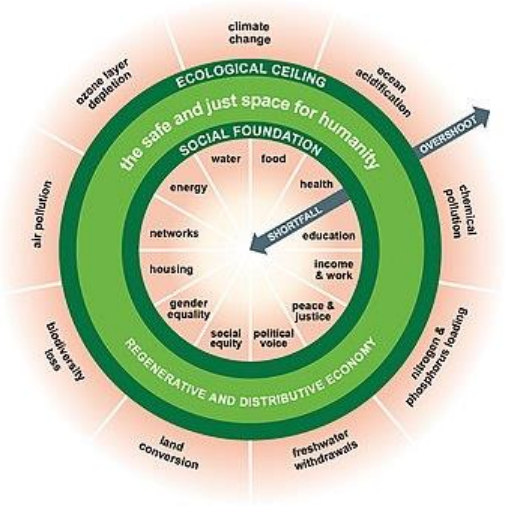
A Local Authority Research System in Bradford: Research Protocol

Background

Areas with high levels of poverty tend to have: poorer levels of child development and educational attainment; higher rates of obesity and high fast food outlet density; greater prevalence of unhealthy behaviours; poor quality, overcrowded and noisy housing; busy, polluted roads with low walkability; poor quality green spaces for play and exercise; more looked after children; higher levels of youth crime; and lower entry into further education, training or employment.[1] These adverse wider social economic, cultural and environmental conditions (figure 1) damage health, drive clustering of unhealthy behaviours, limit opportunities and increase risk of poor health across the lifecourse.[1] They widen inequality such that people living in the least deprived areas of England, experience19 more years in good health than those in the most deprived areas.[2] Addressing wider conditions can improve health outcomes[3] and has economic benefits,[4] but interventions have generally focused on trying to directly influence individual behaviours or treating the disease that results from more upstream determinants. The NHS Long Term Plan[5] is clear that we cannot 'treat our way out of health inequalities' and we need to recognise the key role of local government in improving the wider conditions that influence health.



The Doughnut of social & planetary boundaries (2017)
kateraworth.com

Local government needs to be engaged as full partners in the challenge to generate and use evidence that informs how to cost effectively intervene to prevent disease, improve wellbeing and reduce inequalities in health. This includes evidence relevant to social care which, whilst distinct from population health research, is delivered by local government. Meeting these increasing expectations along with demand for other services in the context of shrinking resources is a major challenge for local government.[6]

Research-active NHS organisations benefit from well-developed National Institute for Health Research (NIHR) infrastructure to support research design (Research Design Service), research delivery (Clinical Research Network), dissemination (Dissemination Centre) and applied health research (Applied Research Collaborations), mechanisms for ethics review, and often have strong university links. However, this infrastructure has tended to have a more clinical and biomedical focus with relatively little attention to the important health challenges outlined above which are driven by wider determinants and require public health actions and prevention research. Many of these fall within the wide remit of local government which lacks the formal research resources, structures and evidence culture, and remains largely disconnected from NIHR infrastructure. Thus, we have robust evidence for how upstream factors affect disease risk but we know little about how to address these at a local government level where action is possible and needed. For that we need research that can inform upstream interventions to improve homes, education, lifestyles, environment and routes to implementation, and this means incorporating local government into the leadership and practice of the broader health research effort.

Delivering prevention research and ensuring it informs local government decision making is methodologically, logistically and politically challenging. Unlike new drugs or clinical procedures that have become relatively straightforward to evaluate, upstream influences on health interact in complex and dynamic ways creating interlocking systems. Understanding and intervening in this, requires research methodologies that provide real world context, quick results and a focus on improving rather than proving[7] and on systems rather than on areas or target groups. Relevant

research is likely to develop at the intersection between boundaries and reflect a complex research ecosystem that includes different forms of knowledge and expertise.[8] Research aware local government means being able to choose and use evidence that is appropriate and this requires significant understanding of research, local decision making and context of the statutory, voluntary, cultural and commercial sectors within local government. Generating and participating in research, needs partnerships with academics and broader interdisciplinary expertise which is often lacking.

Local government operates on a broader canvas than health services, along with a wide range of responsibilities and political environments. This means that prioritisation and decision making can be more complex; health is only one of a number of direct outcomes of interest to elected members and officers. Indeed health impact resulting from local government actions may be seen to benefit other sectors, like the NHS, and so can be less attractive for cash strapped authorities, even though they are vital in ensuring resilient and productive local economies. Local authorities are also subject to local and national political cycles whereby leadership can regularly change, continuity can be challenging and quick wins may take priority over public health impact that requires longer term investment and commitment. This can be a tough sell to voters.[9] There is marked variation across and within local authorities in research appetite, awareness and preparedness. Health research knowledge and use among public health teams is common, but is less so across other areas of local government. Using our preliminary typology of local authority research engagement in (figure 2), we expect most to be at level 1, or level 2 in those areas where there is already genuine interest in and appetite for research innovation.

The COVID-19 pandemic is a major impulse for change. It has seen local authorities take a leading role in response and recovery planning for their populations, working alongside other agencies including the NHS with public health much more prominent. This has highlighted a need to be more evidence informed to be able to make wise decisions. Demand for local intelligence has drawn attention to some of the challenges of using routine local data including access, gaps, quality, coverage and skills but has also sparked enthusiasm for improvement. Local authorities increasingly want high quality linked data, and to ask research questions, use and share research findings to plan and inform recovery, and may now be more receptive to the concept of a formal local research system at the heart of decision making than ever before.

Bradford is well placed to explore how a LARS could be developed. The District Metropolitan Council (BMDC) is a forward thinking local authority which has already actively engaged with local health research projects and is very receptive to transforming prevention and population health to support ambitious whole systems change for the city. The Health and Wellbeing Board brings together leadership from across all sectors and agencies (rather than simply to have health and local authority partners at the table) and they have demonstrated a deep commitment to community engagement which can support ‘citizen researchers’.

Over the last 15 years, health and social researchers have been laying the foundations for public health research in close partnership with collaborating universities. This has led to the growth of the Bradford Institute for Health Research (BIHR), a research organization based at Bradford Teaching Hospitals NHS Trust. BMDC’s involvement in research has been growing in response to initiatives led by BIHR, for example, BMDC’s Air Quality Team contributed to a recently awarded NIHR PHR research grant to evaluate the health impact of a city-wide system approach to improve air quality; Bradford is one of the two City Collaboratories in the UK Prevention Research Partnership ActEarly Consortium (the other being Tower Hamlets); Connected Bradford, an extensive programme of linked datasets with health, education, social care and geospatial linked data for around 500,000 individuals; J Wright as Director of Research, is a member of Bradford’s Integration and Change Board (a collaboration of CCGs, local authority, NHS); and BMDC has partnered with BIHR to develop a COVID-19 Scientific Advisory Group to inform District Gold Command decision making through the coronavirus outbreak. BMDC is also a key partner in the Centre for Applied Education Research (CAER) to support the best possible education for Bradford schoolchildren. Bradford is well connected to NIHR infrastructure, for example, the NIHR Yorkshire and Humber ARC is based at BIHR led by J Wright and S Bridges, J West is the NIHR CRN

National Specialty Lead for Public Health and is jointly based at BIHR and BMDC, and the NIHR CRN Yorkshire and Humber now supports an embedded research support post within BMDC. These demonstrate progress towards BMDC becoming research active, but engagement has mainly been responsive – supporting well when approached by others, rather than creating and using research independently (level 2 in our preliminary typology of local authority level of research activity, Figure 2). To progress beyond level 2, BMDC, in collaboration with others, needs a research system that can deliver a shift change in culture, infrastructure, funding and activity in order to fulfil its research potential. Bradford's engaged local authority, strong NIHR infrastructure and unique city-wide data linkage provides a useful test-bed whilst also providing generalizable guidance for others at an earlier or similar stage in their research journey.

Figure 2- Local Authority Research Activity Assessment Tool

Level	Summary of research activity
1	• Negligible engagement with research • Negligible use of research • Negligible participation in research
2	• Willing to respond to invitations to collaborate in research • Willing to share data • Some use of evidence in intervention and policy development in some parts of the LA
3	• Evidence of strategic level research leadership • Investing in research (training, data and research roles) • Co-developing research (generating questions, co-applicants/funded roles, honorary academic contracts) with academic partners • Full data linkage and sharing • Formal protocol for policy development that includes search for and use of evidence • Evidence informed interventions • Sharing knowledge with partners and other local authorities • Named link to NIHR CRN, RDS, ARC and Dissemination Centre
4	• Using a complex systems approach • Implementation of a LARS model • Forward plan to develop and sustain the LARS • Research department and Director of Research (working at board level) • Commissioning of research • Organisational access to online library and research databases • Embedded NIHR CRN staff • Honorary academic contracts and funded research time • University partners providing formal ethical review process • Local authority manual for evidence informed policy making • Local authority manual for evidence informed intervention development and evaluation

Existing literature

There are few examples of LARS in the literature, most reports focus on how evidence is currently used in local government and the disconnect between academia and practice based public health and policy making.[10] These suggest that what constitutes evidence can be different in local government[11] where local political, cultural and bureaucratic influences[12] mean that local experiences or expert opinion can take priority over research evidence and academic rigour.[13,14] There has been a tendency in prevention research to focus on narrow and simple research questions characteristic of health science approaches, which are unlikely to provide answers for complex system approaches and complex policy decisions.[15] At a national level, the Institute for Government has developed recommendations for improving engagement between policy makers and academics including expert networks, research secondments and research and evidence centres. This may be a framework that could be 'scaled down' to a local authority level. Internationally, the Doughnut of social and planetary boundaries model (figure 1) has recently been implemented in Amsterdam with the aim of creating a thriving, environmentally safe and socially just city[16] and whilst this model is broader and more holistic than a LARS, it provides a tool for

systems thinking, with insightful metrics and methods to inform transformative actions and learning[17] which might transfer well to a LARS for local government. A further broader model is the City Resilience Index[18] developed by ARUP which provides a framework of measurement and assessment to facilitate better connectedness and knowledge sharing within and between cities.

Aim:
To explore the potential for, and what would be needed to develop, a local authority research system (LARS) model for Bradford District.

Objectives:
We will explore and analyse:

Objective 1
- The current research landscape in Bradford including the extent to which BMDC chooses, uses, co-develops and participates in research
- The potential for, and barriers to creating, a culture of research within a local authority

Objective 2
- Possible models for a LARS
- A specific model appropriate for Bradford including the research and development leadership and infrastructure needed (incorporating ways to systematically involve the public) and associated costs
- The local authority based skills, training and career development needed to ensure that the LARS can attract a skilled and transdisciplinary workforce

Objective 3
- The strategies needed to ensure sustainability of the network through political cycles and budgetary challenges
- How to harness synergy and knowledge mobilisation between local government, academic centres, NHS organisations and voluntary, cultural and commercial sectors within a LARS

Project design
Our scoping project will focus on our 3 objectives (see flow diagram) and will use a combination of reviews and qualitative methods for each of the following:

Objective 1**:** Review of BMDC research activity, barriers and enablers:

i) Online short quantitative scoping survey distributed by the Director of Policy and Performance (P Witcherley co-applicant) and Director of Public Health (S Muckle co-applicant) to 500 BMDC staff including the strategic directors and assistant directors of the 4 directorates (corporate resources; children's services; health and wellbeing; place), public health consultants, health and wellbeing board members as well as front line workers. To include questions around knowledge of sources of evidence, use of research, research capacity, research commissioning, current or past research funding received by BMDC (including staff included as co-applicants, BMDC as a research partner).

Analysis- number (%) of responses in each category will be reported for the whole sample and by directorate/team, any free text submissions will be reported narratively.

ii) Qualitative focus groups: *Data collection*- Focus group interviews (x4) with local authority stakeholders (elected members from all political parties, Assistant Directors, public health team, ICB Programme Director) to explore understanding of research and evidence, barriers and enablers to use.
Analysis- Qualitative data from stakeholder interviews will be analysed using Thematic Analysis.[19]

iii) Scoping review of publicly available decision making processes to examine whether evidence use is included (minutes of Health and Wellbeing board and ICB).

iv) Testing and refinement of an easily replicable system to benchmark current local authority research activity (fig 2).

Objective 2: Potential models, cost, capacity, skills and NIHR support required

i) Rapid review of existing models.

ii) Identification and refinement of a BMDC model and consultation with public representatives on how public involvement is incorporated in the model.

iii) Discussions with NIHR CRN Co-ordinating Centre and Yorkshire and Humber LCRN, NIHR ARC Yorkshire and Humber, RDS Yorkshire and Humber and national NIHR Dissemination Centre to explore synergies with NIHR and contributions to a BMDC LARS.

iv) Estimate resources needed to develop and sustain the LARS in Bradford (based on NIHR LCRN Business Case guidance).

v) Review of local authority based skills, training and career development needed to ensure that the LARS can attract the skills and transdisciplinary workforce.

vi) Descriptive summary of NIHR Academy training and funding opportunities within local government (J West is contributing to ongoing NIHR Public Health Incubator discussions and will ensure that the outcomes of this scoping project are submitted to those discussions).

vii) Descriptive summary of NIHR and other research training opportunities (e.g. NIHR CRN training, Yorkshire and Humber Practice and Research Collaboration (PaRC) training opportunities, NIHR ARC Yorkshire and Humber Research Capacity Building opportunities.

Objective 3: Strategies to ensure sustainability and facilitate synergy and knowledge mobilisation

i) Qualitative interviews: *Data collection*- Qualitative interviews (x8) with local authority stakeholders (Council Leader, Chief Executive, Director of Health and Wellbeing, BMDC Executive elected members) and also the focus groups described in Objective 1, to explore initiatives to sustain a LARS and research activity. *Analysis*- Data will be analysed using Thematic Analysis[19].

ii) Descriptive summary of current mechanisms for knowledge sharing between BMDC and the wider district and region and development of a transdisciplinary community knowledge sharing framework for the LARS model proposed for BMDC.

Setting

Bradford is a post-industrial city in the North of England with high levels of deprivation and poor health, and a multi-ethnic population including a large Pakistani community and growing communities of East European and Roma people. The city is experiencing rapidly increasing prevalence of diabetes and cardiovascular disease.[20] Almost a quarter of children are growing up in poverty and the city has the 6th lowest employment rate in England.[21] Bradford is governed locally by BMDC which is the 4th largest metropolitan council in England and is one of 5 metropolitan councils in the county of West Yorkshire (the others being Leeds, Calderdale, Kirklees, Wakefield). This political model means that strategic transport and economic roles are combined across the region under the remit of the West Yorkshire Combined Authority (WYCA) but it also creates a mechanism for information sharing and knowledge mobilisation. BMDC employs around 8,500 people, serves a population of 531,200 and covers an approximate area of 141 square miles.

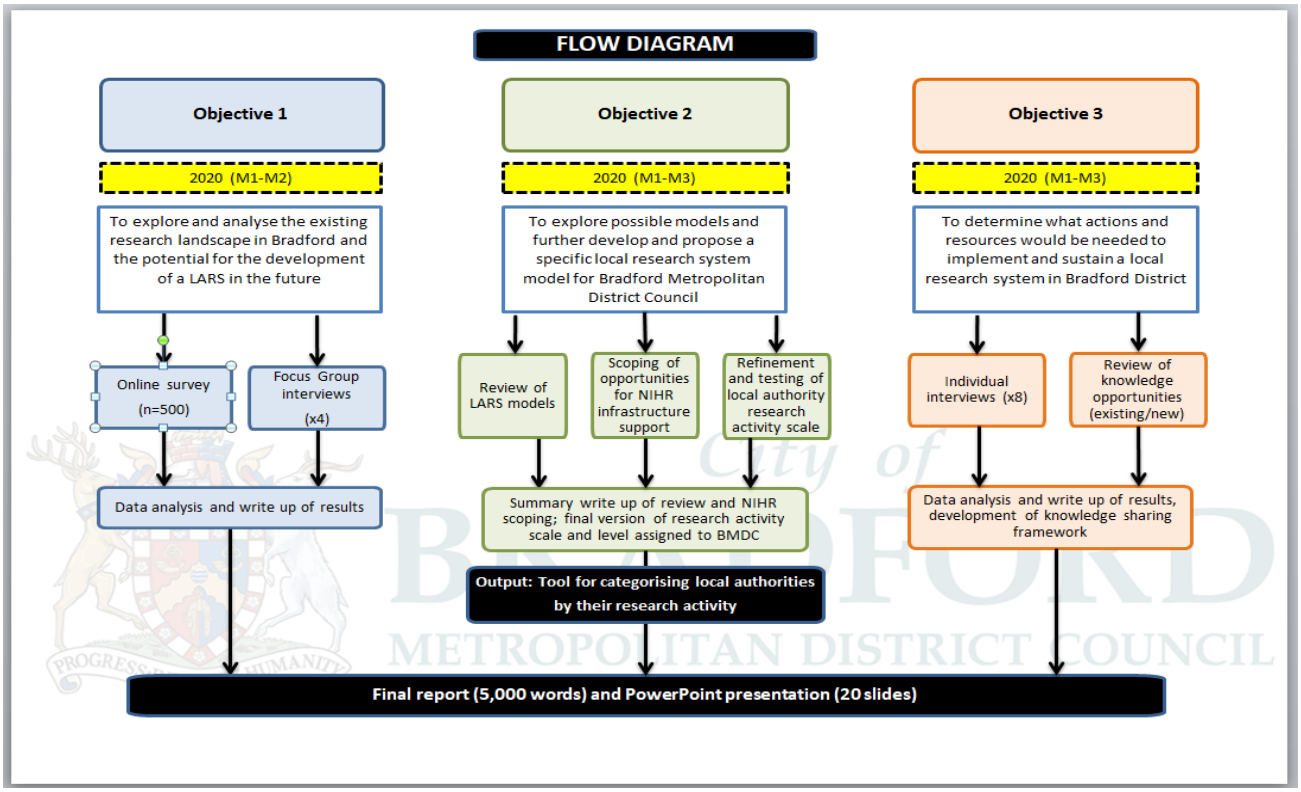
Outputs
The LARS scoping project report will include a conceptual model or taxonomy of types of local authority research activity with different levels of engagement, a summary of the current BMDC landscape, a proposal for a LARS model for Bradford, opportunities for NIHR infrastructure to support and contribute to the LARS, and proposals for the resource and actions needed to develop, deliver and sustain it. We will summarise for the NIHR and other national organisations, how this idea could be taken forward. A PowerPoint presentation of the report will be produced.

Dissemination and impacts
City and local authority: We will circulate our report to council staff, elected members, and academic partners. This scoping project and the outcome of a proposed LARS focuses most on improving health and prevention, however we expect that creating a prevention research environment and culture will have a spill over effect and stimulate other non-health areas of the local authority to embed research in their work and decision making – we will monitor and measure this if this project progresses to the implementation of a LARS beyond this project funding period. We will also use BMDC, BIHR and ActEarly networks to stay connected and share our learning with important LARS partners locally including voluntary, community and social enterprises. *Regionally*: We will share the report with other local authorities within the region including those in West Yorkshire via the WYCA and those in the wider Yorkshire and Humber region via the Association of Directors of Public Health (ADPH). *Nationally*: We will disseminate our scoping project findings to other local authorities through our UKPRP ActEarly co-local authority (Tower Hamlets) and Consortium partners (Centre for Cities, David Pye LGA Programme Manager for Research), and through our PaRC network and ARC Yorkshire and Humber LARK network.[22] We will publish a report summary in the LGA First magazine and Local Government Chronicle, and present at local government attended conferences. We will use our strong NIHR networks (ARC, CRN) to share what we find and our proposal for a LARS.

We will include the following acknowledgement in all our publications: This study/project is funded by the National Institute for Health Research (NIHR) Public Health Research Programme (project reference NIHR131797). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

Research governance and ethics
We will obtain university ethics approval for the online survey, focus group and individual interviews.

Public involvement
BMDC provides a range of mechanisms for the public to contribute to their activity including the Lets Talk Bradford District website and online consultations via the BMDC website. BIHR has an extensive PPIE infrastructure operating within existing cohort studies, which supports co-production of our research. This includes a Community Research Advisory Group (composed of parents and community representatives), Parent Governors (Born in Bradford parents), Young Ambassadors (Born in Bradford children) and Priority Setting Steering Group (parents, community leaders, professionals from the NHS, Local Authority and Voluntary and Community Sector). The Yorkshire and Humber ARC has a PPIE Leadership Support Group (PLSG) who would be available to support PPI strategy and methods. Representatives from these will be invited to comment on our proposed LARS model.


FLOW DIAGRAM
Objective 1
2020 (M1-M2)
To explore and analyse the existing research landscape in Bradford and the potential for the development of a LARS in the future
Online survey (n=500)
Focus Group interviews (x4)
Data analysis and write up of results
Objective 2
2020 (M1-M3)
To explore possible models and further develop and propose a specific local research system model for Bradford Metropolitan District Council
Review of LARS models
Scoping of opportunities for NIHR infrastructure support
Refinement and testing of local authority research activity scale
Summary write up of review and NIHR scoping; final version of research activity scale and level assigned to BMDC
Output: Tool for categorising local authorities by their research activity
Objective 3
2020 (M1-M3)
To determine what actions and resources would be needed to implement and sustain a local research system in Bradford District
Individual interviews (x8)
Review of knowledge opportunities (existing/new)
Data analysis and write up of results, development of knowledge sharing framework
Final report (5,000 words) and PowerPoint presentation (20 slides)