamy Stock Photo

Sarah Boseley Health editor



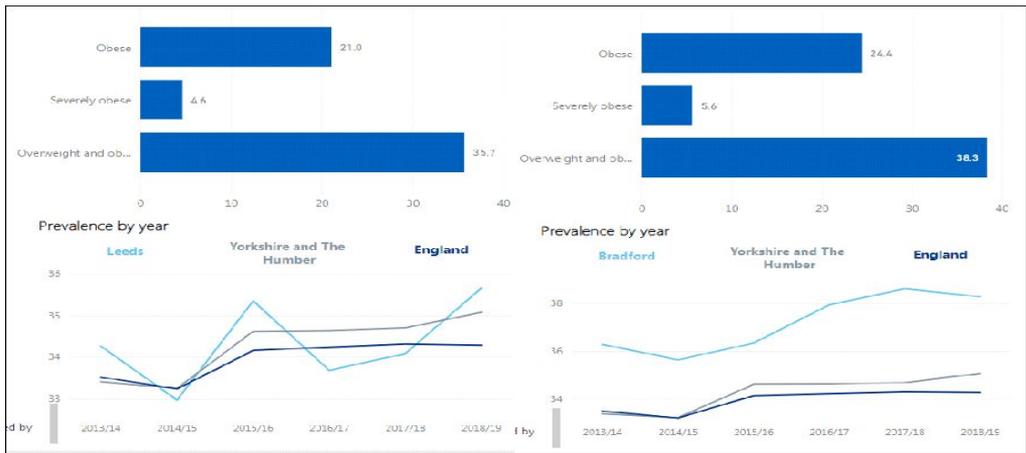
Healthy lifestyle, children and young people

In Tower Hamlets, nearly 1 in 7 children in reception (4- to 5-year-olds) and over 1 in 4 of children in year 6 (10- to 11-year-olds) are obese. Tower Hamlets has the fifth highest proportion of obese 10- to 11-year-olds in London and the sixth highest in the country. However, levels of obesity in 4- to 5-year-olds have been decreasing over the last 5 years and, following a steep rise, the levels of obesity in 10- to 11-year-olds has plateaued over the last 3 years.



Leeds: Reception Year

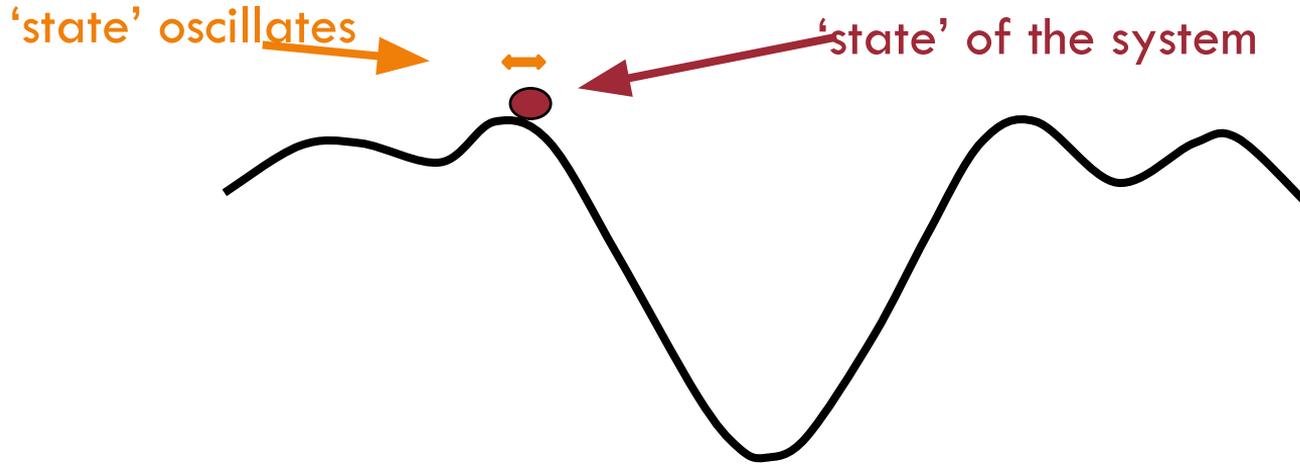
Bradford: Reception Year



Leeds: Year 6

Bradford: Year 6

Tipping points



Complex systems can exhibit rapid change when a threshold point is reached. A system can be pushed towards (and past) a tipping point – especially with feedback





b i b
BORN IN BRADFORD



b i b b s
BORN IN BRADFORD'S BETTER START

**Sheffield
Hallam
University**

Advanced
Wellbeing
Research Centre



**Transforming lives
through innovations
that help people move**



Department
of Health &
Social Care



European Union
European Regional
Development Fund

The Context

Described as the 'best buy' in public health, physical activity is good for physical and mental health, for a connected and vibrant society, for the environment and the economy and yet physical activity has been engineered out of daily life.

This has resulted in the majority of society and particularly the least affluent experiencing negative physical, mental and emotional health with huge medical, psycho-social and economic consequences.

For a city the size of Sheffield, a 2% reduction in the risk factors associated with cardiovascular disease through a more active population could lead to 600 fewer deaths, 2,000 less hospital bed nights and achieve £11.2million of savings in the NHS.

New approaches to the promotion of health and wellbeing are required and they **MUST** tackle the social, behavioural and environmental determinants of health.



An architectural rendering of a modern, multi-story building with a prominent rooftop garden and an outdoor courtyard. The building features a mix of materials, including wood slats and brick. The rooftop garden is lush with greenery and has several people walking on it. The courtyard below is paved and has a few people sitting on a bench. The overall scene is bright and sunny, suggesting a pleasant, active environment.

The vision

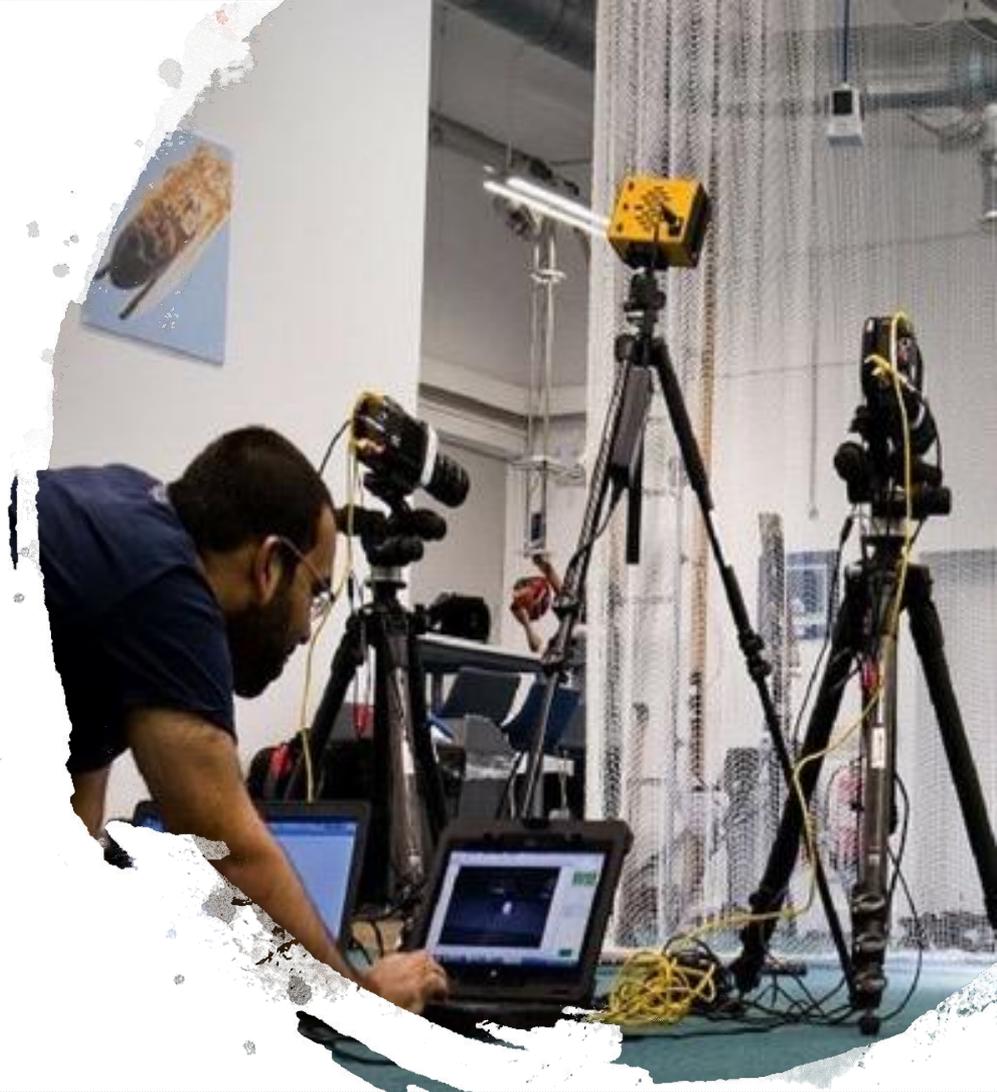
Our vision is to *transform lives through innovations that help people move.*

Our mission is to prevent and treat chronic disease through world-class research and innovation into physical activity.

What we do

The AWRC brings together world-class academic expertise within a state of the art facility to undertake world leading research in physical activity.

The AWRC develops collaborative community, academic and industry partnerships to co-design products, interventions and services to help people move, improving the social, behavioural and environmental determinants of health.



What we do

The AWRC acts as an innovation centre for health care services, bringing together patients, clinicians and researchers to generate solutions to 'real-world' problems in the NHS that can be scaled regionally, nationally and globally.

The AWRC supports the development and delivery of postgraduate courses, CPD, doctoral programmes and apprenticeships to train the next generation of researchers who can work across academia and industry.

Act as the research hub for the National Centre for Sport and Exercise Medicine in Sheffield, including translating knowledge from elite sport into population health.



"Age is no barrier to being physically active. Keeping fit is a big part of my life and keeps me young at heart."

Physical activity keeps me fit, healthy and feeling young! I love the social aspect. There is a real friendly community that makes you feel part of a family"

Olive - Aston

Read my story at:
movemoresheffield.com

**move
more**

At the heart of the community

- Located on the Olympic Legacy Park alongside the Oasis Academy and University Technical College, the AWRC is part of Darnall, one of the most socially disadvantaged areas of the City.
- The AWRC therefore has a key role to play in improving the health and wellbeing of the local community.
- Access to academic staff to design and evaluate programmes, providing training and apprenticeships, hosting and supporting community engagement events and informing the curriculum of the adjacent Oasis Academy and University Technical College with our research.





Healthy and active 100 —research and innovation that prevents disease and supports people into 100 years of healthy and active life.



Living well with chronic disease —management and treatment of chronic disease, such as cancer, stroke, musculoskeletal disorders, diabetes and mental health, through physical activity as a therapy.



Technological and digital innovations to promote independent lives —development and application of new and emerging technologies to help people move, improving health and wellbeing across the population.

Move More Ambassadors



Aims and Objectives

"Ambassadors will help explore community assets, spot opportunities for development, & connect assets for physical activity."





*Participatory modelling of the system -
supporting a network of assets in communities*

Existing Asset	Inclusion of physical activity	Selected considerations
A local food bank	Walking for purpose.	Stigmatisation - those using the space might not want others to know.
A sewing group (Zest)	Health-walk, before or after the session.	Peer-to-peer support but could distract from reason they came.
A jewellery/baking group (Time-builders)	Access green areas of Gleadless Valley (walking).	Improve community awareness and mental health but could be dangerous, hard to find the right volunteers.
A volunteer library	Include according to group interest (e.g. history walks)	Just the usual suspects, doesn't reach anyone new
Litter pick	To go further into different parts of the community	Taps into community mind-set and making things better for others.
Baby and toddler group	Focus on new opportunities for mums	Need other organisations to help introduce new activities and support childcare.
Community hub	Space can be utilised for activities	Funding, hard to ensure it is being used by the people who need it most



Building trust and relationships with community organisations before we can actually 'do stuff'

**Sheffield
Hallam
University**

Advanced
Wellbeing
Research Centre



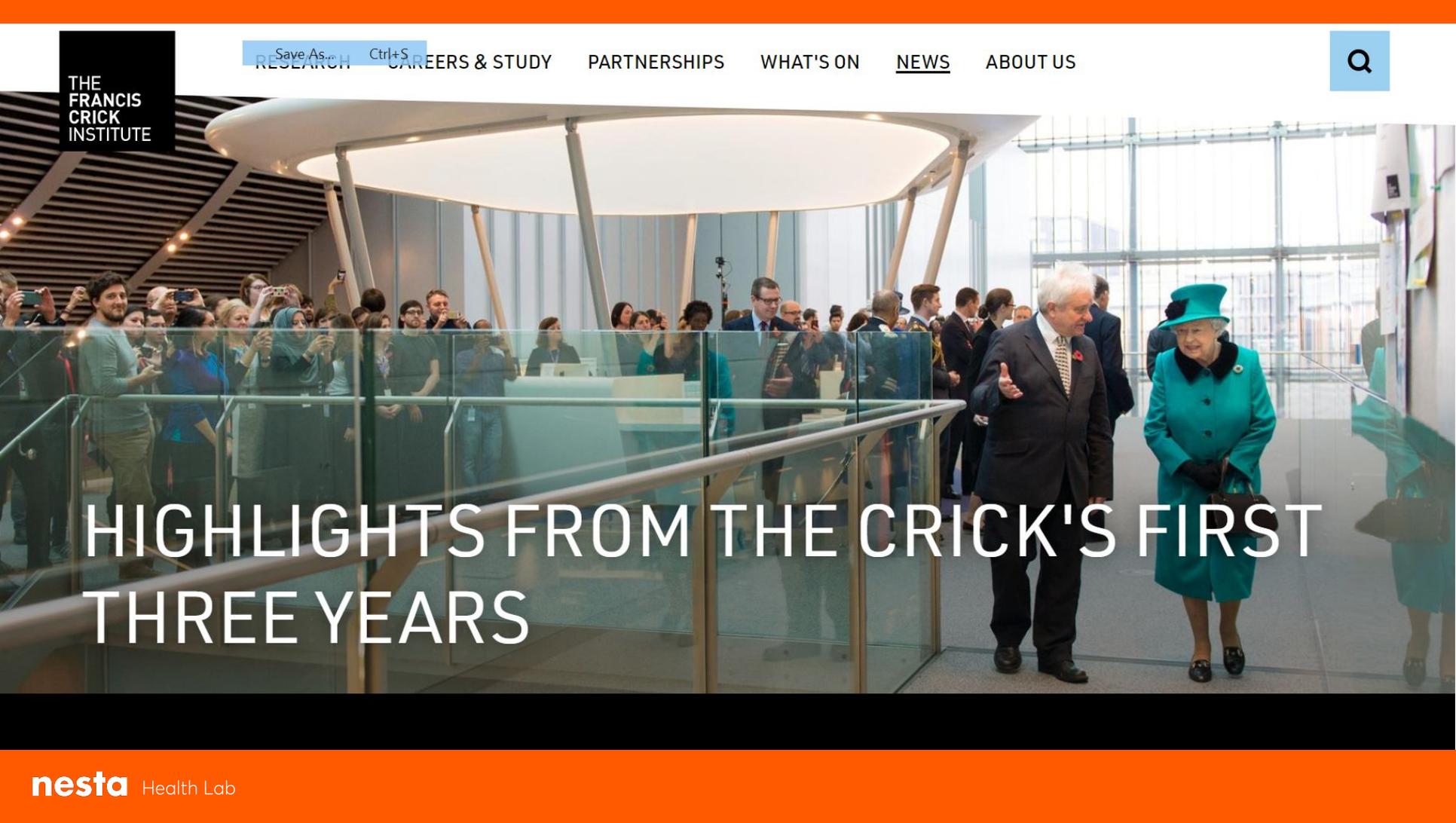
If you would like to find out more, or get involved with the work of the AWRC please contact us.

awrc@shu.ac.uk

www.awrc.co.uk

+44 (0)114 225 2255

Q&A



HIGHLIGHTS FROM THE CRICK'S FIRST THREE YEARS

Imagine...

HIGHLIGHTS FROM THE
NIGHTINGALE...

Over to you...

Choose a 'headline' as a group (what would be an exciting research outcome)

Complete exercise 2 on your own on your personal table mat - 'visioning the future' (5 minutes)

Then join as a group to complete the newspaper canvas - learning from each o

Next steps...

Developing the campaign

What are our **objectives for the campaign?**

- To build and share compelling evidence
- To create a sense of urgency through case studies
- To work with experts and establish an interdisciplinary stakeholder network to shape the direction
- Develop a clear and detailed plan for what the centre would look like and do

Campaign name and hashtag

- More Than Medicine
- Attention On Prevention
- Any others?

Listen out for our podcast episode on Tuesday next week!

Subscribe to Future Curious at

<https://www.nesta.org.uk/feature/future-curious/>

How do you want to be involved?

Please complete the 'advice for Nesta' sections of your personal table mat



nesta

THANK YOU!

27 November 2019

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 [@nesta_uk](https://twitter.com/nesta_uk)