

**BORN IN BRADFORD - AN OVERVIEW OF CHILD AND PUBLIC HEALTH RESEARCH AT BRADFORD INSTITUTE FOR HEALTH RESEARCH (October 2020)**

Since 2007 our [Born in Bradford \(BiB\)](#) family at the [Bradford Institute for Health \(BIHR\)](#) has grown significantly. We now lead or collaborate in a wide range of child and public health research, evaluation and implementation programmes with partners including Better Start Bradford, Bradford Council, Community & Voluntary Sector, NHS, Universities of Bradford, Leeds, Sheffield, York and many others.

**Research Infrastructure**

Research infrastructure includes our core-datasets developed from our study cohorts. This enables us to both describe our populations and identify factors which may be affecting health; and support research, evaluation and implementation programmes.

**Research, Evaluation & Implementation Programmes**

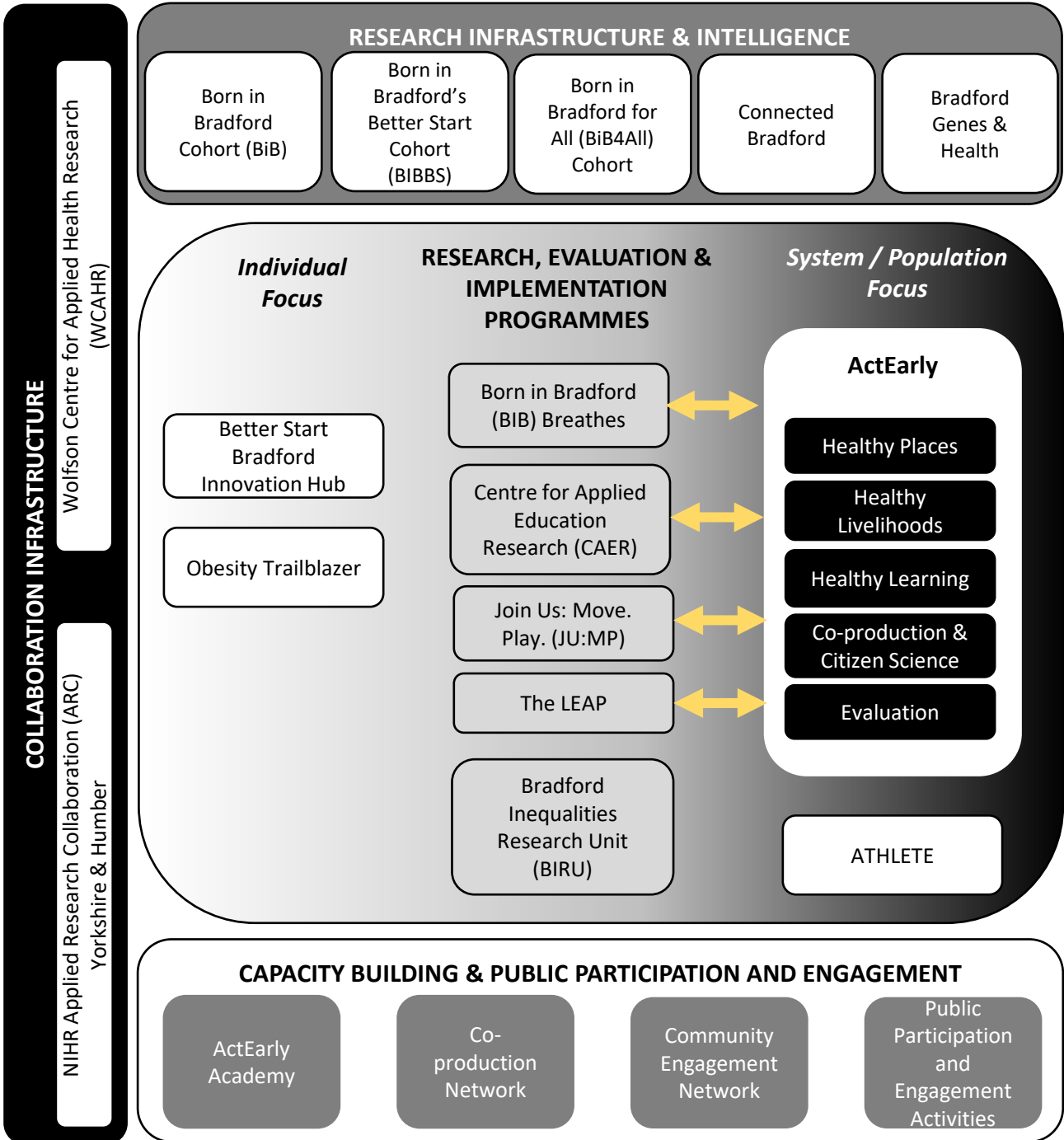
A number of research, evaluation and implementation programmes are now based at BIHR. Some focus on individuals e.g. behaviour change interventions, others are concerned with addressing system and policy influences on health. Most are a mix of both individual and population research.

**Capacity Building & Public Participation and Engagement**

The people of Bradford are key to our programmes – our research would not be possible without their input. We have an extensive programme of engagement and participation with our BiB families, the public, teachers, community, voluntary and faith sectors. We are now looking to expand our focus on capacity building with new networks and an ActEarly Academy.

**Collaboration Infrastructure**

BIHR hosts infrastructure to underpin collaboration between researchers, stakeholders and the public. This includes physical space as well as implementation and impact activity.



## RESEARCH INFRASTRUCTURE & INTELLIGENCE

### [Born in Bradford \(BiB\) Cohort](#)

The [BiB](#) study is following the lives of 13,500 children (born between 2007-2011) and their parents (30,000 participants in total) as they grow up in the city in one of the biggest health research studies in the world. We collect detailed information on wellbeing and health to answer important questions about why some families stay healthy and others fall ill. Now, all of the [BiB](#) children have started school, we are collecting new information to find out how lives have changed for our [BiB](#) families over the last 6-10 years. This is the first time we are revisiting all of our families again since the study started, and we are calling this study [BiB](#) Growing Up! and will be recruiting to this study until March 2021.

### [Born in Bradford's Better Start \(BiBBS\) Cohort](#)

The [BiBBS](#) birth cohort recruits pregnant women, their babies and their partners who live in the Better Start Bradford wards from 2016 until 2024. It aims to recruit 5,000 families and collects routine data from health, education and Better Start Bradford projects to create a rich dataset which provides information on the development of children from ethnically diverse and deprived areas of the city. We describe [BiBBS](#) as an experimental cohort as we will use the information to evaluate the impact of the individual BSB interventions as well as looking at the impact of the early years system on child development.

### [Born in Bradford for All \(BiB4All\) Cohort](#)

[BiB4All](#) is a data linkage cohort study that every woman who is booked to receive maternity care at Bradford Teaching Hospitals NHS Foundation Trust is invited to join. [BiB4All](#) follows families by linking a variety of routine data sets together to build a clearer picture of families lives over time. This includes data from health, education, social care and other settings. The purpose of linking this data together and following families over time is to better describe child health and development in Bradford and identify whether patterns exist in the data that might help us to better understand what helps to keep families happy and healthy. It can also be used to understand the impact of new interventions or policy changes. Connecting data that already exists provides the opportunity to create an efficient research and service improvement cohort as no additional data collection is required from families, creating a local health intelligence tool that can be used across generations of children in Bradford. The study opened in April 2019 and has recruited just over 2000 families to date (January 2020).

### [Connected Bradford](#)

[Connected Bradford](#) links disparate routine electronic data in an anonymised database across primary care, secondary care, community care and social care for over 700,000 individuals at Bradford Teaching Hospitals NHS Foundation Trust. The digital platform data is integral for the secondary use analysis of data to improve patient pathways of care across the region, re-design models of care, research and evaluation. The [Connected Bradford](#) database is governed by the terms and conditions of the signed data sharing agreements from 86 General Practices across Bradford & Craven Clinical Commissioning Group, three Trusts – Bradford Teaching Hospitals, Airedale Hospital, Bradford District Care Trust, two Local Authorities – Bradford and North Yorkshire Local Authorities and two Voluntary care organisations.

### **Bradford Genes&Health**

Bradford Genes&Health is the second site in the wider Genes&Health programme of research which started in East London. The study aims to investigate why Pakistani and Bangladeshi people have some of the highest rates of poor health in the UK and what role their genes play in the prevalence of conditions such as heart disease and diabetes. The study will also investigate how new medicines can be developed based on genetic information gathered by the study and as such, has significant population and prevention health importance. The study is open to anyone of Pakistani or Bangladeshi origin and over the age of 16 years of age. Since the study started in April 2019 we have recruited 1750 participants. Recruitment to the study has taken place at a number GP practices across Bradford. We hope to register 20,000 participants to the study by 2023.

## RESEARCH, EVALUATION AND IMPLEMENTATION PROGRAMMES

### [ATHLETE](#)

BiB is part of the [ATHLETE](#) (Advancing Tools for Human Early Lifecourse Exposome Research and Translation) consortium involving 22 partners from 11 European countries and the United States. It aims to study the effects of the exposome – the totality of an individual's environmental exposures from conception – on child and adolescent health. As well as measuring exposure s in BiB children we will be working with schools from Spring 2021 to co-produce school based interventions to reduce urban exposures.

### [Better Start Bradford Innovation Hub \(BSBIH\)](#)

Better Start Bradford (BSB) is a £49m Big Lottery funded programme to help children in Bowling and Barkerend, Bradford Moor and Little Horton get a better start in life running from 2015-2025. It provides projects and services for pregnant women and families with children aged 0-3 aimed to improve children's emotional and social development, communication and language development, nutrition and reduce obesity. [BSBIH](#) is a partnership between BSB and BiB, uniting leading academics from the Universities of York, Bradford and Leeds. It provides a centre for evaluation of the BSB interventions and has developed supporting, pragmatic tools and an evaluation framework to allow evaluation to be embedded into practice.

### **Born in Bradford (BiB) Breathes**

BiB Breathes will evaluate the impact of a Clean Air Zone on air quality, health and health inequalities in the city of Bradford using air pollution data, health data as well as data collected by schools and school children using mobile air sensors through citizen science approaches. Pilot data collection starts in November 2020. 12 schools and ~400 pupil citizen scientists will be recruited in early 2021.

### **Bradford Inequalities Research Unit (BIRU)**

The former Bradford City CCG (now part of Bradford & Craven CCG) has some of the highest levels of deprivation and ethnic diversity in England, as well as high levels of morbidity and mortality across the lifespan compared to England averages. As part of the Reducing Inequalities in City (RIC) programme the BIRU (a collaboration between BiB, Bradford & Craven CCG and University of York) will use data from BiB cohorts and Connected Bradford to develop an in-depth understanding of the drivers of health inequalities and in the future, evaluation of the health and economic impact of interventions across different services and organisations as well as the cumulative effect of multiple interventions. The RIC programme plans interventions focussing on i) preconception, pregnancy & early years; ii) premature mortality; iii) ageing & dying well.

### [Centre for Applied Education Research \(CAER\)](#)

[CAER](#) was created via the Bradford Opportunity Area and is committed to using research to empower schools to provide the best possible education and start in life for their pupils. It does this by working with schools through specific projects and an evidence active schools network to ensure that Bradford schools benefit from research. [CAER](#) is a partnership between BIHR, the Universities of Leeds and Bradford, Leeds Trinity University, the Department for Education, Bradford Council, the Bradford Research School and the Educational Endowment Foundation.

### [Join Us: Move. Play. \(JU:MP\)](#)

[JU:MP](#) is one of 12 Sport England Local Delivery (LDP) Pilots aiming to better understand what helps young people be active in their communities between 2018-2023. It is focussed in the northern area of the city of Bradford with BiB leading the pilot and evaluating the impact of taking a whole systems approach to physical activity on behalf of Active Bradford. [JU:MP](#) aims to test and learn more about what helps children aged 5 – 14 years and their families to be active testing a whole systems approach to increasing children's physical activity levels by working with families, communities, schools and organisations, and by making improvements to the environment.

### [The LEAP](#)

[The LEAP](#) is the new Arts Council England Creative People and Places programme for Bradford. Creative People and Places is all about getting more people engaged in arts and culture by having local people help shape what's on offer. [The LEAP](#) is led by BiB and consortium partners including Bradford Eid Festival, Mind the Gap, Keighley Association for Women and Children Centre and Royds Community Association. As [The LEAP](#) develops it will be shaped by the voices, ideas and aspirations of people in Bradford & Keighley, initially focussing on activities in Manningham, Bradford Moor, Tong, Bradford City, Keighley West and Keighley Central wards.

### **Obesity Trailblazer**

Born in Bradford, Bradford Council, and Bradford Council for Mosques have formed a unique partnership to explore the opportunities for working with Islamic Religious Settings, in particular with madrassas to co-production solutions to tackle childhood obesity by supporting healthy behaviours and influencing positive social/structural behaviour change for better health outcomes in the local environment.

## ActEarly –Bradford Projects Overview

### ActEarly Overview

Our [ActEarly](#) approach focusses on early life changes to improve the health and opportunities for children living in two contrasting areas with high levels of child poverty; Bradford, West Yorkshire and Tower Hamlets, London. In each of these areas, we are working with local communities, local authorities and other national organisations to understand how we can help families live healthier and more active lives. We have found shared priorities for research and together have chosen three key [ActEarly](#) themes (Healthy Learning, Healthy Livelihoods and Healthy Places). Our research is underpinned by Co-production & Citizen Science approaches and system level Evaluation. [ActEarly](#) will include a series of Natural Experiments (N), Interventions (I) and Modelling (M).

### Healthy Learning Theme

- ActEarly Holmewood Project – a project to apply data science to public service design in Holme Wood, Bradford
- Glasses for Classes – Providing glasses to 4/5 year olds who need them to help improve their literacy and maths skills
- Helping Handwriting SHINE – Improving fine motor skills to develop children's handwriting

### Healthy Livelihoods Theme

- Co-location of benefits advice at Bradford Royal Infirmary (I) - Providing benefit advice and services in maternity services
- Junk Food Advertising Ban (I) – Examining the feasibility of replicating the Transport for London advertising ban on high in fat, salt or sugar foods ('junk food')
- *The LEAP (I) – See overleaf*
- Universal Basic Income Pilot (I) – Trial of universal basic income for young people

### Healthy Places Theme

- *Born in Bradford (BiB) Breathes (I) – See overleaf*
- Horton Park Regeneration (N) – Environmental, community and business regeneration
- *JU:MP (I) – See overleaf*
- Liveable Streets (N) – Focus on deprived areas with multiple initiatives including Healthy Schools Streets and STARs schools

### Co- production & Citizen Science

- Community Priority Setting – Defining future research priorities which reflect what is important to children, young people, families and professionals for happier and healthier children

### Evaluation

- Complex systems evaluation – Exploring how and when intervening in the systems changes it and whether it creates unintended consequences
- Evaluation toolkit for Local Government – Toolkit to support integration of evaluation plans at the outset of intervention development
- Research on research – Understanding how and to what extent ActEarly is cross-disciplinary and sustainable

## CAPACITY BUILDING & PUBLIC PARTICIPATION AND ENGAGEMENT

ActEarly Academy

Community Engagement Network

Co-production Network

[Public Participation and Engagement Activities](#)

Coming soon |



Coming soon – BIHR is seeking to facilitate a network for community engagement colleagues in organisations working across the District in order to foster improved connectivity between projects / programmes / organisations and to share learning / experience.

Coming soon – Co-production is core to many of BIHR programmes. BIHR is seeking to share experiences and build further skills and capacities in this area both within and beyond research.

People powered research is core to research at BIHR and BiB. We have an extensive people engagement and involvement network, including children and young people, schools and parents, which we are constantly seeking to develop and expand.

## COLLABORATION INFRASTRUCTURE

[NIHR Applied Research Collaboration \(ARC\) Yorkshire & Humber](#)

The [ARC](#) is an important programme of applied research, hosted within BIHR, and delivered through a partnership of organisations, including NHS organisations, Local Authorities, universities, third sector organisations and industry. It aims to build connections across stakeholders; ensure research is responsive to needs and priorities; and facilitate increased research implementation and impact. Our [ARC](#) is focused on supporting people-powered research to tackle inequalities and improve health and well-being for our communities across Yorkshire and Humber. Our themes of [healthy childhood](#), [mental health and multimorbidity](#), [older people](#) and [urgent care](#) are the priorities that have been identified by our NHS partners and the public and will ensure our region will benefit from cutting-edge innovation. The [ARC](#) will ensure our NHS and social services are able to improve effectiveness and impact to benefit our patients and their families.

[Wolfson Centre for Applied Health Research \(WCAHR\)](#)

[WCAHR](#) brings together health professionals and researchers to develop quicker ways of translating research into benefits for patients. It helps catalyse cutting-edge science to improve the health and wellbeing of people in our communities and aims to be a national and international exemplar in turning great academic research into better health care for people in the city of Bradford and the wider Yorkshire region. [WCAHR](#) provides a physical space for these collaborations, with a specific focus on three key themes of [child health as a public health priority](#), [healthy ageing as a health service priority](#) and [patient safety and quality improvement as a policy priority](#). Programmes with a base in the [WCAHR](#) building include [CAER](#), [JU:MP](#), [The LEAP](#) and [Well Bradford](#).