A local authority research system (LARS) for Bradford
Final Report

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1. Summary

Bradford Metropolitan District Council (BMDC) demonstrates progress towards becoming research active but so far engagement has mainly been responsive – supporting well when approached by others, rather than creating and using research independently. We explored the challenges and barriers to local government research and opportunities for the council to become more research active using a mixture of a quantitative online survey of BMDC staff and qualitative focus group and individual interviews with a range of staff. We developed a typology of local authority level of research activity and tested acceptability and use of this, both within BMDC and with two other Yorkshire local authorities. We also conducted an assessment of research use in BMDC decision making, current research skills and training provision in BMDC, and a review of the NIHR support currently available to local authorities.

A rapid literature review of existing models in studies from high income countries identified nine models. The best fit for Bradford was a UK model with a systems focus (LACoR logic model).[1] We adapted this based on the findings from our fieldwork and will use this to structure the development of a Bradford LARS.

Four key themes emerged from our fieldwork: leadership, resource and capacity, culture, partnerships. Some use of research in decision making was evident but limited research training opportunities were identified. We indicate in this report how NIHR support might be expanded within local government to help develop research activity and the public and population health evidence base.

Our proposed model for a Bradford LARS will guide the development of an exemplar whole system research framework that includes research infrastructure, data sharing, research training and skills, and co-production with local partners, to choose, use, generate and deliver research in local government. It recognises the research activity and networks already established in Bradford and the actions needed to now move up to the next level of our typology. These include taking steps towards full data sharing, creating research infrastructure, enabling research skills and increasing capacity. We describe in this report some changes needed to enable this transformation, for example significant external resource, co-production with the community and better NIHR support. We recommend that this is initially piloted in two areas of priority co-produced by BMDC and the community. The plan will be implemented using improvement methods: planning actions, implementing, assessing progress, learning lessons, and adjusting actions in an iterative fashion to help ensure efficient and effective public services.

2. Context

Socio-economic, cultural and environmental conditions strongly affect health across the lifecourse and drive inequalities.[2,3] Addressing these wider conditions can improve health outcomes[4] and generate economic benefits.[5] Local government plays a key role in influencing these conditions. Whilst the NHS benefits from well-developed research infrastructure and culture with strong university links, most of this has a clinical and biomedical focus. Many of the wider determinants of health and potential for prevention research fall within the remit of local government, which lacks the formal research resources, structures, evidence culture and connection with NIHR infrastructure. Developing these in local authorities, would facilitate choosing and using evidence to inform

decisions, generating new knowledge, and evaluating attempts to improve outcomes. Being better users and producers of evidence can also result in better use of resources and savings, a priority when budgets are so tight. However, this is challenging, as local authorities work across whole systems that interact in complex ways. They are subject to changes in political leadership and direction, and quick wins may take priority over longer term public health impact. Local government-based knowledge generation is methodologically, logistically and politically challenging, requiring approaches which provide timely results for a real world context often with a focus on improving rather than proving,[6] and on systems rather than on areas or target groups.

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. Almost a quarter of children are growing up in poverty and the city has the 6th lowest employment rate in England.[7] Bradford is governed locally by BMDC, the 4th largest metropolitan council in England.

Over the last 15 years, health and social researchers at Bradford Institute for Health Research (BIHR) have laid the foundations for public health research in close partnership with BMDC and collaborating universities. BMDC's involvement in research, though significant, has mainly been responsive – supporting positively when approached, rather than using and creating research independently. For BMDC to fulfil its potential as a research user and generator, a research system that can deliver a shift change in culture, infrastructure, funding and activity is needed. Bradford's engaged local authority, strong NIHR infrastructure and unique city-wide data linkage offers a useful test-bed whilst also providing generalisable guidance for others at an earlier or similar stage in their research journey. Some of this potential was revealed during the COVID-19 pandemic, where local authorities, which have taken a leading role, have sought high quality linked data, and research evidence to inform response and recovery.

3. Aims and methods

In this scoping project, we set out to review current research activity within BMDC, and explore a potential framework for a Bradford LARS, including what would be needed to put a system in place and how best to sustain it.

We had three specific objectives: 1) to better understand the current research landscape and any barriers and enablers to research activity within BMDC; 2) to review existing LARS models and use these to propose a LARS that would work for Bradford; and 3) to explore how sustainable a LARS might be through political cycles and budgetary challenges, and how to bring together local government, academic centres, NHS organisations and voluntary, cultural and commercial sectors within a LARS.

We were interested to understand the perspectives of BMDC staff and leaders on the use of research, and the challenges and barriers to further developing this. We undertook an online survey of BMDC staff (n= 197 almost 40% response rate), qualitative focus group interviews (mixed levels/departments staff), and individual interviews with key BMDC staff (including the Chief Executive and Council Leader). We undertook a rapid evidence review of potential models for a LARS and developed a typology of local authority research activity (figure 1) which was reviewed by our interview participants, and more widely by other local authorities and networks in our region (Yorkshire and Humber). We completed scoping reviews of use of evidence in decision making and training opportunities within BMDC, as well as existing NIHR support for local government research. **See Appendix A for full details of our methods.**

Figure 1 Typology of local authority research activity

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

4. Summary of findings

Full findings are included in Appendix B.

a) Findings from our data collection

Below we describe key findings grouped by current research activity, and our four emerging themes: (leadership, resource and capacity, culture and partnerships).

Current research landscape

Generally, people felt that research and evidence was used and valued across BMDC. Research was described as "*a really broad church"* which included BMDC commissioned research and research where the council collaborated with partners. Most participants stated that using research and evidence is expected and is part of what they do, 21% of survey respondents had never used research in their role but 76% stated they would like to use research evidence more. 73% strongly agreed or agreed that using research evidence was part of their role and of these, 82% reported using research evidence (including in house research) to help inform or develop policies, projects, interventions or services.

Participants were not aware of a clear plan or policy for how research is used. Levels of research activity reported varied across departments and most primary research taking place, tended to be driven by key individuals who were passionate about research. One participant noted:

"We don't have a programme of work around research and we don't have a nominated research lead and we don't have kind of tick lists of research and we don't have anybody pursuing research opportunities outside of their core work. So … it could be more, higher profile and more coordinated and also expanded out to the broader Council".

Others said that research was academic and complicated and participants spoke of the need to simplify and '*demystify research*'. Messaging and communication about research should be simpler including definitions, language, training, processes, and messaging around benefits of using research:

"*[research] needs to be more approachable. I think research is a scary word for people".*

"Research is viewed as academic - some of the boundaries around using and applying research need to be broken down. The benefits of primary/secondary research undertaken by the BMDC need to be made more obvious".

There was a lack of knowledge about how to find relevant and current evidence and people wanted this to be easier. Barriers to using evidence, such as being unable to access peer review journals through BMDC IT systems, were also identified; only 31% of online survey respondents used peer reviewed journal papers and just 12% reported being able to access them online at BMDC.

Internal data sharing processes were described as a barrier to research and there was a perception that individuals and departments were sometimes over-protective of their data. In both focus groups and in the online survey, participants noted that there were no mechanisms in place to allow sharing of research and evidence across departments. This sometimes led to duplication and silo working. One survey respondent commented:

"*I have found it difficult to identify which person/department has access to the information and research that may be useful, and trying to form any lasting relationships between departments has in my experience been unsuccessful. Knowing who to ask for things has been a huge barrier for me. I think sometimes members of staff are unwilling to share their work and what they know, but this relates more to internal pieces of research and studies of information".*

Leadership

Leadership was considered crucial to a LARS. Participants recognised the need to get 'buy in' across the organisation:

"*When staff are very, very busy they do struggle to give up their time to get involved in something like that [research]. So it needs some leadership and gentle persuasion to sit behind it*".

It was also noted that buy in at a political leadership levels was required to commit to the principle of being evidence-led. Having this clear commitment to research both at a management and political level, was considered an important part of any BMDC research system.

"*Some kind of overall policy sign off from our politicians that that's the strategic direction they wanted us to follow and that they understood that that meant that our staff and even some of our resources will be out in that direction".*

"[Implementing a research system like that outlined in the typology] would come back to that genuine commitment with politicians that this stuff is going to make a difference. You'd have to give some real examples of where you'd expect this to work".

A policy or system for using research was considered helpful but with the condition that it must be appropriate and achievable rather than bureaucratic. There were several comments that this should be outcomes based – indicating what works and how to intervene rather than just describing the problem.

Resource and capacity

Capacity - time, skills and training and money - was mentioned frequently in the discussions. Many respondents felt they did not to have the time to engage in research, especially as research is considered lower priority. At a more strategic level, no time was given to planning future research needs, as most respondents would have liked; due to "firefighting" and a reliance on the way things have always worked:

"You tend to buy what you've always bought because the council hasn't got capacity to think, well, what do you think we should be buying, or what research should we be doing to find out how we should organise these…services next time the contract comes up".

"*In the past we used research to steer our work, now all we seem to do is be reactive to situation. I feel this is due to job cuts as people are just getting on with things every day and no time to research or reflect"*.

Skills and training are variable across the organisation, but include some highly trained professionals. There was a broad understanding that a range of research skills would be needed if BMDC was to increase its use of research, but basic research literacy is lacking in many departments. In addition, participants spoke of a need to support more advanced skills such as writing research funding bids, fieldwork, analysis, and commissioning.

There was a consistent message around the challenge of how to prioritise funding, or generate funding to support research capacity and research. Reference was made to how BMDC previously had a research team but it went following a series of significant budget cuts. There was however recognition that good research could lead to cost savings and so could be cost effective.

"We could prioritise what we want to deal with, which I think the politicians and the top of our organisation find very, very difficult to do. Or we just have to kind of keep spinning plates, or we invest in it more but we just do not have the resources to invest in, in it, we just don't and, and I think it's going to get tighter more than, more than… because of COVID and because of the pressures that come through COVID".

Research culture

BMDC was not considered homogenous in terms of its research use, attitudes or literacy. The council was described as "*lots of different types of organisations in one",* and as having *"lots of subcultures"*. Varying levels of engagement and readiness for research were reported across departments:

"I work in public health - so clearly evidence is important! It's not something which is appreciated or recognised across other departments. It's not within their culture/approach to work. So there's something about raising awareness, increasing skills and capacity, and showcasing how important and how it can make a difference".

BMDC was described by some as being risk averse, in terms of the scale of interventions implemented and around data sharing activities, both internally and with third parties. Despite this there was a clear ambition at senior levels for research to be core to BMDC's work rather in contrast to the reality.

"*The level of ambition is high but the level of resource to deliver against that ambition is low*".

This contradiction was recognised by senior figures, who acknowledged that, whilst not perfect, the use of research and evidence in BMDC was improving. Similar ambition was reported in the online survey. Evidence was also considered empowering for decision making:

"*Given the evidence, it's easier to make more difficult political decisions and I think sometimes politicians don't have all of the evidence to make those difficult decisions*".

Partnerships
Partnership working with universities and other research organisations was common, with lots of examples highlighted by participants. This was considered positive and participants described third party organisations as a more trusted source of evidence, an excellent source of skills and expertise, and good value for money for bespoke pieces of work. There was enthusiasm to build on existing partnerships and to increase activity with partners where BMDC could contribute more fully:

"*… we've got a great asset ..in the Institute of Health Research that you're sitting in, and Born in Bradford and we're very lucky in Bradford compared to probably Wakefield or Doncaster in terms of having that, and we do use that but not, not as much as we could do to match our kind of overall ambitions, just because of both the time and the, the resource…*".

Voluntary, community and social enterprises (VCSE) offer important partnerships for local authorities, not just in terms of service delivery but also as research and evaluation partners. Of those online survey respondents who stated they had been involved in commissioning research, 52% (n=17) used a research organisation, 36% (n=12) commissioned a university, and 24% (n=8) commissioned a local VCSE organisation.

c) Testing of our draft local authority research activity typology
Within BMDC we asked focus group and individual interview participants to rank BMDC using the typology. The most commonly reported level was 2 (range 1-3). External colleagues found it straightforward and a useful indicator of research activity, though commented that the level may be estimated differently by different internal directorates that may be more research active than others.

d) Research used in BMDC decision making
We reviewed minutes of all meetings for two of the council's senior strategic boards – the Bradford and Airedale Health and Wellbeing Board (HWB) and the Integration and Change Board (ICB), held between 1st January 2019 and 31st March 2020. HWB minutes included multiple references to evaluation of local projects, though no formal record of using evidence in decision making. There was a standing ICB agenda item on research, and throughout the ICB minutes we identified statements underlining the priority of strengthening the application of research in practice and that research development is a "catalyst for change" and "more research activity and evidence within an organisation means better staff recruitment and better outcomes". No research references aligned to specific decision making were identified. BMDC now has a Director of Research (J Wright, PI) who is operating at BMDC board level.

e) Rapid review of existing models
Our rapid review of existing published models of local authority-based research systems found nine distinct model types of which four were UK based. **A more detailed summary of the review is provided in Appendix B.**

Briefly, the overall quality of evaluation of models was low. They varied in how they considered development of research capacity and capabilities within local government and had different approaches to facilitating the choosing (finding and accessing), using (to inform decision making) and producing of research (related to local government decisions, activities and needs). Models shared similar components, most commonly leadership and research culture, but were based on different assumptions around power and governance structures, degree of location/co-location, physical presence and ownership of each system, and the respective roles of academia and local government. The models should not be seen as mutually exclusive, and have the potential to co-exist and complement each other. The most recent and most substantive UK model was the Local Authority Champions of Research (LACoR) Logic Model (Appendix C) which fits well with the four themes that emerged from our fieldwork (leadership, resource and capacity, culture and partnerships). It is underpinned by a systems thinking approach which aligns with a range of research programmes in Bradford which are based on complexity thinking, including the NIHR PHR funded evaluation of the health impact of a city-wide system approach to improve air quality and the UK Prevention Research Partnership (UKPRP) ActEarly Consortium's whole system model of prevention.[8] In fact, Bradford has already demonstrated activity across a number of the LACoR logic model domains including inputs (co-production, data sharing agreements with local partners, external collaborations), outputs (shared roles), and outcomes (better use and integration of data, co-production with community groups), so to some extent the model is already partially in place in the city. The LACoR logic model is included in Appendix C.

f) Local government research capacity and career development

Both co-applicants working within BMDC reported that there was no specific BMDC research staff and where staff had research training or knowledge, they lacked the time to use it. The NIHR CRN Yorkshire and Humber has funded a BMDC-based data analyst for 12 months to help develop linked datasets for the ActEarly consortium and this has driven progress in data linkage and editing of education and health datasets for use by researchers. More generally, it was suggested that improving knowledge around basic research principles, ethics and governance (i.e. safe handling of data) would engender a more research friendly environment, and introducing critical appraisal skills would be useful for policy development, so that staff could better choose and use evidence.

g) NIHR support for local government research activity

NIHR Clinical Research Network (CRN)

The NIHR CRN's remit was widened in 2018 to include public health and social care studies, but its activity and performance management remains clinically focused and many public health researchers know little about how it can help them. The LCRN funded data analyst post at BMDC is an example of how the network can support public health and other non-recruiting studies.

NIHR Applied Research Collaboration (ARC) Yorkshire and Humber

The NIHR has asked all ARCs to ensure that public health, mental health and social care are embedded across the work programme and that key stakeholders from these areas are involved to ensure impact in these areas. ARC Yorkshire and Humber actively engages local authorities in collaborative research projects, and facilitates research relationships between local government and academia. Three Local Authorities (Doncaster, Leeds and Bradford) are current ARC member organisations.

NIHR Research Design Service (RDS) Yorkshire and Humber

There is no strategy for local authorities but supporting more public health research is one of the national RDS priorities. The RDS is further developing the support offered to local authority colleagues by working with the pilot Public Health Research Applications and Design Assistance (PHRADA) service and a RDS Partnership Group.

NIHR Centre for Engagement and Dissemination (CED) currently links with the Public Health England (PHE) librarian network as a way of providing updates for public health staff in local government.

The *NIHR Academy* will, in early 2021, launch two new personal funding schemes which support a combined practitioner/researcher role at pre-doctoral and doctoral level in Local Authorities.

5. A proposal for a Bradford LARS

Summary and discussion of key findings from data collection and reviews

BMDC demonstrates features which broadly correspond to level 2 in our typology (figure 1). It is responsive and supportive when approached by academic partners, but less likely to create and use research independently. The importance of research is mostly well recognised with some senior support, but there are challenges to research activity around resources, politics, understanding and skills. External support from the NIHR is slowly adapting to the local government environment but much more work is needed to shift the centre of gravity towards public health, local government and the community more generally.

A LARS model for Bradford

The LACoR Logic Model (Appendix C)[1] was the best fit for our context, however, the scale, depth of application, embeddedness and independence is at a very early stage in Bradford (features that the model does not include). For example, BMDC has contributed to data sharing agreements, collaborations and co-production when approached by others but is some way from leading these activities. To progress beyond typology level 2, we propose a Bradford LARS based on the LACoR model but that recognises the depth and independence of inputs and outputs, as well as the research activity and networks already established in Bradford. Our adapted model (figure 2) aligns with the priority themes that emerged from our interviews: leadership, resource and capacity, culture and partnerships, incorporates the components of our typology, and is a model for the local system rather than specifically the local authority. It is deliberately concise, as through our fieldwork, we found that people would like to see simple messaging and processes for research. We will use this adapted model to structure our thinking and work towards moving up the local authority research activity typology.

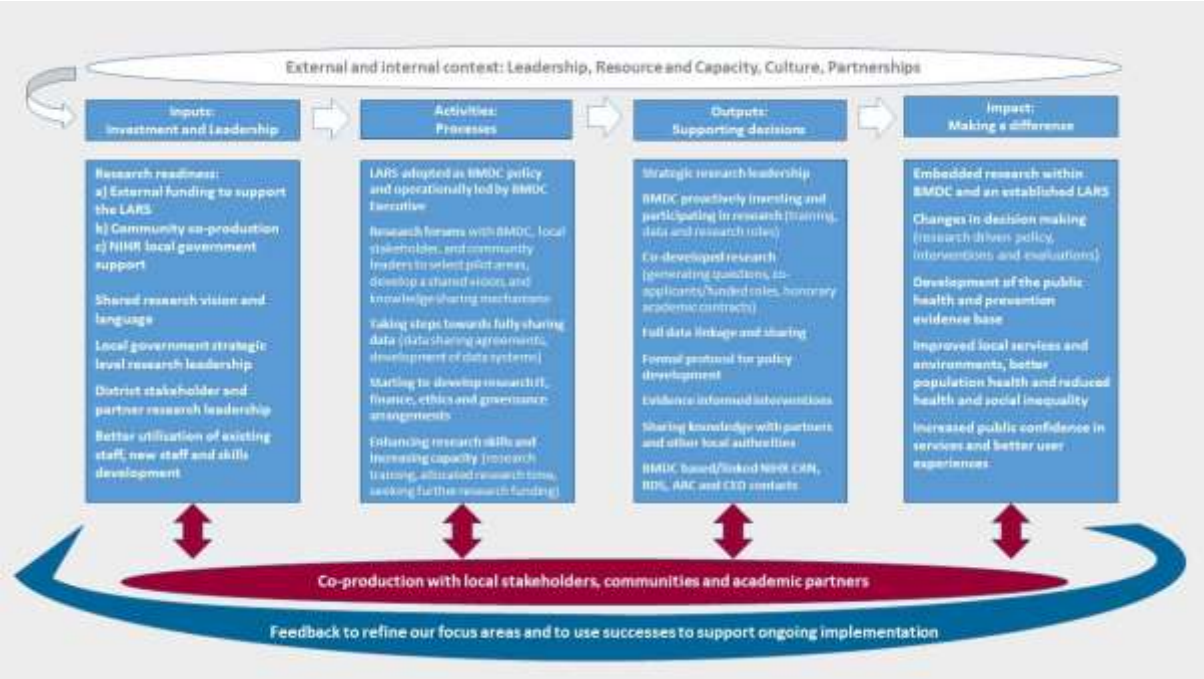
Next steps

A) System research readiness

In this project, we have identified a number of conditions important to ensuring readiness of our local system for a Bradford LARS:

A shared vision, language and understanding of research: We found inconsistent accounts of what is accepted as evidence or research. Local government is a political environment subject to political cycles and leadership changes. Elected members respond to their communities which means that research evidence is only one form of evidence used to make decisions, and views on its importance and value can be mixed. Similarly, different understanding of what is 'research evidence' exists not just between local authorities and partners, but also within them. We propose a series of research forums with BMDC leadership, academic and local partners, NIHR representatives and local communities to discuss a shared research vision, understanding and language.

Figure 2 Proposed Bradford LARS model (adapted from the LACoR logic model)



Additional external resource: Government funding for local authorities fell by almost 50% in real terms between 2011 and 2018[9] and the COVID-19 pandemic has brought further challenges. For BMDC to move from being a responsive research partner to a more proactive research organisation, significant resource is needed to support and sustain a Bradford LARS. External investment in a research skilled workforce (collaborating with and supported by NIHR infrastructure and academic partners), research and development infrastructure (data systems, IT research related software, access to online research, research finance support), governance and ethics arrangements, and co-production activity (see below) is needed so that local authorities can choose and use research, and fully participate in generating and delivering research alongside academic partners.

Co-production with stakeholders and communities: In Bradford, there are well-established community assets on which co-produced research with communities could be developed, for example by embedding citizen science approaches and expanding our existing community research advisory groups within existing local authority structures, networks and activities across the local system. Community co-production is included in our model as a formal structure within the LARS.

NIHR infrastructure: The LACoR logic model includes 'willingness to change' as an internal context (Appendix C). In our adapted Bradford model we also include this as an external context, for example, the NIHR will need to be willing to rebalance clinical research support with the complex non-clinical environment of local government. *NIHR CRN* support could be improved by increasing some of the network's resource allocated to local government, and by developing new mechanisms of support that work for non-clinical and non-recruiting research, for example support for data access, linkage and sharing. Local government representation on LCRN partnership boards would be helpful. A local authority equivalent of the Good Clinical Practice training standard would give local authorities a specific ethics and research practice standard. *NIHR ARCs* should be encouraged to include local government in their steering groups and address local authority health–related priorities. *NIHR RDS* could further expand its public health expertise by a wider NIHR requirement for NIHR Public Health Research Programme principle investigators and NIHR Senior Investigators working in public health, to provide expert support to those seeking local government and public health support from the RDS. *NIHR CED* has an opportunity to drive knowledge mobilisation and exchange between local authorities to support development of and access to the public health

evidence base, for example, by providing evidence summaries for the Local Government Association, Association of Directors of Public Health, Local Authorities Research and Intelligence Association (LARIA). The development of a registry of local authority research (similar to the NIHR Be Part of Research register) should be considered.

B) Actions to implement a LARS in Bradford

Our system research readiness conditions describe what needs to change, and below we outline the actions required for BMDC to implement a LARS and progress to level 3:

1. We will seek commitment for a Bradford LARS from senior BMDC leadership and other leaders across the local system. The development of a LARS will need to be adopted as policy by the council, be accountable to the council at executive level, and operationally led by senior council Executive members (supported by the Director of Research). Research utilisation and evaluation will become a core part of local government leadership development, including how to manage staff who resist efforts to evaluate a project or enable data sharing.

2. We will pilot our adapted model using two areas of high priority to BMDC and the district, which further develop and harness the power of the Bradford connected datasets linking system wide factors relevant to a range of local authority departments and partner organisations. This will demonstrate what interventions work, impacts, and potential budget savings which we will feedback across BMDC and the local system to generate interest for roll-out of the framework more widely. We will consult with leaders and communities through our research forums (described above under system research readiness) to gain consensus and select pilot topic areas which are important to public health and are impacted by system wide factors under the control of a range of local authority departments (e.g. transport, education, environment) to encourage wide engagement across the council.

3. We will focus on the activities identified in our adapted model (figure 2), for example, starting to develop full data sharing, enhancing research skills and increasing capacity through new staff and allocated research time for existing staff, supported by academic partnership and support from the NIHR infrastructure.

4. We will use adapted improvement methodology to iteratively implement the action plan. This approach will acknowledge that the organisation contains disciplines at different stages on the 'evidence based practice' journey and so tailored approaches will be needed. As we progress we will continue to identify areas we need to change to move up the typology and will learn from our focus on these as we progress to level 3.

5. We will more formally evaluate our progress against the outputs and outcomes in our adapted model, such as changes in decision making and evidence informed policy making. We will also evaluate the process of embedding research in BMDC for example, we expect that over time that our LARS leadership, resource and capacity, culture and partnerships will evolve and be refined. We propose a “research on research” study within our LARS to better understand this process and its influence on the local system.

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