

Local Authority Champions of Research Project: A Report for the Health Foundation

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1. Executive Summary

1.1 Aim

The aim of the Local Authority Champions of Research study, funded by the Health Foundation, was to explore a culture of research and evidence use to improve population health could be embedded in local government (LG). This report set outs the findings from five work packages undertaken from January to October 2019, with implications of these findings for LG, academia and research funders.

1.2 Methods

We undertook a rapid literature review of 21 published papers, an online scoping survey of approaches to evidence use in LG (n=8) and facilitated workshops in three UK sites involving 54 participants. In-depth 1:1 interviews (n=14) were conducted in one LA. The combined data informed the development of a logic model which was tested and refined in two further workshops with stakeholders in Newcastle (n=13) and London (n=27). We piloted different approaches to evaluation, and report the findings from Social Network Analysis involving data from 21 respondents who completed a follow up survey.

1.3 Findings

We found no shared agreement about 'what counts' as evidence in LG, with multiple cultures of evidence use co-existing. LA staff who participated in this study were keen to use evidence to inform their work and some felt their research skills were underused. Practical examples of innovative approaches to evidence use were identified in a changing landscape, including research champions and embedded researchers, operating in different ways as knowledge mobilisers and change agents. Organisational churn, rising demands, fragmentation, siloed thinking, data sharing, governance and access issues, capacity, workload and resource pressures limit the ability, time and space to use evidence as a part of routine decision making.

There is a need for academics to adapt their approach, understand the social, political, financial and regulatory context of LG. With the right approach, as part of multi-agency teams, researchers can maximise opportunities for research evidence to inform, and support, decision making alongside other forms of knowledge, including from policy makers, practitioners, politicians and the public. This requires trusting, respectful relationships, a nuanced understanding of context, and for all partners to work together to create a system wide approach to promoting evidence use and creation across LG in partnership with wider stakeholders.

1.4 Conclusions and recommendations

There is an appetite for strengthening the culture of, and capacity for, evidence use in LG. Sustainable funding and incentives are required to support meaningful, co-production opportunities to facilitate a system wide change to grow networks of research champions within and between local authorities and with academia to address questions which reflect the priorities of LG.

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2. Background and introduction

In this report, we describe the findings from the Local Authority Champions of Research (LACoR) study, funded by the Health Foundation and undertaken from January to September 2019. Following a brief introduction and description of methods used, we set out the findings from five work packages (WP) including a rapid literature review (WP1); a scoping survey of approaches to evidence use in local government (WP1); qualitative research including workshops and 1:1 interviews with local government colleagues which informed the development of a logic model (WP2&4); a case study of embedded research (WP3); and pilot of different approaches to evaluation and report of the findings from Social Network Analysis undertaken (WP5). Our aim in the study was to explore ways to embed a culture of research and evidence use in LG to improve population health and address health inequalities.

Local government (LG) is ideally placed to draw on and develop evidence to influence the upstream determinants of public health and reduce inequalities. A renewed focus on prevention, the wider determinants of health and the need to work across different government departments, requires new methodological approaches, including those more suited to evaluation within complex systems (Allan et al, 2014; Holmes et al 2016; Rutter et al., 2017). A complex systems approach is required for a study of this kind as it encourages a focus on context, relationships, interconnections, multiple perspectives, feedback loops and emergence. It assumes that agents in a LG system are interacting and connecting with one another in numerous, non-linear, unpredictable ways influenced by context (Health Foundation 2010).

The Local Government Association (LGA) describe policy making being “evidence-informed” rather than “evidence-based” due to the wide range of issues involved in decision making in LG and in recognition that evidence is only one factor. Evidence-informed policy making is predicated on the value of making decisions informed by the best available research findings. At a time when austerity and public sector funding cuts have been factors limiting investment in research and evaluation, models are needed to generate evidence through collaborative approaches. The push to use evidence to addresses questions of concern to policy makers and practitioners is growing at a time when increasing financial pressures in LG (including public health departments) are driving a need to spend wisely on what works to improve health.

Much is known from previous research, both in the UK and internationally, about the complexities of using evidence in policy and practice: research timescales often do not align with policy processes; research findings are inaccessible; different types of evidence are valued (Oliver et al 2014, Powell et al 2018, van der Graaf et al 2018). Formal research evidence competes with informal knowledge (Ferlie et al 2009) influenced by personal, social and political processes (Fox et al 2019). There is recognition that closer interaction between those working in public health policy and practice and academic researchers increases the likelihood of evidence being used in multiple different settings to improve outcomes (Nutley et al 2007), but progress remains slow (Boaz et al 2019).

There is a willingness to explore and test different models of collaboration between researchers and public health professionals (PHPs) to support the development of evidence-informed policy and practice, including through embedded researchers in LG (Duggan 2014, Cheetham et al 2018), and researchers-in-residence in NHS settings (Marshall et al 2014, HS&DR 2018, Vindrola-Padros et al 2017/2019) and integrated care organisations (Gradinger et al 2019). Increasingly the benefits of involvement in research and evidence-informed policy and practice are recognised. Recent studies of organisation-wide improvement initiatives (The Health Foundation 2019) have shown that the creation of a positive, collaborative and inclusive workplace culture, with a learning climate, time and space for reflective thinking, can be associated with improved patient outcomes (Braithwaite et al 2017), which in turn can improve staff morale, retention and quality of services. One of the five questions which the Care Quality Commission in England asks of services they inspect, relates to effectiveness; specifically whether the care, treatment and support which is provided achieves good outcomes, helps people to maintain quality of life *and is based on the best available evidence* <https://www.cqc.org.uk/what-we-do/how-we-do-our-job/five-key-questions-we-ask> .

The Academy of Medical Sciences (2016) report, improving the Health of the Public by 2040, called for transdisciplinary research in order to tackle the public health challenges of the future. Organisational and cultural barriers within the current system have made this approach difficult to achieve. In its recent report, Public Health England (2018) cited the need and ambition to “strengthen or establish vibrant networks/communities of practice, improve quality of service, and promote exchanges of scientific information and professional experience and to facilitate knowledge of resources available across the system”. Together these approaches recognise and draw together different forms of knowledge from multiple sources, including political actors, enabling collective wisdom and insights to be generated alongside an understanding of contextually relevant solutions.

The Government Green Paper (2019: 62), *Advancing Our Health: prevention in the 2020s*, acknowledges that transformative change in prevention will only be achieved if it is underpinned by high quality research. This involves:

- delivering an evidence base that is much more ambitious
- drawing on a whole new range of disciplines
- co-producing research with the public, policy makers and practitioners
- answering the most important questions facing local authorities and service providers
- focusing research on areas in the country where the public health challenges are greatest
- inspiring the next generation of researchers
- attracting the best people into prevention research
- combining academic research with practice as a career pathway

To achieve this there needs to be a shift in the culture in LG *and* academia to work together to create, share and use research-informed evidence alongside other forms of knowledge. For the purpose of this study, **a research culture is defined as a system which facilitates transdisciplinary working, co-production and collaboration in evidence creation and harnesses the broadest range of types of evidence for local government decision-making relevant to improving health.**

Developing this culture is a two way process involving high levels of collaboration, relationship building and shared learning if it is to be successful. This takes time and energy, because it involves the development of respectful relationships and understanding about the respective systems, structures and pressures (organisational, professional, political, and financial) that surround evidence use.

In the following report, we describe the activities undertaken to explore evidence use in local government, the findings from each of the work packages, before discussing what we learned and its implications for academia, LG and funding organisations.

3. Methods

The proof of concept study consisted of five work packages:

1. To undertake a scoping exercise of the different approaches being currently used to support evidence-informed policy and practice in LG settings.
2. To jointly develop a logic model for embedding a research culture within LG.
3. To refine the logic model based on insights gained in this 'proof of concept' study and to develop recommendations for how the model could be generalised for use elsewhere in England and across different jurisdictions.
4. To learn from an embedded researcher case study.
5. To test the feasibility of approaches to evaluation of the value of an embedded research culture in LG.

3.1 Work package 1: A Review of embedded research models in local government

Work package 1 consisted of two parts: a rapid literature review and a scoping exercise. Each is discussed in turn below.

3.1.1 Rapid literature review

A rapid literature review was conducted to (1) identify existing literature on research capacity and usage in a LG context, as well as (2) identify current practice detailed in the literature relating to embedding research culture(s) in LG. For pragmatic reasons to fit in with the overarching project timetable, the review was rapid rather than a full systematic review. Rapid reviews use a streamlined approach to order to synthesise evidence quickly within a limited time frame. They are typically used in aiding decision makers in health care and health service settings to respond quickly to urgent and demanding needs (Konnyu et al, 2016). The rapid review has been informed by the WHO guidance on rapid reviews (Tricco et al, 2007) and rapid review methods (Thomas et al, 2013, Feathesone et al, 2015, Langlois et al, 2019).

The protocol and flow diagram of publication selection process are set out in 8.1 **Appendix A:**

Rapid review protocolA. The literature search took place during April 2019 and was restricted to publications with English language abstracts published since 2010 (just prior to public health moving into LG in England) which were published in peer-reviewed journals, or on Government websites. All literature had to relate to LG in the UK to be included.

In total 1,323 articles were identified through the initial database search. Following an initial screening of the titles, 110 potentially relevant articles were downloaded and screened at abstract level for duplication and relevance. These titles included those identified through the database search as well as an additional 36 identified from the project team. 38 full-text articles were downloaded following the abstract screening and assessed for eligibility in line with the inclusion criteria. Data was extracted from 21 articles for inclusion within this study. Data extraction was conducted using an Excel data extraction spreadsheet using a thematic analysis approach, where, following a review of all data collected, common 'headlines' were formed inductively to provide structure to the data extraction.

3.1.2 Online survey of approaches to facilitate research and evidence use in local government

To supplement the rapid review, an online scoping survey was developed (see 8.2 Appendix B: **Template for Local Authority Champions of Research scoping review**) and distributed to Directors of Public Health across England with support from the LGA in order to identify different approaches currently in place to encourage and facilitate evidence informed practice in LG. The survey was piloted by a practice partner and reviewed by all project collaborators. Feedback was used to improve the language, order and framing of questions in the survey.

The survey consisted of 23 mostly open-ended questions, asking respondents to provide and reflect on examples of scientific health research use in their LA. Additional questions were asked if respondents indicated that they had an embedded researcher in the LA. At the end of the survey, respondents were asked whether they would be willing to participate in a follow-up telephone interview to discuss their experiences in more detail. Three follow up interviews were undertaken and notes taken of these.

The survey link was circulated widely by email and social media in the personal networks of the research teams and project collaborators. In spite of these efforts, only 8 completed questionnaires were returned between May and July 2019 when the survey was active. Therefore, the findings need to be interpreted with caution as they are an indication of a small sample of experiences and are unlikely to be representative of practice across England. Findings from the scoping exercise are discussed in section 3.

3.2 Work package 2: Developing a prototype system based logic model

The initial LACoR logic model was developed following a workshop with LA staff in Newcastle which explored how evidence is currently used in LG, alongside the opportunities and challenges of using evidence in this context. The topic of school readiness was used to focus discussions in the workshop whilst relating findings back to the core theme of evidence use.

Data collected was analysed by the research team through a framework approach in order to develop an understanding of what aspects of embedded research are likely to be effective as well as how an evidence-informed research culture could be adopted and supported.

A 'type 4' systems based logic model structure based on work by Mills et al (2019) was adapted to allow for qualitatively modelling the dynamics of the complex process of embedding a research culture within a LA setting. This approach allows for greater emphasis on the contextual influences on the mechanisms which interact through flexible facilitation within the overarching output (Dalkin et al, 2015) of an embedded research culture. These elements surrounding an embedded research culture, continually interact and re-organise themselves into more elaborate structures over time resulting in 'emergent dominant forces' (Matthews et al, 1999) therefore creating a complex frame of reference.

The logic model was revised by the research team through an iterative process following two further workshops with staff from two other local authorities focusing on core themes related to embedding a culture of evidence use within a LA setting, as well as qualitative interviews with LA staff.

3.2.1 Workshops

Following the initial workshop in Newcastle, subsequent workshops were held in Belfast and Southampton attended by 54 participants in total. Topics were used to focus discussions, 'health inequalities' in Belfast, and 'health in all policies' in Southampton. Workshop discussions provided an opportunity to scope local needs in relation to the chosen topic and examine the existing networks that drive decision making and use of evidence.

Although each authority chose different public health topics to frame their discussions, workshops were facilitated using similar prompt questions, to test and refine different components of the logic model. Written notes by table facilitators and flipcharts from each of the interactive table

discussions at the workshop were analysed collectively by the research team and informed the development of the logic model.

The logic model was then presented at a fourth workshop by means of a 'sense check', generating group discussion among LA participants (n=13) regarding the appropriateness of the model along with practical considerations of its application. See 8.3 Appendix **C: Facilitated workshop attendance** for a detailed breakdown of workshop attendance.

3.2.2 Qualitative interviews in Newcastle City Council

Aim

The aim of the qualitative data collection was to explore evidence use and how to embed a culture of research and evidence use in LA decision making, and explore the themes emerging in the topic-specific workshops with a group of stakeholders working in / with LG. One to one, face-to-face, semi-structured interviews were conducted by a researcher, hosted by the public health team in Newcastle City Council from February to August 2019. LA (LA) colleagues in the People Directorate (Insights and Informatics and Public Health teams) operated as organisational navigators, helped familiarise the researcher with the LA culture and context and facilitated access to, and recruitment of, potential participants.

Recruitment and sampling

A purposive sample of LA staff and stakeholders from partner organisations (n=14) were recruited to explore perceptions of what, why and how evidence is currently used in LG; factors influencing efforts to build a culture of evidence use and any examples of where evidence had been used to affect change.

Fieldwork took place between May and July 2019. An initial list of potential interviewees (n=15) was identified in scoping meetings undertaken from February to April with members of the public health team and wider research team. A further four potential participants were identified in interviews and contacted to check for interest in taking part in the study. Participant Information Sheets (PIS) and consent forms were circulated to all potential participants by the Director of Public Health, on behalf of the research team, to inform people about the study and invite them to contact the researchers with any questions. Participants made arrangements with the researcher directly if they were willing to take part.

The final sample included the following participants;

LA staff (n=10), elected member (n=1), senior representatives from the Clinical Commissioning Group (n=1), Voluntary and Community sector (n=1) and University (n=1). Council officers who participated were located in People; Place and Assistant Chief Executives Directorates and included representatives from public health (n=3), Insights and Informatics (n=4), community safety (n=2), commissioning and procurement (n=1).

Data collection and analysis

A draft interview schedule was piloted and amended using feedback from one interviewee (see 8.5

Appendix E: **Interview Schedule for staff**). The topic guide covered participants' views on;

- How evidence is defined in the context of local government
- What kinds of evidence are used, by whom and for what purpose
- Factors influencing evidence use in local government
- Any practical examples of evidence use/partnerships with Universities/embedded research
- Messages for Universities/evidence producers/funders
- Views on the draft logic model developed in the workshops

Interviews lasted between 40 minutes and one hour 20 minutes (average 65 minutes). All interviews were audio recorded and transcribed verbatim. Transcripts were coded and analysed thematically using a coding framework informed by the interview schedule and themes drawn from published literature. Themes included types of evidence; sources of evidence; drivers of evidence use; barriers and facilitators to evidence use; practical examples; relationships with university-practice collaborations. Verbatim quotes from participants are included to illustrate the main themes identified. Named examples are included with the permission of the relevant participant.

3.3 Work package 3: Learning from an embedded researcher: 'a case study'

Researchers embedded in practice are one potential approach to supporting the development of a research culture. An embedded researcher was appointed towards the end of this project to work in Well Newcastle Gateshead, jointly funded by Newcastle and Gateshead Local Authorities with Well North, which supports the delivery of a number of 'Arts for Health' projects in four wards of high deprivation. The work is delivered in partnership with third sector organisation Bluestone Consortium and funded from Research and Capacity Funding held by the North East Commissioning Service (NECS) and from Well Newcastle Gateshead so was not included in the funding for this study.

The plan is for the embedded researcher to work with the LAs, third sector and community organisations in Newcastle and Gateshead to establish a culture which values research and offers practical advice to ensure that routine data collection, monitoring and evaluation is part of the norm, and which facilitates and develops ‘citizen research’ through local assets.

Our progress on this work package has been slower than anticipated. The recruitment process has provided valuable learning about advertising and developing a job description and person specification for an embedded research post like this. Our experiences reflect the challenges of recruiting people with public health experience to academic roles and the different rewards and incentives in LG and academia respectively.

As the research process unfolds, this case study offers an additional opportunity to further contribute to the development and testing of the logic model and the feasibility of proposed approaches to evaluation described briefly below (WP5). The case study will add to other examples of embedded researcher models identified in the scoping survey and described later in this report, (WP1).

3.4 Work package 4: Refining the logic model based on insights gained in workshops

Following the development of the draft logic model, a final workshop was organised in London with wider stakeholders on 19th September 2019 to present and sense check the final logic model and to develop recommendations for implementing the model across different contexts.

Participants at the workshop included consortium members, Public Health England, Department of Health and Social Care and two participants from each of the four previous workshops including Directors of Public Health and Senior members of Public Health Agency NI. Participants discussed options for using the findings to develop and evaluate an embedded research culture in LG in different locations across the UK.

3.5 Work package 5: Testing the feasibility of approaches to evaluation of the value of an embedded research culture in local government

This work package aimed to test the test the feasibility of potential methods which could be used to measure both the intermediate and longer-term impact of developing a research culture in LG in the

next stage of this work (subject to further funding being secured). Timescales (9 months) and resources invested in LG were such that it was not the intent to seek to detect change or evaluate if embedding a research culture in LG made a difference to the ingraining of evidence and evaluation as normal practice, rather to test the feasibility and acceptability of potential methods. Two approaches were tested as potential evaluation methods; complex system mapping and stakeholder network analysis.

3.5.1 Complex system mapping

A complex systems approach was taken to the topic of embedding a research culture within a LA. This approach goes beyond systems thinking, recognising not only that the component parts of open systems are interrelated and interconnected, but also acknowledging that the interconnections are inherently unpredictable and prone to change (Johnson, 2009; Wolf-Branigin, 2009; Stevens & Cox, 2008). The complexity frame of reference views local authorities as not just a single entity but as a 'social system' with internal (i.e. staff, structures, cultural values) and external (i.e. political environment, national directive) influences.

This project was focused on the potential for embedding a culture of research within LG. Such a culture would therefore be embedded within systems that influence such a culture, and are in turn influenced by it. We therefore drew on systems thinking approaches to help generate a conceptual model of the relevant systems.

Our team includes experts in complex systems and we have used to this expertise to work with stakeholders and map the relevant systems, identify the most relevant elements, and describe the relations between them.

We approached this by generating a stakeholder-led map of the potential elements within those systems, and the relations between them. We used this to achieve three main objectives:

- 1) To agree the boundaries of the systems we were addressing
- 2) To help identify key areas of importance for embedding a research culture in LG
- 3) To provide contextual information to support the refinement of the logic model

A draft systems map was created during the workshop in Belfast by one of the co-investigators (8.6

Appendix **F: Draft Systems map**) using online mapping software (STICKE, Deakin University). We broadly followed the approach used to generate a causal loop diagram described by

Hovmand, and as used by Allender and Friel. This generated a map that focused on hypothesised causal relations between putative factors, which identified three main potential positive influences on a culture of research (importance of a critical friend role; generating evidence through evaluation of activities; and pursuing evidence-informed activity), and one key negative factor (maintenance of the status quo). The findings from the map were then used to contribute to the refinement of logic model.

3.5.2 Stakeholder Network Analysis

Stakeholder Network Analysis (SNA) was proposed as a potential additional method of evaluation because it offers an approach to assess the structure, characteristics and function of the stakeholder network, including temporal changes of these factors, providing important aspects of context for embedding a research culture. Given the strong relational nature of research mobilisation within LG, which was confirmed by the rapid review, by the online survey of best practices and the interviews with LA staff, an assessment of the network and the processes that facilitate or inhibit the effective use of research evidence in LG is an integral part of this programme of work.

The sustainability of any efforts to support implementation at both individual and organisational levels will depend on the strength and empowerment of the inter-organisational networks. A study of the network processes facilitating or inhibiting the effective use of evidence in Local Authorities is thus an integral and important part of this pilot (Stecklar and Linnan, 2002). The evolution of organisational capacity and the effectiveness of these partnerships to meet their objectives are assessed using established partnership and stakeholder network analysis tools and techniques (Nigg et al, 2002; Provan et al, 2004).

A stakeholder network survey was developed by Dr Ruth Hunter from Queen's University Belfast and other consortium members (see 8.7 Appendix **G: Social Network Analysis (SNA) Questions**). The pilot survey measured the extent of network ties between stakeholders, in terms of reciprocal relationships and exchange of information, and was used to visualise and describe the network mathematically.

The survey was distributed online to the participants of the first three workshops (Newcastle, Hampshire and Belfast) via our purposefully developed tool (<http://stakeholdernet.org/>) to test the feasibility of this method for assessing the stakeholder network. Each survey was tailored to a specific chosen topic area in each LA, including *school readiness* (Newcastle), *health inequalities*

(Belfast) and *health in all policies* (Hampshire). The network boundary was defined as those who were invited to and attended the workshop in each LA pilot area. In total, 40 stakeholders (n=15 Newcastle; n=13 Belfast; n= 12 Hampshire) were invited to participate via email containing a Participant Information Sheet and URL to the survey. Before participants completed the survey they provided informed consent.

Briefly, the strength and extent of network ties between the stakeholders, in terms of reciprocal relationships and exchange of information, can be evaluated using a range of mathematical parameters describing the network (Hanneman and Riddle, 2005). This includes the network density, degree (in-degree and out-degree) and clustering co-efficient, which reflect respectively the connectedness of the network by the proportion of possible ties in a network that are present, the number of ties to and from a stakeholder (used to determine opinion leaders), and the measure of the degree to which nodes in a graph tend to *cluster* together (Valente, 2010).

4. Findings

Findings in this section are presented in relation to the data collection methods used, prior to a discussion of the overall findings in section 4. Throughout the data collection and analysis, key themes emerged which spanned the rapid review, scoping exercise, workshop feedback and qualitative interviews.

4.1 Rapid Review

The primary aim of the rapid review was to identify (1) existing literature on research capacity and usage within a LG context, and (2) current practice detailed in the literature relating to embedding research culture(s) within LG with the following research question guiding the literature search:

What is known and understood about research/evidence use in local government and building research capacity in local government in the UK? How does evidence inform decision making in local government?

As this was a rapid review carried out within a limited timeframe, one researcher carried out the data search and initial screening at title and abstract level. Two additional researchers contributed to the detailed abstract review of 38 articles and also screened 10% of the titles to provide quality assurance.

Many of the papers reviewed did not explicitly state the types of research used, or how capacity had been built in relation to the use of research, but rather highlighted how research had contributed to the various functions of the LA. A thematic analysis approach was taken on the data extracted from the literature and from this seven key themes emerged: Multiple types of evidence; Drivers for use of research; Context; Barriers and facilitators; Collaboration; Data usage; and People. These headings have been used to structure the findings to understand how research and evidence is used within LG.

4.1.1 Multiple types of evidence

It was clear that although many of the studies cited the use of evidence, there was not a single consistent definition of the term. 'Evidence' is used to relate to a diverse range of meanings and sources depending on context within which it is used. Evidence was observed to relate to: Statutory data; National guidelines; locally derived intelligence, including the voice of citizens; Theoretical

standpoints (i.e. behavioural science theory); and scientific evidence. Beenstock et al (2014, p466) highlight the challenge of defining evidence and how it should be used in the context of local authorities through the following interview extract:

'We are clear that decisions have to be based on evidence. This is a simple principle but we also recognise that there are challenges: evidence from different sources presents convincing pictures; quantitative and qualitative evidence about the same circumstances may not easily be amalgamated to present a comprehensive picture; and board members bring different types of expertise and may have different views about relevant evidence methodologies.'

As well as different meanings, different values are placed on 'types' of evidence. The perception of value assigned to particular evidenced sources is linked to staff role and context. A disconnect between what LG practitioners and researchers viewed as evidence was highlighted (Van der Graaf et al, 2017; Oliver & de Vocht, 2017). It has been suggested that a critical 'political science' perspective is required to recognise the complexity of the local policy process within the LA setting in relation to interpreting and understanding the importance of evidence (Sanders et al, 2017).

LG decision makers are often stated to place greater emphasis and value on locally produced data than national data sets or national scientific research (Gavens et al, 2016; Atkins, et al, 2017; Kelly et al, 2017). The value of local over national level evidence was clearly highlighted in a review of LG health and wellbeing strategies by Kneale et al (2017) where only 5 out of the 47 strategies reviewed were found to contain reference to research evidence published in an academic journal and only 3 were found to reference NICE guidance. None were found to reference a Cochrane systematic review (Kneale, et al 2017).

4.1.2 Drivers for use of research

Research is predominantly seen to be used in policy formation processes within a LA context. However, statutory requirements for data collection are also seen to drive engagement with research (Hallmi & Brown, 2014) along with guidelines mandating the use of evidence when developing policy (Oliver & de Vocht, 2017). Evidence is more likely to be used to inform service planning if stakeholders at all levels have opportunities to consider what it means through both formal and informal means (Cheetham et al, 2018), suggesting therefore, a need to ensure engagement with various stakeholders within the LA.

4.1.3 Context matters

Context is highlighted within the literature as having significant impact on both how evidence is perceived and how it is used within a LG setting. '*...the culture of using evidence to inform policy-making is far from a well-established or uniform practice.*' (Lord & Hincks 2010 p477). Local needs are often used to frame the context within which evidence and research is used within LG (Kelly et al, 2017). It is commented that there is a need to 'interpret' evidence in light of the local context in order to make it relevant and therefore increase potential usage (Sanders et al, 2017).

LG is often described as complex and as such has been suggested to necessitate comprehensive and context sensitive evidence (Kneale, 2017). There is a need to understand the 'realities' of the context and acknowledge the idea of 'real-world' situations where other factors influence implementation of policies and decisions and that these factors will vary across LG (Atkins, et al, 2017, Curtis et al, 2018). It has been suggested that the world of academic research is detached from the 'messy' and 'complex real-world' of commissioning within a LA and that this may cause barriers to impacts of research within LG settings (Sanders et al, 2017).

The policy process within LG is also viewed as 'messy' with evidence as just one factor in the process by Hallmi & Brown, 2014. The context surrounding policy formation in local authorities is also complex and highly politicised (Wilkinson et al, 2012). Policy is conducted through a number of channels including, overview and scrutiny committees, council members and the cabinet, and thus the ideology of the leading party in local authorities has significant influence on guiding research and evidence use and culture within LG (Hallmi & Brown, 2014). The accommodation therefore of political perspectives and the impact of limited budgets influence how and which evidenced informed national recommendations are implemented by LG (Atkins, et al, 2017, Boswell & Smith, 2017).

A 'three-way dynamic' has been suggested to exist between research, public health and the broader structure of the LA in informing the creation and use of evidence (Sanders et al, 2017). The context surrounding information sharing is therefore an important aspect of the practice of both formal and informal methods of evidence use (Gavens et al, 2016).

Public health is shaped by the political and legal constraints of LG and it is suggested that it is this context which creates implications in terms of the type and format of evidence needed and used (Kneale et al, 2017). Pressures from contextual factors, such as public preference are important

factors to elected members and as such influence policy formation and implementation (Atkins, et al, 2017, Kneale et al, 2017).

The political nature of LG has been suggested to potentially make public health priorities vulnerable and subject to rapid change. There is therefore a need for the producers of evidence to work quickly or to have evidence ready, as often policy cycles differ to research cycles (Berridge, 2011), in order to respond to rapid changes in the LA (Kneale et al, 2017). Evidence usage aligned to the prevailing ideology is seen to be identified as the most useful to decision makers (Kneale et al, 2017).

4.1.4 Factors influencing use of evidence

Barriers:

The issue of local evidence is again highlighted in relation to barriers to engaging with evidence and research to inform decision making. The perception that national evidence lacks local relevance is the key driver behind this barrier (Atkins, et al, 2017, Curtis et al, 2018, Kneale et al, 2017), with research studies having been described as ‘being too far removed from what is happening on the ground.’ (Van der Graaf et al, 2017 p5).

A perceived mismatch in relation to timescales is also apparent between LG and researchers. The speed of the decision making process is perceived as a barrier to the use of research in decisions, as the time lag between research evidence being produced and informing recommendations often results in research seen as ‘out of date’. It has therefore been suggested that there is a need for research to keep up with the speed of LG decision making (Atkins, et al, 2017, Van der Graaf et al, 2017).

Access to research relevant tools, such as journal articles and dedicated time to conduct literature searches were also identified as barriers to engaging with research (Curtis et al, 2018, Boswell & Smith, 2017, Wilkinson et al, 2012). As well as staff commenting that they do not always know how to access published research findings (Van der Graaf et al, 2017).

Existing organisational cultural working practices may also act as a barrier to evidence use within LG. The context of a public sector culture in relation to ‘siloes’ working with a ‘need to know’ attitude is suggested to hinder knowledge-sharing practices (Deverell & Burnett, 2012).

Two further barriers were cost which is seen as a barrier to engaging with research. Van der Graaf et al (2017) highlight the associated costs of rigorous research which is often seen as unaffordable by local authorities and the absence of relationships between researchers and practice partners within the LA is suggested to be a barrier to partnership working (Wilkinson et al, 2012).

Facilitators:

Linked to the requirement for more localised relevant research, there is a need for researchers to develop greater understanding of the evidence requirements of local decision-makers as well as developing greater collaboration to facilitate the use of research and evidence (Kneale et al, 2017, Hope, 2016, Boswell & Smith, 2017, Wilkinson et al, 2012). One method of addressing the requirement for understanding local needs is suggested by Cheetham et al (2018) and Van der Graaf et al (2017), who state that embedded researchers as an approach may go some of the way to address issues which can arise when knowledge production is not joined up between knowledge production and use. In this approach, embedded researchers carry out research alongside the end users, as part of that context. Co-production as an approach is highlighted as a way to ensure that researchers work closely with local authorities in order to understand issues affecting them and how research may be used to address this (Boswell & Smith, 2017, Cotterill & Richardson, 2010, Wilkinson et al, 2012). Another method linked to promoting change is knowledge transfer partnerships (KTP) KTP's link academics and organisations in order to enable the transfer of information to improve innovation. KTP's have been identified as a key method of promoting innovative change (Hope, 2016). It is suggested that they are effective in exchanging knowledge between universities, industry, communities and LG and therefore may also be well-placed to generate knowledge that is '...transdisciplinary, participatory, problem-orientated, practice-orientated, generated through formal and informal networks.' (Hope, 2016 p8.6). Knowledge translation is required to ensure that research is able to be understood by all, e.g. Councillors, public health decision makers and researchers – a common language/framing reference (Sanders et al, 2017).

Local authorities play a major role in how policies are formed and rolled out and therefore it can be argued that having this function will facilitate the use of research in such practices (Hallmi & Brown, 2014). In addition, innovative practices such as identifying original evidence bases that informed the national recommendations to determine how relevant it was for the local area have been suggested to improve perceived relevance of research (Atkins, et al, 2017). Becoming involved with the research process has been identified as a facilitator. For example, Hallmi & Brown (2014) provide an

example of schools becoming more involved with data collection, and as a result are more engaged with the data and indicators as methods to monitor and improve their overall performance).

As well as earlier being identified as a barrier, LG organisational culture may also be seen as a facilitator (Hope, 2016). A general cultural shift to evidenced-informed policy has been suggested to facilitate the use of research within a LG context in demonstrating the value of research (Davies, 2004).

4.1.5 Collaboration

Collaboration between departments, neighbouring authorities and external stakeholders are all understood to be effective methods in providing an evidence base for decisions and therefore collaboration can be viewed as a facilitator (Lord & Hincks, 2010, Boswell & Smith, 2017).

The strengthening of networks and communications between evidence producers and evidence users is central to meeting the needs of decision makers in health (Kneale et al 2017, Cotterill & Richardson, 2010, Wilkinson et al, 2012, Stokes et al, 2015). There is a need for researchers and decision/policy makers to work together due to the links with political context within a LA in order to facilitate the use of research (Beenstock et al 2014). Cheetham et al (2018) highlight a quote from Marshall et al (2016, p220) stating '*...for research to have impact, both knowledge producers and users need to be involved in its creation and application*'. However, how this should actually be undertaken in practice has been relatively under-researched (Kneale et al, 2017).

The embedded researcher role has been suggested to have the ability to act as a 'knowledge broker' (Cheetham et al, 2018). Knowledge brokers are suggested to have key roles to facilitate exchanges between academics and practitioners (Wilkinson et al, 2012). In this function of knowledge broker, the researcher is able to feed in research findings and bring stakeholders together in order to co-produce research which enhances local relevance and overall usefulness to local policy makers. Aspects such as the interpersonal relationships developed and trust are stated to be key to facilitating knowledge exchange (Wilkinson et al, 2012). In addition, knowledge transfer partnerships (KTPs) are identified as mechanisms for facilitating creation, transfer and exchange of knowledge and can develop innovative approaches (Hope, 2016). They have been observed to bring about significant change in both host organisations and the community in responding to challenges and producing useful evidence on activities to pursue (Hope, 2016).

The role of wider society has also been cited as contributing towards collaboration. The role of the university in recent years has been viewed to become increasingly interconnected and interdependent on wider society and the economy (Hope, 2016). For this to be successful there is a suggestion that integrative approaches with the wider society should be used to ensure that research agendas are influenced by a multi-stakeholder context, in order to address multidisciplinary societal needs (Hope, 2016).

However, although professional relationships need to exist between researchers and policy makers, it has been argued there is a need for researchers to maintain independence and guard against collusion as the reporting of unwanted findings may be compromised (Berridge 2011). In relation to this, it has been suggested that governance arrangements between LG and research establishments should be made explicit (Cotterill & Richardson, 2010).

4.1.6 Data usage

When looking at the types of data used in local authorities, again there is a sway towards locally produced and relevant data as 'being more persuasive' than national data sets (Atkins, et al, 2017, Curtis et al. 2018, Kneale et al, 2017, Wilkinson et al, 2012) holding to a view that local evidence can provide context for local recommendations (Atkins, et al, 2017, Kneale, et al 2017). Indeed, Beenstock et al, (2014) provide an example of how Joint Strategic Needs Assessments (JSNA) in LG use data and intelligence often from a local level in order to identify health needs of the local population. Similarly, Van der Graaf et al (2017) identified that public health practitioner's favoured in-house research or intelligence produced locally or in similar areas elsewhere. The need for evidence that is transferable to the local context has been suggested as an underlying explanation as to why local expert opinion is held in such high regard (Kneale et al, 2017, Gavens et al 2016). A detailed scoping review undertaken by Kneale et al (2017) confirmed these findings stating that the most influential evidence used within LG was generated through local evaluation activities as it is able to meet requirements of the notion of transferability of evidence to the local context.

Mandated practices on data collection have been identified as one of the main reasons for local authorities to engage with research (Hallmi & Brown, 2014). However, from this, data collection and analysis often becomes part of regular practices. Some authorities reported going beyond statutory duty on collection of performance data, and used research to identify ways in which they can improve performance (Hallmi & Brown, 2014).

In terms of 'how' data is used, the focus of data usage was noted through research conducted by Curtis et al (2018) where it was stated that there was consensus in relation to the focus of measuring outcomes instead of how the outcomes are achieved. Indeed, it has been suggested that research evidence is sometimes 'shoehorned' into existing commissioning frameworks rather than used to shape them (Saunders et al, 2017).

4.1.7 People

Policy makers are viewed to use evidence in a more conceptual than instrumental way, for example evidence is more likely to lead to changes in policy maker's knowledge rather than their behaviour (Hallmi & Brown, 2014). This links to the work of Lipsky (1980) which highlights that implementers are viewed to shape policy by their own understanding, tacit, experimental knowledge and socio-historical backgrounds, therefore adding personal aspects to the delivery of policy on the ground (Hallami & Brown, 2014).

There is a suggested disconnect between policy makers and academics in relation to what constitutes 'useful and robust knowledge' (Kneale et al, 2017 p7), again alluding to the importance of locally relevant evidence. It is also suggested that even where relevant research and evidence is available a lack of confidence in how to use specific data has resulted in a lack of use of data (Curtis et al, 2018). It is therefore suggested that decision makers in LG need to develop skills in understanding research, and the practice of implementing evidence informed recommendations (Atkins, et al, 2017). Personal contact is described as being crucial in order to encourage the use of research within policy and practice context (Wilkinson et al, 2012). Again, the embedded researcher approach has been evidenced to have the capacity to act as a sounding board, a knowledge broker, facilitator, capacity builder and catalyst for enabling this change and improvement through bridging the gap between research and practice (Cheetham et al, 2018; Van der Graaf et al, 2017).

In order for research and evidence use to take greater prominence within LG, it has been suggested that elected members need to be engaged in order to raise the profile of research and evidence use, as well as encouraging behaviour change by councillors acting in the capacity of enablers (Curtis et al, 2018).

4.1.8 Conclusion from rapid review: The role of research within local government

A key factor emerging from the literature is that there was not a single consistent definition of what constitutes 'evidence' within a LG setting. This ambiguity results in reported inconsistencies in terms

of what is used and valued as research between different staff within LG. It is therefore difficult to summarise the role of research within LG as different authorities will include different types of evidence and/or research in their practices. However, the literature reviewed clearly demonstrated the importance of the perceived relevance of evidence used within a LG setting as being paramount to its use. Locally derived or relevant evidence is considered to hold far greater value than (inter)national level data or research evidence. If research and evidence is to be used within LG it must hold local contextual relevance (Gavens et al, 2016, Atkins, et al, 2017, Kelly et al, 2017, Sanders et al, 2017, Curtis et al. 2018, Beenstock et al, 2014, Kneale et al, 2017). There is therefore a need to focus on how evidence is produced locally or translated into a local context, rather than how research evidence is imported.

The use of research and evidence within LG is also highly political. LG are diverse and complex, with a strong political influence. Prevailing ideologies shape the way evidence is identified, interpreted and considered at a local level (Hallmi & Brown, 2014, Kneale et al, 2017).

Linked to alignment with political ideologies, the timing of research is a key aspect for consideration within a LA context (Atkins, et al, 2017). There is a requirement for timely research to fit with the notion of being able to influence and impact upon 'policy windows' (i.e. a moment in time that is dedicated to the establishment of a policy).

Evidence has been seen to inform decision making within LG in a number of ways. Research is predominantly seen to be used in policy formation processes within a LA context. However, statutory requirements for data collection are also seen to drive engagement with research (Hallmi & Brown, 2014).

To promote the use of evidence and research within LG and increase research capacity there is a need to improve collaboration between researchers and LG through developing a greater understanding of what evidence is actually required at the local level and which research findings can be deemed relevant (Kneale et al, 2017, Hope, 2016, Lord & Hincks, 2010). An embedded researcher hosted in LG and knowledge transfer partnership approach have been two suggested methods to aid this approach (Cheetham et al, 2018, Hope, 2016, Van der Graaf et al, 2017).

4.2 Findings from qualitative interviews undertaken in Newcastle City Council

Building on the workshops in the three participating sites, further qualitative research involving participant observation and 1:1, in- depth interviews took place in Newcastle City Council in order to explore the emerging findings and their implications. In the following section, the findings from the interviews are set out, illustrated using quotes from participants. The role / position of interviewees are not identified in order to maintain anonymity.

4.2.1 Multiple types of evidence

In their accounts, participants highlighted broad definitions of evidence in the context of LG, with diverse views about ‘what counts’ as evidence and how it is used:

It's all sorts of things from anecdotes about individual stories all the way through to outcomes that we will collect tied up with funding, or being involved in national research programmes by universities elsewhere (IV10:1).

I suppose my understanding of evidence would be that it's evidence of good practice, it's evidence of what's happening in other areas that is working well, that has been evaluated, so we've got evidence to say that's it's worked (IV4:1).

Another participant reflected on the range of views, commenting that it would be useful to be “stricter about the standards” used to define evidence in LG, rather than ‘*simply anecdotal experience*’:

I guess it's used to mean quite a range of different things by people working in the council. When I talk about evidence usually what I'm talking about is something that is akin to a medical definition of evidence, things that have objective criteria that meet a certain standard (IV8:1).

Participants acknowledged mixed views about the perceived value of evidence influencing how it is used in different council departments, with no single, agreed perspective across the whole organisation:

Some departments in the authority see real value in research and analysis, and some departments don't. And I think that's a real shame. So, it's how do we give those departments the confidence and kind of sell how important this is, not just at that really senior level, but actually mid-level management (IV4:28)

There were suggestions that skills are underutilised in some departments, causing frustration for “fantastic staff that are just not given opportunities to use skills or develop or to use the information they’ve got in more effective ways” (IV4: 28):

We’re supporting people to gain qualifications. I think some of the time it must be frustrating for them because they get that far with the qualifications and they don’t get the opportunity to use it in practice (IV8:5).

It was felt that diverse approaches to facilitate the use of evidence would be required to take account of the range of attitudes, leadership and management styles and structures in LA departments, NHS and VCS organisations:

4.2.2 Changing organisational culture

Participants commented on the changing picture of evidence use in LG over recent years. The shift signalled continuing commitments to improve outcomes despite (or perhaps because of) the significant financial pressures facing LG:

I think there are different levels of awareness around evidence but I think it is becoming stronger in certain areas...so thinking about early years practitioners and in children's social care, where it is definitely seeing what the evidence is telling us, what do we need to do to improve our practice and then improve outcomes for children and families. I think that's been a change over more recent years (IV5:1).

The shift was noted by participants across different council departments, alongside recognition of the time pressures involved:

What I see in people across the council is actually a desire to move towards a stronger basis for the things they’re doing...I think there’s a willingness to go that way. We also have to deal with reality which requires us often to move quite quickly, without the sort of timescales that are available if you’re doing a pure academic project. Then it may be necessary to work on the basis of the best evidence you have, rather than the best evidence you possibly could have (IV8:1)

Efforts to promote a different approach to evidence use in one department highlighted the tensions and risks associated with organisational change. For example, a move away from purely quantitative analysis towards a more blended approach incorporating qualitative evidence in context, reportedly provoked resistance among some staff:

I think there was a real tension and fight about the nature of the evidence when they changed all the roles in our team to try and include qualitative and quantitative data, and understanding, and research evidence as opposed to just being performance management people who don't really understand...It's about building understanding isn't it, as opposed to just counting (IV3:9).

The importance of building analytical capacity to enhance understanding, taking a complex systems approach, rather than 'counting beans', was recognised as challenging and necessary in and out of public health, in particular when addressing 'wicked' issues, such as childhood obesity, with mandatory national measures in place:

It's easier to count beans but the beans are not necessarily the thing you want to know about... We're not very good at changing childhood obesity and the reason we're not is that you can't do it through focusing down on an individual or family and doing one thing. It's just wrong. It's a system problem (IV8:7).

Many participants recognised the important role the LA played as part of a multi-agency, joined up approach, working with partner organisations, to bring together multiple pieces of the evidence jigsaw, understand local trends, and what they mean through a comprehensive understanding of population needs:

It is not only about processing information and looking at trends; it is also about how we interpret that, and what does that mean (IV4:3)

There were examples of innovative practice in some council departments, where analysts were specifically appointed to "facilitate cross partnership analysis and work with different agencies" and "embed systems and processes around that" (IV13:1), to inform priorities and provide decision making support:

In simple terms, our job is very much about collection of data, interpretation of it, determining what the patterns and trends and so on might be, linking in with practitioner partners and saying okay, we're seeing this, what does that mean to you, what have we done that might have affected that, what have we taken away that might have affected that going on, and really that interpretational aspect of it and trying to develop an evidence base for sort of policies that we might put in place (IV13:2).

Increasingly, rather than providing traditional written reports, this role involved attending meetings to present complex information using “lots of charts and lots of maps” and being asked to advise, or to offer an informed judgement about what the data means, to inform recommendations for possible action. This participant acknowledged that this process involves “the same principles as might be used in academic research”, but “it can feel less scientific in terms of its approach” (IV13:3):

This strategic needs assessment is both a science and an art form together and it is there to help you make a decision. That’s all it’s there to do. It’s not there to give you hard and fast statistics that nail down what you should be doing. You, in the end, make a decision based on what your professional opinion is of what the evidence base is telling us we should do (IV13:5).

The perceived ability of the analyst to provide informed judgements and interpret data was valued in these discussions. The push towards embedding analytical capacity in different departments / teams was not entirely new in the council or in partner organisations such as the Clinical Commissioning Group, where research posts had existed as part of teams. In 2013, the North East Public Health Observatory mentioned by this interviewee transferred into Public Health England:

About five, six years ago or even longer now when I was in a different role, we had NEPHO [North East Public Health Observatory] working directly in the organisation... it was really good having those researchers there to work with us to direct us about what we needed to do and what we didn’t need to do. But you didn’t see them like that, they were just part of your team that you talk to and that (IV2:15).

Three participants described a previous model in LG in which LA data analysts were embedded with children’s social care (social work) teams:

I was part of the children's social care transformation program and as part of this, they created analysts posts that were embedded within social work teams, which sat away from the main performance management team (IV1:6)

Family Insights embedded analyst role

In 2015, as part of a pilot initiative, data analysts were ‘embedded’ in social work teams in Newcastle City Council, helping them identify patterns, undertake ‘deep dives’ or case study analysis, understand the root causes of problems and identify effective interventions, through an overview of the team’s activity. One interviewee who was involved in this pilot reflected on her

experiences, the perceived drawbacks and benefits both for the team and the wider council directorate:

From an analytical point of view, I really enjoyed it, I enjoyed getting under the skin of things and I think that we got a lot of really, really valuable analysis and information from it. I think what we also did with that group of social workers, was to support them to think differently about data. There were some barriers to this, specifically in terms of supporting social workers about what 'counts' as data as there was sometimes a perception that we were only interested in numbers and performance management. Little by little, it certainly didn't happen overnight, I think this started to change and social workers could see the benefit of having an embedded analyst in the unit.

From a structural point of view, I think because we had the time to produce pieces of research and analysis that were focused on outcomes which takes time, but there was space to do that, and as a result I genuinely do think we saw the art of the possible at a directorate level which supported buy in. I think the work in Family Insights laid the groundwork for what we're trying to do now, although that is much more difficult to resource at a directorate level.

There were definitely lots of positives in working in this way but the thing that was lacking was knowledge of what was happening at a system point of view and I think in hindsight, we, as analysts could have done more to facilitate this (IV1:6).

Further information about this work was published at the time and is available at

www.nesta.org.uk

Whilst recognising the resource intensive nature of this embedded analyst model, other interviewees identified the challenges and opportunities of this model for policy makers, practitioners and researchers:

We can't afford to put one researcher for every six social workers but lots of researchers would be delighted to be in that position and so, how to get across that bravery of mutual trust and experience in order to make that kind of difference, I think, is fundamentally important. I think, we've answered most of the siloed questions that we can answer (IV3:19)

This participant saw embedded analysts in LG offering improved understanding of the multiple complex issues facing some of the most disadvantaged individuals and families. One role of these

embedded analyst roles appeared then to bring a wider lens to understand and address this complexity:

I think that we do need to be much, much cleverer about how we can co-ordinate or understand those pieces of research...it's nobody's job in a local authority to ask the wider questions...from a research point of view, trying to piece together the wider picture (IV3:19)

Reflecting on his observations of this model, another interviewee described the challenges and risks associated with this model, which he felt require careful advance planning and support for the staff involved:

It's a good thing to have researchers embedded in the services we are most interested in... I think it's an important role...I think you have to really carefully describe the research you want...I suspect it probably requires more careful thought and probably more detailed ongoing support than those two individuals in my experience received (IV11:12).

One approach to building a culture of evidence use in LG involves academic researchers from universities being 'hosted' by local authorities and working alongside LA staff, including data analysts. When asked about the pros and cons of embedded researchers working in LG, many participants voiced enthusiasm for the idea. The potential benefits are put succinctly by this participant, who recognised the challenges to academic rigour and independence:

What I like about that model is it does enable you to get a degree of depth and trust, which I think is sometimes quite difficult to do if you're doing a project which is time limited and remote. I think it's that sort of depth, when you're actually based in an organisation, the nuances which you're able to pick up around where some of the different pressure points are, and the different drivers, I think can result in a much more meaningful or deep understanding of the issues (IV14:8).

One of the things about having academic expertise is the degree of independence and rigour and the counter argument to building that trust and those deep relationships is the ability to maintain that level of independence, to be honest, and the ability to challenge where that's needed. I think those are where the challenges come from (IV14:8)

This model requires academic researchers to recognise the assets available in LG and be aware of any assumptions they may make about LA staff, as explained by this interviewee:

There is a lot of really skilled and talented and competent people in here and sometimes it takes a bit of time for people to deal with some of their own perceptions, I think, who come from universities (IV4:27)

Further discussion about the perceived pros and cons of embedded academic research models can be found later in this chapter (in section 3.3.3), drawing on examples from respondents who took part in the scoping review.

A number of contextual factors were found to influence the use of evidence in LG (see 8.11

Appendix K: Contextual factors influencing evidence use in local government K).

These factors clustered around the following themes:

- Organisational churn and fragmentation
- Budgetary pressures
- Data sharing
- The wider context
 - Regulation at national level
 - Relationships with Universities
- Competing rewards and incentives
- Different perceptions of co-production

4.2.3 Creating space to test out different approaches

The availability of central government funding enabled different approaches to evidence use to be tested in LG, for example as part of a Homelessness Prevention Trailblazer¹ (see panel below). The ethos underpinning the homelessness prevention trailblazer centred on the need to create an open and honest learning culture in the organisation:

We don't all know what we're doing upfront. We need to go through this process together and have a trust based model to some extent and be open and honest about things, which are always terms that get thrown around all the time, but in reality, maybe don't happen as much in practice (IV12:3).

¹ (<https://www.newcastle.gov.uk/services/housing/housing-advice-and-homelessness/information-professionals/newcastles-homelessness>).

Homelessness Prevention Trailblazer

As one of three trailblazers across the UK, Newcastle City Council was awarded a grant of just under £1 million to “support a public service transformation programme from 1 January 2017 to 31 March 2019, focusing on system change and supporting homelessness prevention at an earlier stage”.

Heriot-Watt University were commissioned to evaluate the work. In their report they note: The aim was to make the prevention of homelessness, poverty and destitution 'everyone's business' through the Active Inclusion Newcastle (AIN) partnership which supports residents to have access to the foundations of a stable life: somewhere to live, an income, financial inclusion and employment opportunities. Research and evaluation was embedded in the evidence-informed approach from the outset, with a strong focus on collecting, reporting, sharing, learning and service improvement (Watts et al 2019).

The trailblazer was highlighted by one of the research participants in the LACoR study who worked on it. He commented “*one of the four core characteristics of the active inclusion approach is using data, being data-led*” (IV12:3):

The way they describe it is, they wanted a thinker and a writer so they went for someone from a research background...the brief was relatively broad.” (IV12:1).

The trailblazer built on existing long standing partnerships between Newcastle Council, Newcastle University and local voluntary organisations, resulting in several innovative projects including:

Retelling Stories (2019) was a pilot project between Newcastle City Council and Newcastle University to explore how creative writing techniques could help advice and support workers use active listening skills and narrative structures to better capture, understand and re-tell the stories of the people they see, who are homeless or at risk of homelessness.

Newcastle Voices Peer Research project (June 2019) explored the views of homeless people or those at risk of homelessness about participating in the design, delivery and decision making in support services. 84% of participants in this study were keen to support others who were homeless, offering peer support. 61% expressed an interest in engaging in research projects, either as a researcher or participant.

Further detail about the Homelessness Prevention Trailblazer including resources for other areas to use and the findings from the Heriot-Watt University study can be found here

<https://www.newcastle.gov.uk/sites/default/files/Housing%20and%20homelessness/Homelessness%20Prevention%20Trailblazer/Overview%20of%20Newcastle's%20Homelessness%20Prevention%20Trailblazer.pdf>

In their interviews, participants identified numerous opportunities for research and evidence use in LG. The examples given here involved LA staff taking roles in different teams to enable use of existing data; partnerships with external academics / researchers / universities to generate new evidence; and appointing staff with a research background to LA positions to build research capacity from within. It was suggested these opportunities reflect the changing profile of senior leadership in the LA:

We've definitely got more academically-minded and research-minded people leading the council now. So, that's become more of a normal conversation with that kind of side of it. So, that's quite a good thing, so that helps shift that culture (IV13:16).

One interviewee questioned whether robust evidence was used to underpin existing programmes of work funded by the annual council budget in the way it was required for new, small scale proposals:

Whether or not we apply the same rigour in our thinking to the £200,000 proposal to the £50 million to the new building, £100 million spend on social care, or the £300 million that runs through the dedicated schools grant, I think is debateable (IV11:5).

Observations about the challenges of embedding a culture of evidence use across the entire LA at a time of reduced funding and increased workloads emerged strongly in interviewees' accounts. In the following section, we explore these concerns in more detail, alongside other contextual factors affecting the use of evidence.

4.2.4 Reduced capacity and thinking time

There was widespread agreement amongst participants that capacity in LG had been reduced, presenting both a challenge and an opportunity for councils to collaborate with different partners in and out of LG, including health, police, local communities and service users *"to try and gain a better and more nuanced understanding of what are the needs and how we might respond to them"*

(IV14:1):

I think it's fair to say that capacity has been affected quite significantly by austerity over the last 8-10 years. On the other hand, I would say there has probably been, because of the lack of resources, more of a sense that it's really important that the way in which the policies and practices that local authorities have adopted is informed by evidence...I think if I had a critique it would be, like many places, local government is not always, for various reasons, great at connecting data and evidence to policy and practice (IV14:1).

This view was endorsed by officers working in and out of public health:

I think part of it is very much down to capacity. We're all so busy doing the day jobs sometimes it's hard to lift your head up and think (IV5:17).

This participant felt the part of her role which focused on research and evaluation was often “*the thing that gets left behind*” because of performance/business management pressures:

I think it's time, it's capacity, it's pressures, we've got deadlines we've got to meet, and I think everyone's just kind of working 100 miles an hour, that sometimes it's maybe an afterthought or it's additionally put into kind of bolster a bid or something. It's not the first point that we go to, if that makes sense (IV4:2).

The importance of time and capacity emerged repeatedly in participant's accounts. There was a reluctant acceptance of the need for pragmatism in the current climate, given the difficulties of reduced funding and the pressures to “*get things done to short timescales*”:

We are all searching for the thing we should do to achieve a very difficult outcome, or effectively the golden thing that can't possibly fail. I think often we underestimate the importance of context on that basis. Even before we get to that, I think we all have different views of evidence (IV11:1)

The luxury of advanced evidence-informed planning in LG was sometimes felt to be sacrificed in place of more pragmatic approach in which policy makers “*corral the evidence you think you've got...you almost start with what you want but then go back and see evidence would support it*” (IV11:1).

I think, coming back to culture and capacity, what we often see in a local government setting is limited resource, which means people are always moving quickly to the next decision without necessarily having the space to understand what the evidence is telling us, or to

review and take time and understand what impact a particular course of action might have taken (IV14:2).

4.3 Common findings from scoping survey and qualitative interviews

The following section combines the findings from interviewees from Newcastle City Council and scoping survey participants, given the significant overlap in the data collected. Compounding the pressures on time were issues related to accessing academic research evidence by staff in LG.

4.3.1 Access to and use of evidence

Interviewees indicated a wide range of sources of evidence including national government reports from the Department of Health and Social Care, Department for Education; Guidance from NHS England; Public Health England; NE Public Health Observatory; Fuse, the Centre for Translation Research in Public Health in North East England www.fuse.ac.uk; open access academic publications; personal contacts in academia; Directors of Public Health and / or public health colleagues; commissioned research from Universities; contacts in other local authorities. Local data was mentioned from systems including estart; capita; NHS Child Health Information System; GP health records; maternity services; HES data; LA nurseries; school census data; staff surveys; household surveys; performance monitoring / KPI data and case studies from commissioned services. Narratives from children, young people, families and local community members were also highlighted. Professional organisations such as the Association of Directors of Public Health (ADPH); Local Government Association (LGA); Institute of Health Visiting; professional newsletters; websites and reports from national voluntary organisations, including The Education Foundation; Early Intervention Foundation; The Wave Trust; What Works Centre for Crime; Jill Dando Institute; Institute for Fiscal Studies; grey literature were also cited by interviewees, alongside online sources including Google; Google Scholar; TV; written news reports and word of mouth.

The importance of online sources combined with social networks and personal contacts were echoed in the findings from the scoping review which indicated that for accessing scientific health research, online resources, such as briefings, were most often used by the respondents (7 out of 8 respondents), while attending professional conferences and events (5 out of 8) or university courses and short workshops (2 out of 8) were also mentioned. Only two respondents mentioned academic journals and reading clubs as a means for accessing research evidence. One respondent made particular reference to the importance of informal and formal relationships with local universities.

Published academic papers were not routinely available, and not surprisingly they were rarely mentioned by participants as important sources of evidence in isolation. This suggests limited progress has been made in improving access to academic research for staff in LG, as noted by one participant who had recently completed his PhD and worked in LG:

I've really suffered from leaving university and not having access to any academic literature, or very little academic literature, other than the ones people publish themselves separately or what's free on Google Scholar. That's been a challenge (IV12:18)

Another participant made reference to a meta-analysis published by Newcastle University, which highlighted the benefits of parental reading (Law et al 2018). Illustrating the opportunities of combining evidence with local early years data, academic research has a potentially influential role in setting the agenda or directing concerted activity to achieve positive outcomes for particular groups, in this case, pre-school children:

We would do better to monitor how many children get bedtime stories than many of the things we do measure because of the way it then impacts. Eight months advantage in receptive speech and language skills at school entry is a thumping great benefit (IV8:13).

This may present a possible way forward in addressing some of the frustrations expressed by participants who felt that published papers did not always provide clear actionable answers to the pressing questions which staff in LG had.

Respondents reported using scientific evidence most often to inform the (strategic) commissioning of public health services (4 out of 8) or to underpin local data interpretation for Joint Strategic Needs Assessments (JSNAs) or health impact assessments, or to prepare annual reports by Directors of Public Health, as well as to evaluate specific interventions.

It is used in strategic commissioning, from understanding the needs in a population through the evidence for different approaches, interventions and tools. It's also used for evaluation of an approach or intervention (R2).

In some cases, scientific research was specifically used to complement local data analysis by providing more insight into the 'lived' experiences of residents to help tailor services for local communities. In other cases, research evidence was used to support bids and grant applications or underpin wider approaches within the Council, alongside other departments such as planning and licensing.

For half the respondents, scientific health research was integrated in local decision-making through formal reporting (4 out of 8), such as Joint Strategic Needs Assessments and Cabinet and Scrutiny reports, where research evidence was used to provide a context for the interpretation of other data.

Results of evaluations are interpreted in the context of what we know based on the results of scientific research and these findings and interpretations are included in local reports. This work is then sometimes taken to be presented at events (R7).

Other respondents admitted that research evidence is not used routinely or systematically, but only in adhoc decision making (2 out of 8), as previous systems for incorporating research evidence have been lost:

Historically we had a system-wide joined up Metrics and Evaluation group which developed a shared dashboard with indicators selected based on scientific health research (R4).

One respondent observed that there remains significant room for improvement:

I don't think we are anywhere near being able to describe ourselves as integrated (R5).

Not surprisingly, comments about reduced capacity in LG emerged in the review findings as well as in the qualitative interviews discussed previously. In the following section, we explore the contextual factors reported to influence evidence use in LG.

4.3.2 Factors influencing evidence use in local government

In the following section, using both the “loose interpretation of the term evidence” (IV 11:1) commonly described by interviewees, and the definition of scientific research specified in the scoping survey, we explore some of the ways in which research and evidence is used in LG.

Table 1 shows examples of research and evidence use identified in the qualitative interviews and in the scoping survey. (8.10 Appendix J: **Illustrative examples of evidence use in local government identified by interviewees** provides further examples of evidence use identified by interviewees in LG).

Table 1: Examples of how evidence is used in local government

Examples of evidence use in local government identified by interviewees and survey participants:

- To understand local context, respond to local health needs, improve outcomes for specific population groups and/or track their progress
- To compare/benchmark against other councils/statistical neighbours to measure change(s) over time
- To understand patterns of service use, measure current demand, and predict future demand for council services
- To understand the impact of council run and/or commissioned services; what is working, for whom, to inform re/de/commissioning decisions
- To inform strategic priorities, strategy development, planning decisions/policy and practice
- To test a theory or hypothesis or develop a theory of change
- To make the case for new/different models of support e.g. for integrated care
- To map, plan and target public health services/interventions for particular groups/communities to address inequalities in health
- To comply with government directives, regulatory and/or funding requirements
- To demonstrate value for money and/or drive cost savings/efficiencies
- To raise awareness of the impact of austerity and welfare reform at local level
- To respond to political imperatives
- To help interpret local data
- To raise awareness of public health issues (e.g. air quality) and build collaborative efforts to address it
- To inform decisions about service design (e.g. drug and alcohol treatment services, smoking cessation services, smoking in pregnancy or breastfeeding support)
- To evaluate the effectiveness of an approach or intervention
- To inform staff training (e.g. affordable warmth)
- To support external funding bids or grant applications
- To change attitudes/shift perspectives/challenge views of colleagues
- Combined with tacit or experiential knowledge, learning and practice-based wisdom to reshape and reconfigure services, redesign contracts or support a change in direction in the provision of services

4.3.3 Views about, and experiences of, embedded research

One of the ways in which to embed a culture of evidence use in LG identified in existing literature and emerging practice in public health is through the use of embedded researchers. For the

purposes of the online survey undertaken in this study, we adapted the definition of embedded researchers suggested by McGinity and Salakangas (2014:1) as

“individuals or teams who are either university based or employed undertaking explicit research roles...legitimated by staff status or membership within the host organisation...with the purpose of identifying and implementing a collaborative research agenda”. In this way, embedded research describes a *“mutually beneficial relationship between academics and their host organisations, whether they are public, private or third sector”*.

In the following section, we outline the responses to questions about embedded research from the scoping survey. These included respondents who were working as embedded researchers in LG, and/or NHS settings as well as colleagues in LG who had experience of hosting embedded researchers.

Examples of embedded researchers identified in online scoping survey

The scoping survey identified four local authorities with experience of working with an embedded researcher; three in their public health team and one in another part of the Council. Not all respondents neatly fitted the definition of embedded researchers above, despite undertaking similar roles. One LA employed staff members with honorary contracts at a local university suggesting links with academia existed in different ways. One respondent without experience of working with embedded researchers identified a lack of knowledge to date about potential benefits and budget constraints as reasons for this.

Embedded research posts were mainly co-funded between organisations, including NHS Foundation Trusts, Clinical Commissioning Groups (CCGs), Collaborations for Leadership in Applied Health Research and Care (CLAHRCs), Clinical Research Networks (CRNs) and LA public health departments. Three of the four post holders were employed by local universities, with supervision split between universities and practice organisations. Embedded researchers were likely to work part-time (ranging from 8-28 hours per week) with contracts varying in length from 2-5 years.

The embedded researchers performed a range of roles in local authorities, including building links between LAs and universities and between LAs and wider stakeholders, such as Voluntary and Community Sector organisations (n=4), helped local authorities to understand what works, for whom, to improve population health and wellbeing (n=4), co-produced research funding bids (n=3), supported LA employees to do their own research (n=3), produced evidence briefings (=3),

understand the needs of local communities (n=3), worked with elected members to determine their priorities (n=3) and facilitated changes in practice (n=2).

Benefits and risks of hosting embedded researchers

When asked about the benefits of hosting an embedded researcher, most respondents highlighted improved networks and relationships between academia and practice, leading to new collaborations with new partners and a focus on topics that would otherwise not have been addressed. The partnerships also helped to forge closer links with local communities through collaborative research which facilitated improvements in local services.

Respondents also reported increased research capacity in local authorities with greater uptake of local training opportunities by LA staff and improved awareness of research, suggesting wider changes to the organisational culture of evidence use. Embedded researchers need understanding of local decision-making processes to feed in academic evidence, and facilitate knowledge mobilisation in real time.

The role acknowledges the changing culture of decision-making in a local authority and the need for academic evidence to remain part of that process (R4).

Respondents were aware of the risks of hosting an embedded researcher in their organisations. Embedded research could be a drain on limited resources by creating extra work, or suggesting new ways of working or by providing additional training opportunities to staff, which potentially diverted time and attention away from other tasks when staff became involved in research activities. Lack of resources also endangered the continuation of the post and retention of embedded researchers, as *“it takes time for a researcher to become fully embedded”* and for the benefit and true value to become apparent.

Other risks related to personal relationships, with an embedded researcher potentially not fitting in with the host team or being (un)able to build trusting relationships with wider partners in the council. Moreover, the funding arrangements for the post were recognised as affecting power relations that could influence the research, or reporting its findings. Lastly, the embedded research could be affected by policy, personnel or organisational change.

Scoping survey respondents made various suggestions for improvements to minimise the risks associated with having an embedded researcher in their organisation, as highlighted in the table

below. One respondent suggested, at the start of a new post, a team meeting would be beneficial to clarify and manage expectations for the embedded researcher and host organisation staff.

More time being made available for the embedded researcher to work on site was also seen as beneficial to develop and maintain relationships. Overall, more flexible funding for embedded researcher posts was seen as crucial for sustainability and impact. This requires greater recognition of the potential benefits of embedded research by universities, rather than just seeing these posts as short term business arrangements. Support for career progression of embedded researchers, and enabling them to lead on projects and funding applications was also highlighted. A regional approach was identified in helping to co-ordinate opportunities and funding, including a network for embedded researchers to share experiences and provide peer support, reducing the risk of isolation. An example of a collaborative Local Authority Research Network in Yorkshire and Humber to support ongoing, two-way communication and knowledge exchange was highlighted by one participant (<https://www.yhphnetwork.co.uk/links-and-resources/practice-and-research-collaborative-parc/local-authority-research-link-lark/>).

8.9 Appendix I: Examples of embedded research and researcher-in-residence studies undertaken by respondents to the scoping survey

I shows examples of embedded research provided by respondents from across the UK, including a qualitative study of the impact of Universal Credit undertaken in North East England, a paper outlining reflections on a researcher-in-residence model in an integrated care organisation in South West England and a Mental Health and E-cigarettes Pilot undertaken in South Gloucestershire.

4.3.4 Embedding a culture of research

Table 2 shows the practical suggestions, lessons learned and top tips suggested by scoping survey respondents for embedding a research culture and integrating research into decision making processes in LG.

Table 2: Embedding a culture of research

<ul style="list-style-type: none"> • Make research easy to access and understand (for those who aren't academics). If possible, link to case studies involving real people.
<ul style="list-style-type: none"> • Make the issue politically relevant and have continuous conversations about the work
<ul style="list-style-type: none"> • Make the evidence message succinct and clear so its easily digested
<ul style="list-style-type: none"> • Make research undertaken within the organisation (LA) very visible.

<ul style="list-style-type: none"> • Have processes that identify research as a key component of decision making.
<ul style="list-style-type: none"> • Researchers need to understand how decision-making actually works and learn the politics of the decision-making processes.
<ul style="list-style-type: none"> • Build relationships, so people are confident to pick up the phone and ask.
<ul style="list-style-type: none"> • Engagement with elected members and chief officers is important
<ul style="list-style-type: none"> • Senior level buy-in (Chief Executive and corporate management team) is essential.
<ul style="list-style-type: none"> • Make sure the researcher is properly embedded in the team and sits with them regularly and that this person and their role is known to LA staff.
<ul style="list-style-type: none"> • The embedded researcher can facilitate the process of conducting research and evaluation by supporting LA staff throughout
<ul style="list-style-type: none"> • Encourage the robust collection of data so useful and informative evaluations and research can be conducted
<ul style="list-style-type: none"> • Let go: co-production is all about sharing power and control over every aspect of the research process; most crucially set a relevant, and jointly owned agenda. The key is to find a balance between relevance and rigour.
<ul style="list-style-type: none"> • Pooling, be open and stick at it: this is about the different pace and culture - think of the embedded research function as an essential element of a multidisciplinary team. The real transformational benefits always go both ways - it needs an ongoing commitment and understanding that in order to both benefit a pooling of resources is necessary (i.e. matched funding arrangement).
<ul style="list-style-type: none"> • Longer more flexible funding is needed as sustainability / relationships are crucial for impact
<ul style="list-style-type: none"> • Think long-term: access and expectations need to be sorted over time to achieve actual impacts. Have two part time researchers embedded for at least three years.

4.4 Logic model development

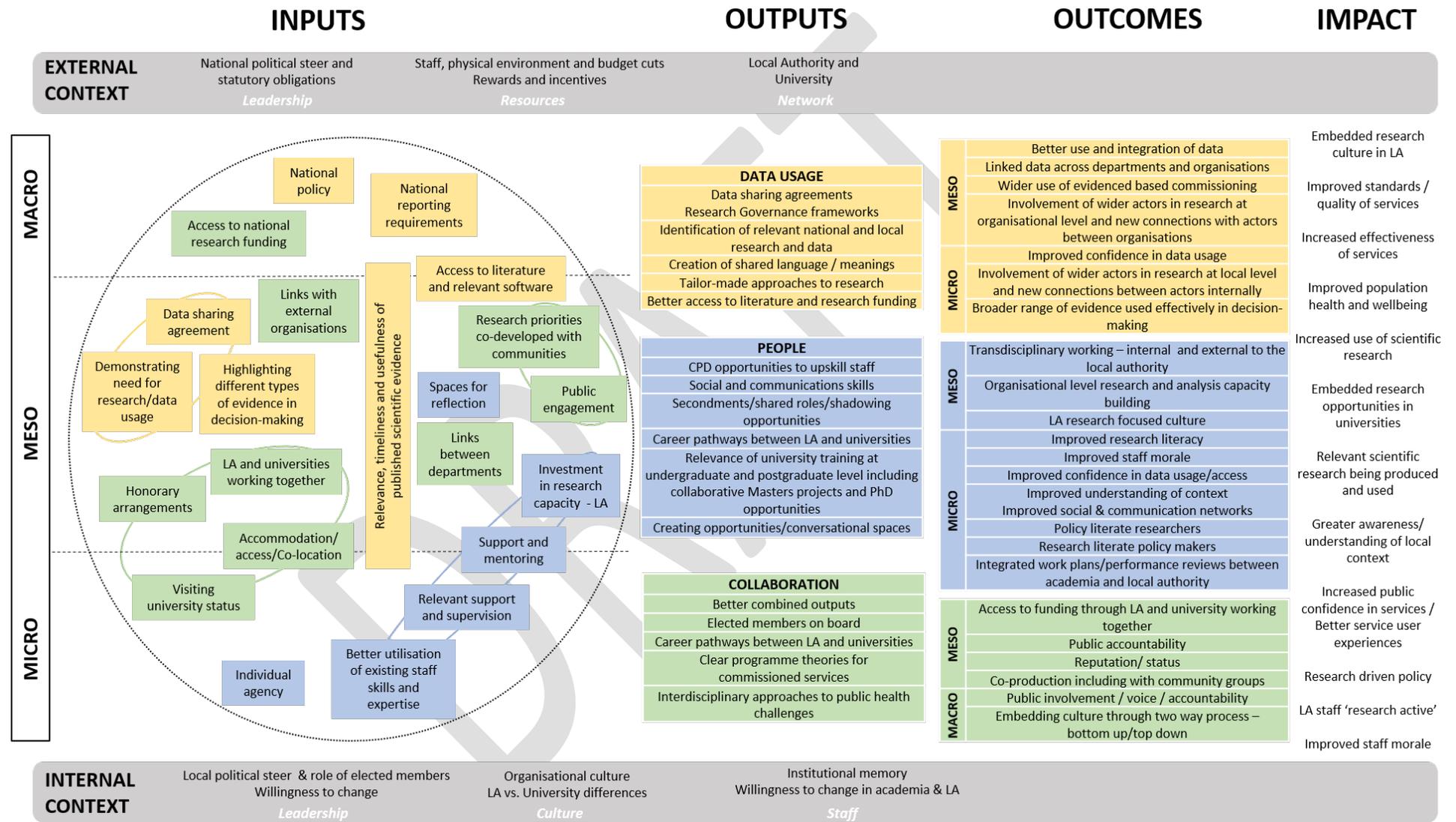
This section explains the LACoR logic model developed following the initial workshop and subsequently revised based on findings from additional workshops and interviews reported in section 3.2. The model is a visual depiction of the required inputs and contextual factors affecting implementation and the priority outcomes identified along with associated impacts of embedding a research culture within a LA.

The model itself has been designed to identify core components to guide implementation to support embedding a research culture within a LA. In terms of understanding systems, complexity thinking rejects linear cause-and-effect thinking and instead uses the concepts of emergence, connectivity, interdependence and feedback (Byrne, 1997). The model therefore identifies key mechanisms which have been identified to prompt action and facilitate feedback.

The logic model presented is designed as a highly summarised planning document. The narrative provided below provides an explanation of the dynamic relationship between the facilitation of embedding a research culture within a LA setting, the users/recipients of this intervention, contextual moderators and intended outcomes.

DRAFT

Figure 1: Logic model



4.4.1 Context to the LACoR logic model

It was apparent through discussions with participants at the workshops that the context surrounding the use of evidence use in local authorities was very important. Context is perceived to influence all mechanisms associated with embedding a research culture within a LA and as such has been highlighted across all elements of the model including input, output, outcome and impact.

Context within the model has been differentiated between internal and external factors. Influence from within the LA is shown as internal, and outside the LA as external. This approach allows for the illustration of the full spectrum of factors to support a research culture within a LA. This could be through the use of positive moderators or overcoming negative moderators (Mills et al, 2019). Context is shown as encapsulating the whole of the logic model through a bar at the top (external) and bottom (internal) of the model.

External context

External contextual influences to the LA are shaped by the national political steer. From this national perspective, a number of mandatory functions and obligations are placed on the LA which must be adhered to and thus constrain to some degree what can be undertaken at the local level. Linked to these issues, are the resources which are shaped by external influences. The main resource influence within the current political climate for local authorities is budget cuts and financial pressures as a result of funding cuts. Although local authorities are accountable at the local level for spend of their own budget, national directives, wider public sector funding cuts, austerity and welfare reform inevitably have an impact.

Staff and the environment in which they work is identified as an external contextual issue. Although it could be argued that these resources could be both external and internal as they relate to physical presence within the LA, they have been grouped as external due to being heavily influenced by the national steer in terms of budget allocation.

Network is the final external contextual consideration listed and relates to existing, emergent or lack of relationships between the LA and university(s) and academic expertise within. These relationships will directly impact how a LA engages with academic establishments.

Internal context

Internal contextual issues within the model relate to those within the LA and have been broadly grouped into leadership, culture and staff. Leadership relates to the political steer within the LA along with the role of elected members and senior Directors. Also within the leadership category, a willingness to change has been identified as an important factor. Closely linked to culture, a willingness from senior members of the LA to change working practices was clearly identified within the workshops as being a key driver for affecting change throughout the organisation.

When considering the current culture within the LA comparisons with universities were made by workshop participants. It was felt important to contextualise the identified mechanisms within the model in terms of whether they were being implemented within a LA or university setting as this would affect how they were perceived and operationalised.

Staff are identified as an important internal contextual issue. Within staff, institutional memory exists and impacts on service delivery. Connected to this, an individual level willingness to change is an important consideration as it will impact on intentions to engage with, and attitudes towards proposed and implemented changes within the organisation.

4.4.2 Inputs to the LACoR logic model: Developing systems

In order to develop systems to support embedding a research culture within a LA it is important to take account of the inputs required. In the model, inputs are defined as the resources used to carry out activities, produce outputs and accomplish results. Inputs within this logic model are also taken to relate to the activities, such as horary arrangements, allowing for university staff to work within local authorities or vice versa for example, which enable the delivery of outputs. It must be noted that in different contexts, inputs may be viewed as outputs. For example data sharing agreement is listed within the model as both an input and an output. A data sharing agreement can be an input if it is viewed as a resource to enable further action, such as the creation of shared language for example. However, it can be viewed as an output when it is the result of the enactment of an input, i.e. links between departments result in a data sharing agreement needing to be produced to enable the better use and integration of data.

Inputs have been split between macro (national level), meso (LA level) and micro (individual level) and are shown at the left-hand side of the model. Inputs are colour-coded to reflect the three emerging themes; data usage, people and collaboration.

At a national level, many of the external contextual factors are mirrored within the inputs. These include national policy, national reporting requirements and access to national funding. All of these elements shape what can be delivered within a particular LA setting.

The majority of input components within the model fall into the meso sub-category, existing at the LA level. It is here that we see actions such as the need for data sharing agreements, a very practical action which directly relates (as shown through grouping within the model) to demonstrating the need for research and data usage and also a need to acknowledge different types of evidence which are used in decision making. This example illustrates that there is a need to show people 'how' research and evidence can be used in order to demonstrate or maximise the potential. However, this use of research and evidence also needs to be underpinned by practical and ethical considerations such as a data sharing agreement. This agreement may be between departments within authorities or between local authorities and external partners such as universities. The idea of the requirement for collaboration at this level is also seen through the identification of need for co-development of research priorities with communities. Linked to this, public engagement is also identified as a key collaborative input. The notion of co-development and involvement with communities illustrates a desire to ensure research reflects local need.

Co-development of research priorities was a strong recurring theme from the workshops. This was articulated as a need for practitioner public and engagement to maximise opportunities for buy-in, relevance and ownership of priorities and so subsequent activities.

Links between LA departments and more broadly with external organisations including universities were also described as an important input in facilitating a culture of research and evidence use. These links are seen as key to facilitate sharing of both research expertise and also to cultural norms. The formalisation of this collaboration is suggested as being through honorary contracts, co-location, shared posts, secondments and visiting university status for practitioners being put in place.

An investment in research capacity is required at both the meso (LA) level and the micro (individual) level at all levels of the LA. Investment from the authority was perceived as a demonstration of commitment to embedding a research culture, providing visible practical examples of how research can be used, such as to inform service development, and created but also contribution to decision making. Connected to this are a number of micro level inputs including the support and mentoring of

staff, relevant supervision, better utilisation of existing staff skills and expertise, and a feeling of individual agency.

4.4.3 Outputs from the LACoR logic model

Outputs listed in the model are expected to happen within the LA setting as a result of the inputs combining in various configurations under the contextual considerations listed above. Inputs are designed to facilitate expansion of research usage or to provide stimulus for its use. Through the inputs detailed previously, it is anticipated that routine data usage will increase, and be used to inform services and planning, staff will have opportunities to use their research skills, and people will have access to developmental opportunities to increase research use. Collaborative opportunities for researchers and academics and wider partners to alongside each other will also be forged. .

Outputs within the model, as with the inputs, are categorised and colour-coded into the three key emerging themes; data usage, people and collaboration. Although there is overlap between the three themes, predominately the inputs, outputs and outcomes will have stronger links within a theme.

Data usage outputs focus on the practical use of data and so include outputs such as data sharing agreements and governance frameworks. They also look at how data and literature are accessed along with possibilities for facilitating research funding opportunities.

The people theme focuses on equipping staff with necessary skills to make use of research within their role. Outputs also include career pathways, acknowledging the links to be made between universities and LA to promote staff development, CPD opportunities, secondments, and the creation of opportunities through conversational spaces. Relevant training is also addressed through the suggestion of collaborative masters and PhD projects between the LA and universities.

Heavily linked to people, collaboration outputs focus on how individuals and teams can work together. Interdisciplinary and pathways between organisations are highlighted here as key outputs, such as the establishment of career pathways between LA and universities, along with clear engagement with elected members to ensure local political support.

4.4.4 Outcomes from the LACoR logic model

Outcomes are the expected consequences to come from the outputs. They are broken down within the three emerging themes at a micro, meso and macro level (where applicable) within the model. It is expected that the outcomes will connect the anticipated outputs, with the expected impacts. The outcomes here serve as key practical considerations of 'how' change will be seen.

Data usage outcomes at the meso level focus on how data is used within the LA and the wider implications it has such as involvement of wider actors in research at the local level and new connections with actors between organisations. At the micro level there is more of a focus on the how individuals can use data in relation to their role.

The people theme is also split into meso and micro outcomes. Here, meso level outcomes focus on team and authority level changes such as capacity building and culture change. Micro level outcomes focus on individual staff and look at the effect of increasing research opportunities for staff in terms of increased research confidence and understanding and subsequent impact on staff morale and performance.

Collaboration has macro and meso level outcomes within the model. At the macro level outcomes relate to issues such as public involvement and accountability and the need for embedding culture through a two-way process from national level down, as well as local level up. At the meso level, outcomes for collaboration identifies more along the lines of accountability, reputation and the working together of universities and local authorities to achieve shared goals.

4.4.5 Impact from the LACoR logic model: Delivering change

Impact is illustrated within the model as a list on the right-hand side. Impact here relates to the effect that the combination of outputs and outcomes has on the LA for embedding a research culture.

Impacts will be generated as a result of a combination of inputs, outputs and outcomes illustrated throughout the model and delivered within particular contextual considerations. Due to the complex context of a LA, different configurations of inputs/outputs will result in subtle differences in impact achieved. Overall, at an abstract level it can be summarised as:

In a LA setting (variable context) inputs relating to research culture (mechanism) will combine to produce processes for change (mechanism) resulting in outputs and outcomes which are aligned to embedding a culture of research use within a LA (outcome 1) which produce meaningful impact (outcome 2).

4.5 Stakeholder Network Analysis

In total, 21 (53%) stakeholders completed the network survey (n=12/80% Newcastle; n=8/62% Belfast; n=1/8% Hampshire). Figures 2 and 3 below illustrate the stakeholder network regarding which organisations exchanges evidence with other organisations in Newcastle and Belfast. The arrows indicate the direction of evidence exchange. Figure 2 shows that the departments for Insights and Information, and Public Health are key gatekeepers of evidence exchange. Figure 3 identifies the Public Health Agency and Belfast City Council as important gatekeepers of evidence exchange.

Figure 2: Newcastle – Stakeholder Network of Evidence Exchange

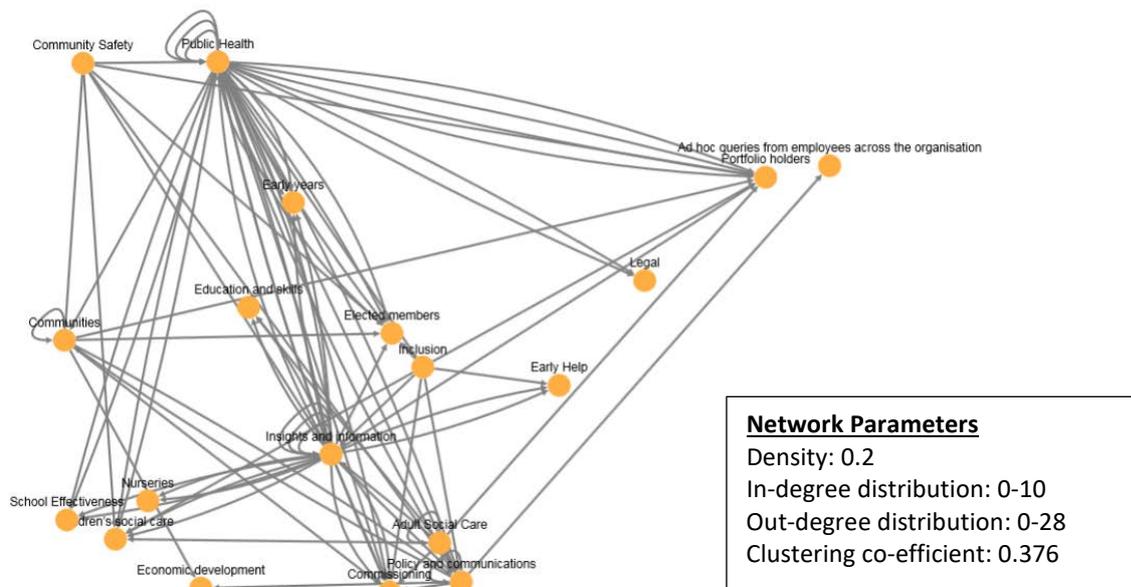
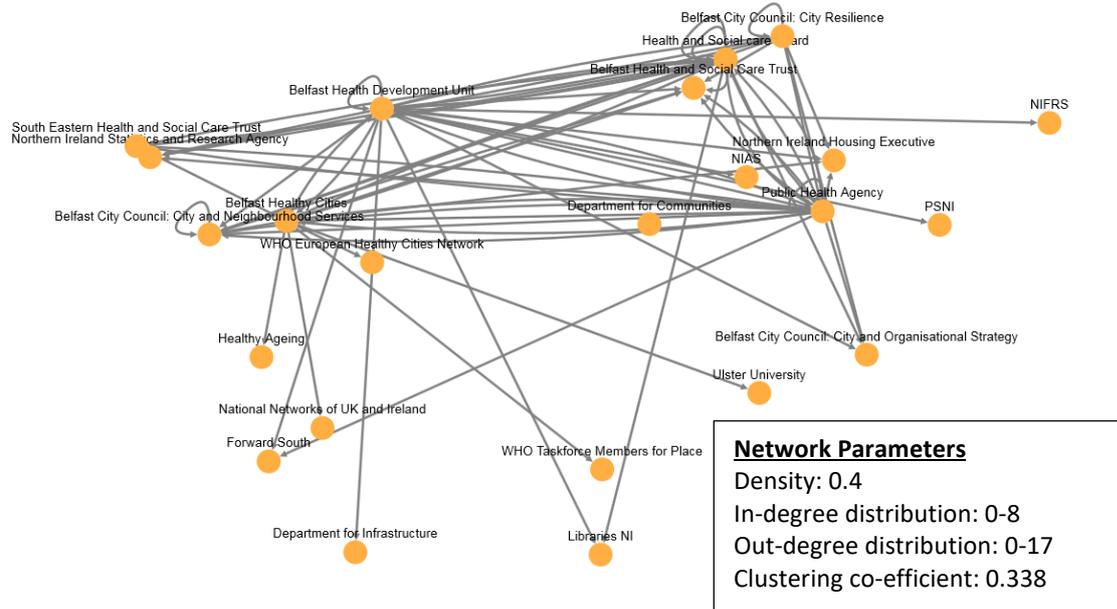


Figure 3: Belfast – Stakeholder Network of Evidence Exchange



Figures 4 and 5 illustrate existing collaborative networks for school readiness (Newcastle) and health inequalities (Belfast). Figure 4 shows a sparse, mainly uni-directional network, illustrative of a newly established network of stakeholders collaborating on a new topic, whereas Figure 5 illustrates more established and active collaborations regarding health inequalities in Belfast.

Figure 4: Newcastle – Collaborations with Organisations regarding School Readiness

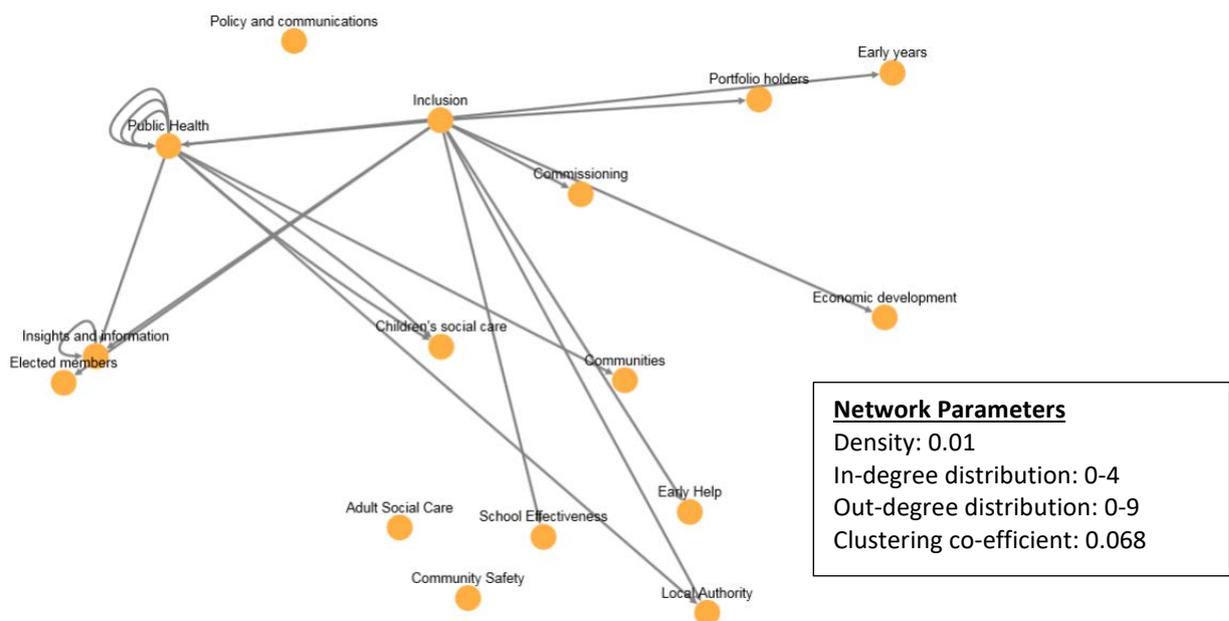
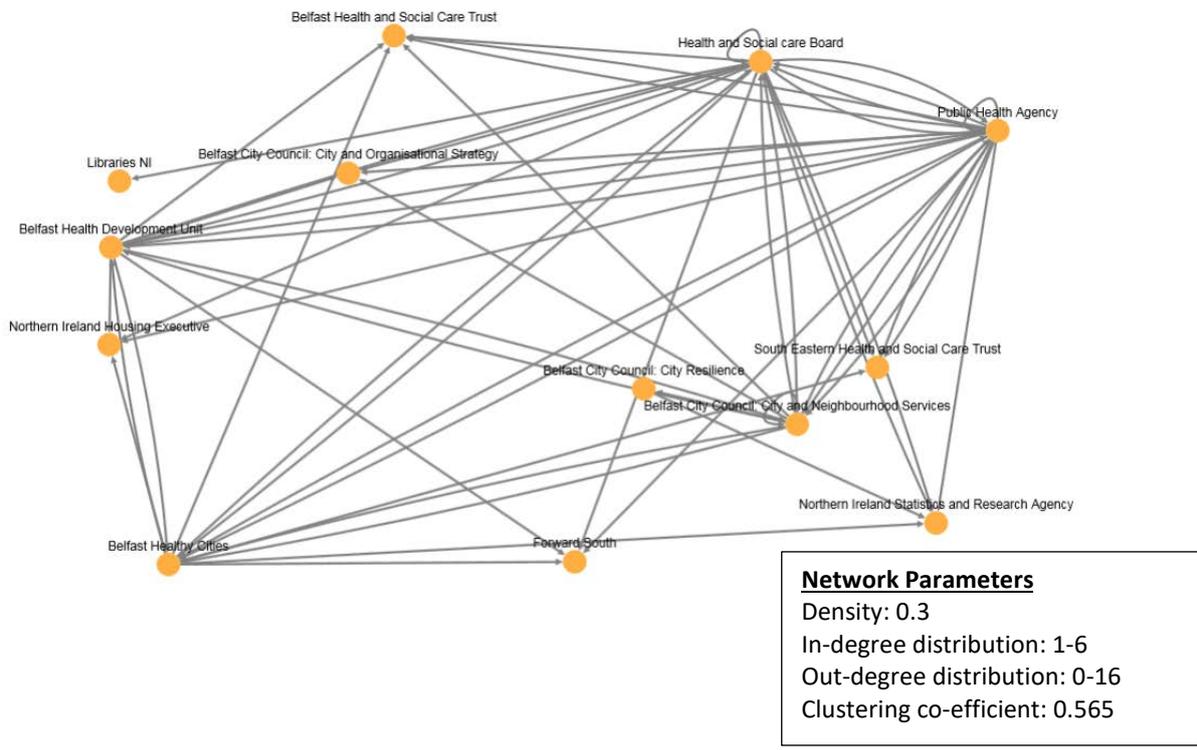


Figure 5: Belfast – Collaborations with Organisations regarding Health Inequalities



In summary, stakeholder network analysis is a feasible tool to: 1) identify the current stakeholders involved with the topic area and how they are linked; 2) describe the structure and characteristics of the network, how they communicate with each other and how influential they are; 3) identify areas and strategies for further strengthening of the participation and involvement of key stakeholders; 4) to derive network parameters that can be used to populate statistical models to test hypotheses regarding the role of the stakeholder network in, for example, changing the evidence culture in a LA. We have recently written about the importance of stakeholder networks for tackling NCDs (Hunter et al, 2019). Better understanding of the structure, characteristics, and function of stakeholder networks, to inform the design of network intervention strategies, can improve their efficiency, effectiveness and sustainability. For example, network data can be used to identify individual stakeholders selected on the basis of some network property and who may be trained and equipped to have greater roles in providing information or support within their network. Most central nodes (i.e. with the highest betweenness centrality measures and shortest connection between organisations), typically occupy gatekeeping positions and have an important role in sharing information across fragmented networks. Stakeholder network analysis techniques are also capable of capturing dynamic networks, such as those in Local Authorities, which have changing actors, changing organisations, changing priorities and changing actions. Knowledge of the networks' structural characteristics and the position that certain actors occupy in those networks can also help

an evaluator select key informants for interviews and focus groups as part of any parallel qualitative inquiry and that can shed further light on the synergies, interactions and feedbacks to be expected within a complex system (Popelier, 2018, Carmen & Fredericks, 2018, Cross et al, 2009). Varda et al (2008) has defined important core dimensions of connectivity in public health collaboratives such as this, including membership (e.g. organisational identification by type, size, mission); network interaction (i.e. network patterns and positions identified by sub-groups, key players etc); role of the LA (e.g. facilitator versus equal member); frequency of interaction; trust (i.e. reliability, shared belief in mission); reciprocity (i.e. evidence of mutual exchange of resources).

The derived network parameters can also be used to populate statistical models, such as tobit regression models, to test hypotheses regarding the role of the stakeholder network in, for example, changing the evidence culture in a LA (Boumans and Ferry, 2019). Other statistical models, such as Exponential Random Graph Models (ERGMs) (Robins et al, 2007) and Stochastic Actor-Oriented Models (SOAMs) (Snijders, 2001; Snijders, 2005; Snijders et al, 2010), can be used to test hypotheses regarding how change in the network characteristics and structure over time impacts on change in evidence culture. Yousefi-Nooraie et al (2015) provide an example of using SOAM approaches to analyse the evolution of stakeholder networks in three public health authorities. They usefully define three levels of measures of network change: actor effects; dyadic effects and structural effects which were used to populate the SOAM to help understand the role of change in network parameters in evidence exchange.

It is also possible to use ego-network (or personal network) approaches to capture the change in stakeholder network of an embedded researcher in a LA context. This enables us to chart the links built between, for example, Local Authorities and universities, how internal networks have been fostered in the LA, and how networks have been established between Local Authorities and wider stakeholders including voluntary and community sector organisations. Typical network measures include density, average strength of ties, network composition (e.g organisation type), size and homophily/heterogeneity.

Our experience of using SNA in the LACoR study provided helpful reminders of the need to integrate qualitative and quantitative evaluation approaches from the outset and use emerging findings iteratively to inform developments as the research unfolds. SNA can be complemented by other tools and frameworks to assess organisational readiness, support and impact, which could be

adapted for use in LG, with an understanding that the organisational context is not just a backdrop for exploring evidence use, but plays an active part in shaping and influencing its use.

5. Discussion

In this section, the main findings are drawn together with existing published literature on knowledge mobilisation, transfer and exchange. We conclude with reflections on what our study adds, the implications of the findings for evidence use in LG and recommendations.

We found no shared agreement across LG about ‘what counts’ as evidence or a uniform set of expectations about how evidence is, or should be used. Different directorates, departments and teams were reported to have different approaches to evidence use, suggesting multiple cultures of evidence use co-exist in LG and different strategies may be required to influence these, with research built in to examine what works, and for whom in different contexts.

We found many different types of evidence are used in LG, as others have reported (Boaz et al 2019², Oliver et al 2012). Research knowledge is only one type of evidence, which interacts with other forms of knowing (Kitson et al 2008). Given that research may not provide operationally relevant, actionable messages (Kothari et al 2009), at a time when decisions are made (Rushmer et al 2015), it may be blended with local knowledge, intelligence and experience to make it fit for purpose, relevant and useful to the local context (van der Graaf et al 2018). There are opportunities to weave in accessible evidence as an integral part of LG decision making processes, and maximising these requires contextually specific knowledge and understanding of how these social and political systems operate and where the levers of influence are. Skills are required in political sensitivity, negotiating, influencing, persuasion, change management, problem solving, teamwork and leadership (South et al 2014).

As Bev Holmes and colleagues (2016) note the very meaning of evidence is now the subject of lively debate. However defined, the emerging consensus is that evidence is not a thing apart, generated in isolation and then passed on to those who use it. It is clear that evidence alone does not solve problems, and that myriad elements of context, including different professional, organisational and sectoral cultures and the role of power and politics, are critical considerations.

Many of the barriers and facilitators that affect the use of research and evidence in LG have been identified in studies of knowledge transfer and knowledge exchange in health services (Lomas 2000,

² According to Boaz et al (2019:5) “research-based knowledge can encompass any systematic, transparent gathering and analysis of empirical data”.

Innvaer et al 2002, Graham and Tetroe 2009, Holmes et al 2016, Greenhalgh 2019). Solutions and appropriate infrastructure will need to be adapted to LG, but much can be learned from existing literature, where it has long been recognised that research is more likely to be used if it is targeted, relates to organisational priorities of the people involved, is presented in a format that is readily understood, demonstrates its applicability and users are engaged with researchers in defining the purpose and design of new research (Innvaer et al 2002, Lomas 2003, Greenhalgh et al 2004, Ogilvie et al 2009, Graham and Tetroe 2009, Kitson et al 2008, French et al 2009, see Moore et al 2009). Walter et al (2003) argue that impact is enhanced where there is strong evidence, endorsement from opinion leaders and high levels of commitment from stakeholders, which will be challenging given the pressures on LA staff. We argue that co-production is the best approach to secure and maintain engagement. Despite pressures on LG staff, we identified high levels of commitment, energy and enthusiasm to use evidence. There were examples of 'sustained interactivity' between researchers, policy makers and practitioners to support ongoing exchange, opportunities for personal two-way communication and partnership approaches (Graham and Tetroe 2009, Oliver et al 2012).

There is scope to learn from studies of evidence use in policy making, which suggest a multidimensional view of research implementation processes (Fox et al 2019), requiring practitioner engagement, an understanding of external and organisational context and political dynamics, in which research use is conceptualised as a learning process shaped by pre-existing knowledge and personal experience, judgements and values as well as evidence (Fox et al 2019:26, Oliver et al 2014). Organisational attributes and enablers that support evidence use in policy (Oliver et al 2014, Cairney 2018) and practice (French et al 2009) have been identified which support internal and external collaborations, as well as less tangible factors, such as a supportive culture that values and assimilates knowledge, and its application (absorptive and receptive capacity Greenhalgh 2019). An understanding of the specific micro-, meso- and macro-organisational contexts are therefore critical to identify appropriate strategies (McPherson et al 2017).

Leadership (at all levels) is important in laying the foundations and setting the tone, opening opportunities and addressing some of the contextual factors (such as those identified in the logic model), to enable the use of evidence in policy and practice in LG. These include issues of capacity, workload and time; access; encouraging inter/intraorganisational dialogue; creating opportunities for interaction between researchers and practitioners; addressing fears and anxieties about data sharing within and between council departments and wider stakeholders, all of which are factors

influencing collaboration. Universities are among a broad range of partners, engaged in a complex system of interactions between senior leaders, managers, officers, elected members, residents, and wider stakeholders in and out of LG. Academic expertise may not necessarily be privileged in this system.

Shifting the culture of evidence use in LG requires trusting relationships in and outside LG with recognition that incentives and rewards may pull people in different directions. We identified positive approaches to partnership and examples where bold leadership, co-location and meaningful co-production could change mind sets and attitudes. Over time, these may create ripple effects, in LG *and* academia, synergistically altering individual and collective expectations about how things are done (i.e. organisational culture). Long term commitments from, and sustainable funding for, research is required to build these relationships over time (Lomas 2000). Short term initiatives are unlikely to work given the likely pace of organisational change and scale of the challenges facing academia and LG.

A changing culture in LG means a different approach is required in academia. Numerous opportunities exist for evidence use, with some frustration expressed by participants in LG in our study about missed opportunities to work more closely with academics. Several examples were identified of positive relationships with university based academics with shared interests, a willingness to collaborate on research projects sometimes at small scale and/or using local data. LA staff welcomed partnerships with academics with open minds, willing to work collaboratively and able to take account of the political, social, environmental, regulatory and financial context in which LG operates.

There is energy and enthusiasm to work together to maximise the use of existing research capacity in LG. The importance of 'evidence champions' (Vindrola-Padros et al 2018) and 'credible intermediaries', boundary spanners and knowledge brokers have been identified in previous studies (Ogilvie et al 2009, Phipps and Morton). We found they already exist in different places in LG, VCS and NHS organisations suggesting these roles could be fulfilled by practitioners and policy makers working alongside academics to foster mutual collaboration and integrate evidence use in LA decision making processes and practices at a relevant time. Embedded research initiatives have been piloted in various forms in NHS settings (Holmes et al 2016, Marshall et al 2016, Lalani et al 2018, Gradinger et al 2019), education (Duggan 2014), and LG (Cheetham et al 2018). New and different approaches are required by universities to harness this capacity and build on the learning from LA

embedded initiatives and NHS researcher-in-residence quality improvement models. There is scope for universities to make meaningful contributions to decision making by working alongside colleagues in LG in multiple ways through secondments, internships, KTPs, joint training, PhD, masters and apprenticeship opportunities. This requires a different, less business/corporate minded approach by universities, with long term relationships between academics at different levels, across different departments working together on questions of mutual interest with potential gains for all involved. Interpersonal trust and ongoing communication channels have been identified as essential to the process of developing close collaboration between research producers and users (Contandropoulos et al 2010: 463).

Kitson et al (2008) suggest facilitation strategies need to match the readiness of individuals, teams and context. Case studies of ER identified in this study suggests a similar need for a 'match' in values, ideology, expectations and research skills. Other suggested ways to increase the use of research and evidence use in service delivery include 'inside out' (where locally sensitive knowledge is produced in situ) and 'outside in' approaches (where external evidence is pulled into organisations to reshape services) (Martin and Williams in Boaz et al 2019:53). However, with budgets for learning and knowledge sharing miniscule compared to those of audit, inspection and performance management, good intentions may be overshadowed by the pressing concerns to demonstrate compliance with central government targets (Rashman and Hartley 2002 cited in Boaz et al 2019:53). Similar pressures face academia given the highly prescriptive nature of conventional research quality metrics, albeit with changing expectations associated with REF impact.

Our study suggests that a combination of co-produced approaches may produce useful cumulative impact over time. The lack of robust evidence of effective measures of research use have been noted by Nutley et al (2007: 295) who describe impact as "a somewhat elusive concept, difficult to operationalise, political in essence and hard to assess in a robust and widely accepted manner". Measuring the effects of efforts to build a culture of evidence use remain in their infancy but are important for accountability and learning (Boaz and Nutley 2019: 269). It has been suggested that there is a need to develop and draw on diverse methodological and assessment approaches including qualitative methods (see for example Kothari et al 2009; Spaapen and van Drooge 2011; Morton 2015; Mazzucca et al 2019) to fully capture the nuanced contribution of research to policy and practice and ensure we avoid the paradox that those advocating greater research use often struggle to practise in research informed ways themselves (Powell et al 2018).

A summary of practical ways to address barriers to evidence use and proposed solutions, facilitators and suggestions of what is needed, as identified by LACoR participants, is shown in the table below.

Table 3: Summary of barriers, facilitators and proposed solutions to support evidence use in local government

Barriers to evidence use	Proposed solutions
Time / capacity	Spaces for reflection Senior leadership buy-in / support Strategic leadership / management support Better utilisation of existing staff skills and expertise Better use and integration of data
Competing priorities	Coherent overview / strategic plan Shared priorities Research priorities co-developed with communities Involve children, young people and parents / carers and wider community in prioritisation
Organisational culture	Organisational culture that promotes positive attitudes to risk / learning and development / quality improvement / learning culture Interdisciplinary approaches to public health challenges Involvement of wider actors in research at organisational level
Pressures on resources	Access to external funding to create additional capacity Investment in meaningful co-production Building a repertoire of skills and techniques to give LA staff additional tools
National funding	Funding to set things up, test and learn and understand cumulative / multiplier effects of different approaches
Fragmentation in systems / structures Different professional cultures	Whole system approach Appointment of people with open minds and attitudes Bring people together to collaborate on research studies / projects

<p>Siloed thinking</p>	<p>Build robust partnerships and trusting relationships through co-location of staff</p> <p>Embedded research posts</p> <p>Placements, secondments, job shadowing</p> <p>Shared language / understanding / priorities</p> <p>Long term relationships with academics rather than one-off commissioned pieces of research</p> <p>Career pathways between university and LA</p>
<p>Data sharing</p>	<p>Data sharing agreements</p> <p>Data security</p> <p>Research governance frameworks</p> <p>Clarity of purpose</p> <p>Robust ongoing GDPR training and support</p> <p>Demonstrate need for research/data usage</p>
<p>Wider context</p> <p>Rising demands</p> <p>Budget cuts</p>	<p>Invest to save – investment in LA research capacity</p> <p>Build and maximise existing skills</p> <p>Focus on outcome</p> <p>Pool budgets / resources</p> <p>University civic responsibilities</p>
<p>Access to academic research</p>	<p>Technical support</p> <p>Library and relevant software access</p> <p>Critical appraisal / interpretive skills Methodological expertise</p> <p>Research / practice collaborations</p> <p>Academics being receptive to priorities identified by practitioners and policy makers</p> <p>Actionable messages</p> <p>Use evidence of effectiveness e.g. promote What Works Centres</p> <p>Visiting university status</p>

6. Conclusions and recommendations

The findings from this study confirm there is an appetite for building on existing assets to strengthen the use of evidence in LG, highlighting the importance of personal networks and trusting relationships between academics and LA staff. Research champions, or potential champions, with relevant skills and a positive mind set are already in place in different roles in LG, keen to engage and act as change agents, as part of wider system of evidence use. The study identified a number of mechanisms and practical examples of ways in which a culture of evidence use can be facilitated and supported in LG. For example, embedded researchers can be one part of this changing landscape with the potential to enhance connectivity and interaction, and act as a critical friend, but they rely on a receptive organisational culture, in-house alliances and may be limited in their sphere of influence. There is a need for academics to better understand the social, political and financial pressures on LG and to listen, learn and adapt to the context in which research is used in LG. This means taking time to understand it, not just as a backdrop, but as a critical part of any research or implementation process. In complex systems, like local authorities, change is not linear, and although the cumulative impact of multiple efforts to embed evidence use might be anticipated, their effects cannot be predicted. Funding for new approaches to co-production and innovative models is needed for long term sustainable change to be embedded in academia and LG.

6.1 Takeaway messages for local government (senior leaders and commissioners)

- LA staff have underutilised research skills, knowledge and expertise
- Pressures on capacity, workload and thinking space limit effective use of evidence
- Potential willing research champions already exist in different roles, including among front line practitioners and middle managers
- Engage with universities and individual academics with shared interests
- Embedded researchers, two-way secondments, honorary appointments, jointly funded /shared posts, internships and co-located and supervised PhDs offer opportunities to generate and sustain links between policy, practice and academia

6.2 Takeaway messages for academia

- Multiple cultures of evidence use exist in LG, so no one size fits all
- Efforts to increase evidence use need to take account of the local context, and the social, political, financial, regulatory and legal constraints of LG

- Universities have an important role as part of integrated system-wide approach
- Sometimes the trade-off between academic rigour and timeliness means good enough research will be used in decision making. By working in partnership researchers can maximise opportunities for robust research evidence to be used to inform, and support, decision making alongside other forms of knowledge, including from policy makers, practitioners, politicians and the public
- Partnership working requires mutual trust and respect for different perspectives. Such relationships take time to

6.3 Takeaway messages for research funders

- Long term sustained funding is required to support collaborative partnerships between LG and academia and across LG so research evidence is generated to addresses LG priorities and that this evidence is shared across LG with similar priorities
- Investment is needed in meaningful co-production opportunities, which grow and build personal contacts and trusting and sustained relationships. This investment could be directed to support secondments, jointly funded /shared posts, internships, embedded researchers and other capacity building mechanisms to generate and sustain links between policy, practice and academia. The impact, including economic impact, of such investment should be measured to determine what works in which circumstances and inform the design of a sustainable model for research capacity in LG
- Research funding infrastructure for the NHS will need adapting for use in LG

6.4 Suggested principles for building evidence-informed policy and practice in local government

Building on the takeaway messages above, common principles to enable evidence-informed policy and practice in local government have been distilled from the research. These principles centre on four emerging key areas; Conceptual clarity; Co-production; Co-design; and Learn and grow. The principles highlight key mechanisms needed to facilitate and prompt the use of evidence.

Table 4: Common principles to enable evidence-informed policy and practice in local government

<p>Conceptual clarity</p> <ul style="list-style-type: none"> • Work on defining the “problem” together drawing on multiple perspectives from different departments and/or organisations where relevant • Be clear about how evidence is defined and articulated through the creation of shared language and meanings • Recognise that different kinds of evidence are valued differently by stakeholders • Take account of context
<p>Co-production</p> <ul style="list-style-type: none"> • Work in co-production to support organisational learning • Engage in dialogue from the outset to build relationships and shared understanding • Create conversational spaces through the research process • Identify and support dialogue between research champions in different teams/departments • Listen to people’s anxieties and fears about change • Explore what co-production means to all stakeholders involved • Identify and engage willing partners, including for example, community members, LA staff, elected members, academic staff and service providers • Be open and inclusive of people with different levels of responsibility • Recognise that leaders and potential leaders exist in unlikely places • Leadership (at all levels) is essential to create opportunities and address fears • Be aware of the impact of power differentials • Go where the energy is / where there is a desire for change • Demonstrate the need for research/data usage through practical examples
<p>Co-design</p> <ul style="list-style-type: none"> • Co-design a flexible plan, not a detailed roadmap • Embrace and respond to the views and experiences of staff delivering services and people using them • Recognise and develop the assets and expertise which people bring • Be honest about the limitations of existing research, and explore what it can offer • Appreciate different ways of learning
<p>Learn and grow</p> <ul style="list-style-type: none"> • Don’t parachute in. Take account of what is happening and existing skills and expertise in order to maximise utilisation of existing staff skills and expertise

- Make space and time to reflect on what evidence is needed for decision making. Invest in staff. Encourage curiosity.
- Build a culture in which it is okay to test out ideas and learn from implementing these
- Co-locate people in multi-disciplinary teams to surface new insider/outside insights
- Consider honorary arrangements and visiting university status between local authorities and universities
- Encourage 'constructively clueless' questions of one another
- Use what we know about organisational change
- Be patient, expect resistance, explore how to resolve tensions collectively
- Connect people with drive and energy to maintain momentum in terms of embedding evidence in practice
- Seek sustainable funding and expect long-term commitment
- Evaluate and share learning
- Invest in research capacity along with relevant support, supervision and mentoring in the LA and in academia

6.5 Strengths and limitations

The strength of this study lies in the mixed methods approach used, and the involvement of multiple stakeholders, including representatives from universities and LG across the UK. In the short timescale available, we were limited in the data it was possible to collect. We recognise that, although geographically, culturally and politically distinct, the three participating local authorities may not be representative of all local authorities. The interviewees and survey respondents may not represent the views of others in LG. We did not capture the views of those outside LG, in funding bodies or among academics with or without experience of co-production in LG. We look forward to building on the relationships established in future research projects.

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8. Appendices

8.1 Appendix A: Rapid review protocol

Aims

The review will inform research design and analysis for the ongoing project 'Developing Local Authority Champions of Research LACoR through an embedded research culture: a proof of Concept project.

The primary aims of this rapid review are to (1) identify existing literature on research capacity and usage within a LG context, as well as (2) identifying current practice detailed in the literature relating to embedding research culture(s) within local government.

Primary Research Question

What is known and understood about research / evidence use in LG and building research capacity in LG in the UK? How does evidence inform decision making in LG?

Key search terms to include:

- Research or research capacity or research capacity building
 - Embedding research or embedded research or embedded researcher
 - Research culture
 - Knowledge mobilisation or knowledge exchange
- AND**
- Local government or local authority or council

Methods

Rapid reviews use a streamlined approach in order to synthesise evidence quickly. They are typically used in aiding decision makers in health care and health service settings to respond quickly to urgent and demanding needs³. The rapid review will be informed by the WHO guidance on rapid reviews⁴

³ Konnyu, K, Kwok, E, Skidmore, B & Moher, D (2016) The effectiveness and safety of emergency department short stay units: a rapid review. *Open Medicine* 2012;6(1)e10

⁴ Tricco AC, Langlois EV, Straus SE, editors (2017) *Rapid reviews to strengthen health policy and systems: a practical guide*. Geneva: World Health Organization

and rapid review methods⁵⁶⁷ and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement⁸. The eligibility criteria will be established prior to conducting searches of electronic databases.

Eligibility criteria

Due to time pressures of the review, strict eligibility criteria has been set out to guide data collection. Papers will need to conform to the following criteria in order to be included:

- Full text English-language
- Published in peer-reviewed journals or on Government websites
- Must relate to LG in the UK
- Published since 2010 (just prior to public health moving into LG)

Data extraction

Data extraction to include the following categories:

- Author/Year
- Title
- Publication
- Summary of paper's main findings of relevance to LACoR project
- Type of research used, i.e. peer reviewed, local evidence etc.
- How has research capacity been built - interventions/methods employed
- How is research used within LG?
- What changed, if anything?
- Has it been evaluated
 - Method of evaluation
 - Summary of results
- Broad policy area (i.e. housing/transport etc.)
- Funding source

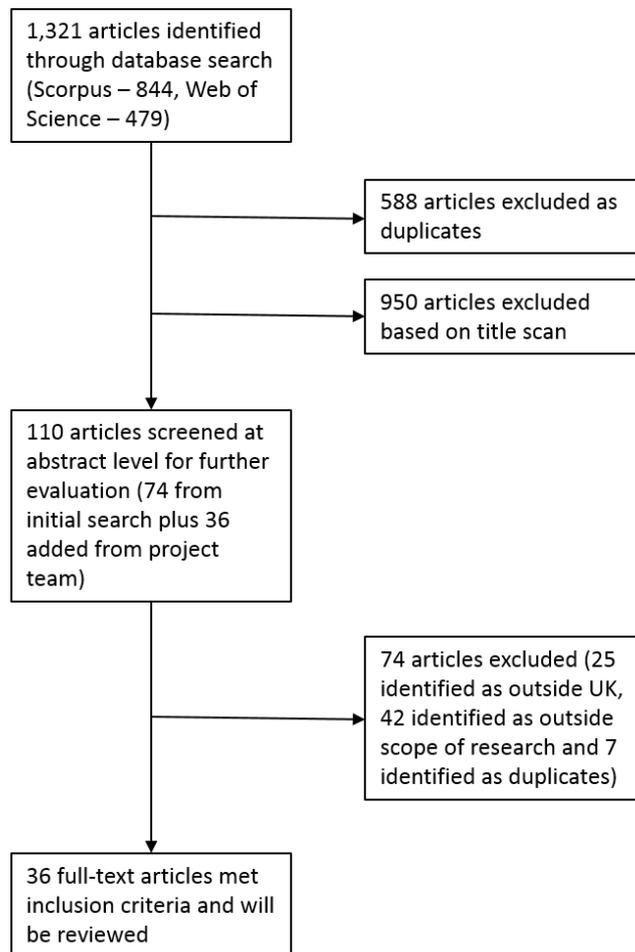
⁵ Thomas J, Newman M, Oliver S. Rapid evidence assessments of research to inform social policy: taking stock and moving forward. *Evid Policy*. 2013;9:5– 27. <https://doi.org/10.1332/174426413X662572>.

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⁷ Langlois EV, Straus SE, Antony J, et al. Using rapid reviews to strengthen health policy and systems and progress towards universal health coverage. *BMJ Glob Health* 2019;4

⁸ Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic review and meta-analyses: the PRISMA statement. *BMJ*. 2009;339:

Flow Diagram of Publication selection



8.2 Appendix B: Template for Local Authority Champions of Research scoping review

SECTION 1: CONTACT DETAILS (for person completing the form)	
Name:	Local Authority: Type of LA (unitary, county, district etc.):
Job title:	
Email address:	
SECTION 2: USE OF SCIENTIFIC RESEARCH	
<i>Scientific research includes publications which report original empirical and theoretical work which often require a peer-review process. Examples might include evidence briefings from Public Health England, the Local Government Association, professional bodies such as Royal College of GP's, Government Departments or Cochrane Reviews of evidence.</i>	
Please provide an example of how the results of scientific health research is accessed within your local authority	<ul style="list-style-type: none"> a. Online b. Attending conferences c. Membership of specific organisations <i>Please state which.....</i> d. Hard copy journals e. Other access point <i>Please state where.....</i>
Please provide an example of how the results of scientific health research is used in your local authority	
Please provide an example of how the results of scientific health research is integrated within local decision making processes within the local authority	
SECTION 4: APPROACH TO RESEARCH – EMBEDDED RESEARCHER	
<i>Embedded research describes a mutually beneficial relationship between academics and their host organizations whether they are public, private or third sector'</i>	

For the purpose of this study, embedded researchers are defined as:

Individuals or teams who are either university- based or university employed undertaking explicit research roles ... legitimated by staff status or membership within the host organisation. . . with the purpose of identifying and implementing a collaborative research agenda.⁹

<p>Do you have an Embedded Researcher within your authority?</p>	<p>Yes – within Public Health</p> <p>Yes – within an area outside Public Health</p>	<p>No (please go to section 3)</p>
<p>What is the main role of the Embedded Researcher?</p> <p><i>Please circle all that apply</i></p>	<p><i>a. Build links between Local Authorities and Universities</i></p> <p><i>b. Support LA employees to do their own research</i></p> <p><i>c. Understand what works, for whom, to improve population health and wellbeing</i></p> <p><i>d. Develop quantitative research skills in LA staff</i></p> <p><i>e. Develop qualitative research skills in LA staff</i></p> <p><i>f. Build internal networks in the Local Authority</i></p> <p><i>g. Build networks between local authorities and wider stakeholders, including voluntary and community sector organisations</i></p> <p><i>h. Understand the needs of local communities</i></p> <p><i>i. Assist with research funding applications</i></p> <p><i>j. Provide evidence briefings</i></p> <p><i>k. Work with elected members to determine their research priorities</i></p> <p><i>l. Facilitate changes in practice</i></p> <p><i>Other, please state</i></p>	
<p>Who funds the Embedded Researcher?</p> <p><i>Please indicate % split if more than one funder</i></p>		

⁹ Adapted from McGinity R, Salokangas M (2014) Introduction: ‘embedded research’ as an approach into academia for emerging researchers *Management in Education* 28(10): 1-5

How long is the Embedded Research post funded for?	Start date: End date: Approximate hours per week:
Which organisation employs the Embedded Researcher?	
Who has management responsibility for the Embedded Researcher? <i>Please identify individuals by role and team (rather than by name)</i>	
What are / have been the 3 main benefits to the Authority of hosting an Embedded Researcher?	1. 2. 3.
What are / have been the risks of having an Embedded Researcher within the organisation?	
What could be improved with regards to having an Embedded Researcher within the organisation?	
SECTION 3: RESEARCH IMPACT	
Thinking about <u>how</u> scientific health research is used in your local authority, can you identify the following key roles¹⁰ within your organisation... <i>Please identify individuals by role and team (rather than by name), including links to any groups such as Health and Wellbeing Board</i>	Champion (Senior policy makers or managers supporting the work) Allies (people offering contacts and support)

¹⁰ Roles identified by Vindrola-Padros C, Eyre L, Baxter H, et al. (2018) Addressing the challenges of knowledge co-production in quality improvement: learning from the implementation of the researcher-in-residence model in *BMJ Qual Saf* Epub doi:10.1136/bmjqs-2017-007127

	Chaperones (a key person to keep an eye on progress)
Please provide an example of how scientific health research has been successfully used within your local authority and what impact it made <i>Please describe what has been done and what changed as a result. This could be in the form of a brief case study</i>	
Please identify 3 top tips for embedding a research culture or integrating research into decision making processes in a local authority?	1. 2. 3.
If you would like to leave any further comments about the topics in this survey, then please do so here."	
Please indicate if you would be happy to participate in a 30 minute telephone interview to discuss research within your organisation in more detail	Yes Please provide contact email or phone number No

8.3 Appendix C: Facilitated workshop attendance

The first workshop was held on Wednesday 13th March 2019 with public health practitioners and commissioners in Newcastle. Focusing on school readiness, we explored beliefs about the value of research evidence, the value of embedded research models for evidence-informed decision making, the routine application of existing evidence (identification and translation) and participants' views on the potential for co-creation of new evidence that would address their challenges and priorities. The workshop was attended by 14 participants, which included: Senior Specialist - Public Health (Children and Young People), Public Health Intelligence Specialist, and Service Manager - Early Help and Family Support, Performance Analysts, Information Managers. (See Appendix C for example of prompt sheet used in Newcastle workshop).

Further workshops were held in Belfast on 29th March 2019 and in Southampton on 30th April 2019 where the logic model was further tested and refined with local public health practitioners in each area.

The Belfast workshop was attended by 22 participants with representation from Belfast City Council, Belfast HSC Trust, Health and Social Care Board, South EHSC Trust, Libraries NI, Belfast Health Development Unit, West Belfast Partnership Board, Northern Ireland Housing Executive.

The Southampton workshop was attended by 18 participants from across Hampshire County Council, Southampton City Council and Southampton University, including, Assistant Director, Internal Provision and Front Door, Head of Insight and Engagement, Head of Research and Intelligence, Head of Corporate Customer Service, a newly appointed embedded researcher, academics in Public Health and Medicine from Southampton University.

Refining the logic model

A follow up workshop was organised in Newcastle on 21st June 2019 to feedback findings from the different workshops to senior members within the Council and to gain consensus on the logic model, while exploring recommendations for embedding a research culture within LG. Participants included: Senior Public Health Specialists, Insights Manager, Performance Analysts, Service Improvement Leads, Community Safety Specialist, Communities Officer, Policy and Communications lead, Public Health Intelligence Lead, two Directors and a voluntary organisation chief executive.

8.4 Appendix D: Newcastle workshop programme and prompt sheet

Local Authority Champions of Research (LACoR) workshop

Newcastle Wednesday 13th March 9 -12.30pm

Time	Content	Lead
09:00 – 09:15	Arrivals Arrivals and refreshments Registration PIS and consent forms distributed Set up presentations	All LR/SR MC/SR LR
09:15 – 09:45	Welcome and introductions: <ul style="list-style-type: none"> • Welcome and introductions • Introduce research team and explain aims of workshop • Request consent forms • Background, rationale for choice of topic and future opportunities • Participants introduce themselves (name, role, length of service in council) • Working agreement 	AA EM SR MC
09:45 - 10:05	Understanding school readiness <ul style="list-style-type: none"> • How would you define School readiness? What do we mean when we talk about school readiness? <ul style="list-style-type: none"> ○ Write responses down on flip chart paper following discussions in pairs ○ <i>AIM: get respondents thinking about the topic area and clarify terms</i> 	Table discussion
10:05 – 10:35	Future visioning	Table discussion

<p>10:35 – 10:45</p>	<ul style="list-style-type: none"> • The year is 2029, and all children in Newcastle are ready for school. What three things have happened to ensure all children in Newcastle are ready for school? What if...? <ul style="list-style-type: none"> ○ Write responses down on post it notes and stick on flip chart paper on the wall ○ <i>AIM: to set scene, engage participants and define outcomes in relation to topic area</i> <p>Group feedback from each table (5 mins each)</p>	<p>MC/SR</p>
<p>10:45 – 11:00</p>	<p>Comfort break</p>	
<p>11:00 – 11:30</p> <p><i>10 mins per question</i></p>	<p>Understanding current practice</p> <ul style="list-style-type: none"> • How do you know that a child is ready for school? <ul style="list-style-type: none"> ○ Write responses down on flipchart paper – specific examples ○ <i>AIM: Gauge participant’s understanding of school readiness and what influences it</i> • What evidence/statistics/performance measures/research are collected to show school readiness? <ul style="list-style-type: none"> ○ Write each down on separate post-it note then group discussion ○ <i>AIM: Get an understanding of what information sources are used to ascertain school readiness and by whom</i> • Where does the evidence/statistics/performance measures/research come from? <ul style="list-style-type: none"> ○ Put the post-it notes into groupings (on flip chart paper) dependent on where the information comes from ○ <i>AIM: Get an understanding of who has access to and who holds what data</i> 	<p>Table discussion</p>

<p>11:30 – 12:00</p> <p><i>10 mins per question</i></p>	<p>Understanding current use of research</p> <ul style="list-style-type: none"> • How is the evidence/statistics/performance measures/research used and by who (role not name)? <ul style="list-style-type: none"> ○ Refer back to the post-it notes from Q3 and use separate flip-chart page to write down how each is used and by whom ○ Prompt if required on; commissioning decisions, performance targets, performance measures ○ <i>AIM: Understand how research is currently used</i> • What helps and hinders evidence/statistics/performance measures/research to be used in decision making? <ul style="list-style-type: none"> ○ Write responses down on flip chart paper ○ Prompt if required using responses from Q5 ○ <i>AIM: Understand current practices, perceived barriers and facilitators</i> • What could be improved in terms of the use of evidence/statistics/ performance measures/research? <ul style="list-style-type: none"> ○ Write responses down on flip chart paper ○ Prompt if required using responses from Q5 or on examples of other areas where it has worked well. Explore who would lead areas/actions suggested ○ <i>AIM: Understand current practices requiring improvement</i> 	<p>Table discussion</p>
<p>12:00 – 12:20</p>	<p>Understanding potential role of research</p> <ul style="list-style-type: none"> • Who and what is missing? <ul style="list-style-type: none"> ○ Prompt on: <ul style="list-style-type: none"> ▪ What evidence is missing? Are there any gaps in our knowledge / understanding? ▪ What else is needed? ▪ Who else needs to be involved in discussions / plans 	<p>Table discussion</p>

	<ul style="list-style-type: none"> ▪ Any risks / unintended consequences of focusing on school readiness? ▪ What else might affect efforts to introduce change at the present time <ul style="list-style-type: none"> ○ Write responses down on flip chart paper ○ <i>AIM: Get an understanding of what types of evidence may be missing and strength of inter/intra-organisational relationships</i> 	
12:20 – 12:30	<p>Close and thanks</p> <p>Round up, next steps and final round of feedback – one thing from the afternoon that will stay with you or make you think differently.</p>	AA
12:30	Lunch	

8.5 Appendix E: Interview Schedule for staff

- Explain aims of study
- Reminder there are no right or wrong answers
- Talk through PIS and complete consent form
- Check if there are any questions

Current practice

1. What do you understand by evidence in a LG context?
2. What's in place already to support evidence-informed decision making in public health in this LA? (map current structures / processes or prompt with Ward and Marshall's NIHR study icons)
3. What data is collected currently in LA / public health (related to school readiness)? By whom?
4. How is this information used?
Prompt - to inform commissioning / service planning / policy?
5. If it is not used, why not? Prompt what gets in the way?

School readiness

6. At the Newcastle workshop, there appeared to be a disconnect between the data available on school readiness (SR) and the data people might like to collect, given the preferred definitions of SR, do you agree with this?
7. Do you have any suggestions about what data could be collected, (in line with the preferred definition of SR) and by whom?
8. Who could support this?
9. Do you have any thoughts / comments on the map we produced from the workshops held so far?

Evidence use

10. What different kinds of data / evidence are valued and by whom in this LA?
11. Who holds power and control over the data / evidence used?
12. What currently works well in using evidence?
13. What could be improved? What is missing or not working so well in this LA?

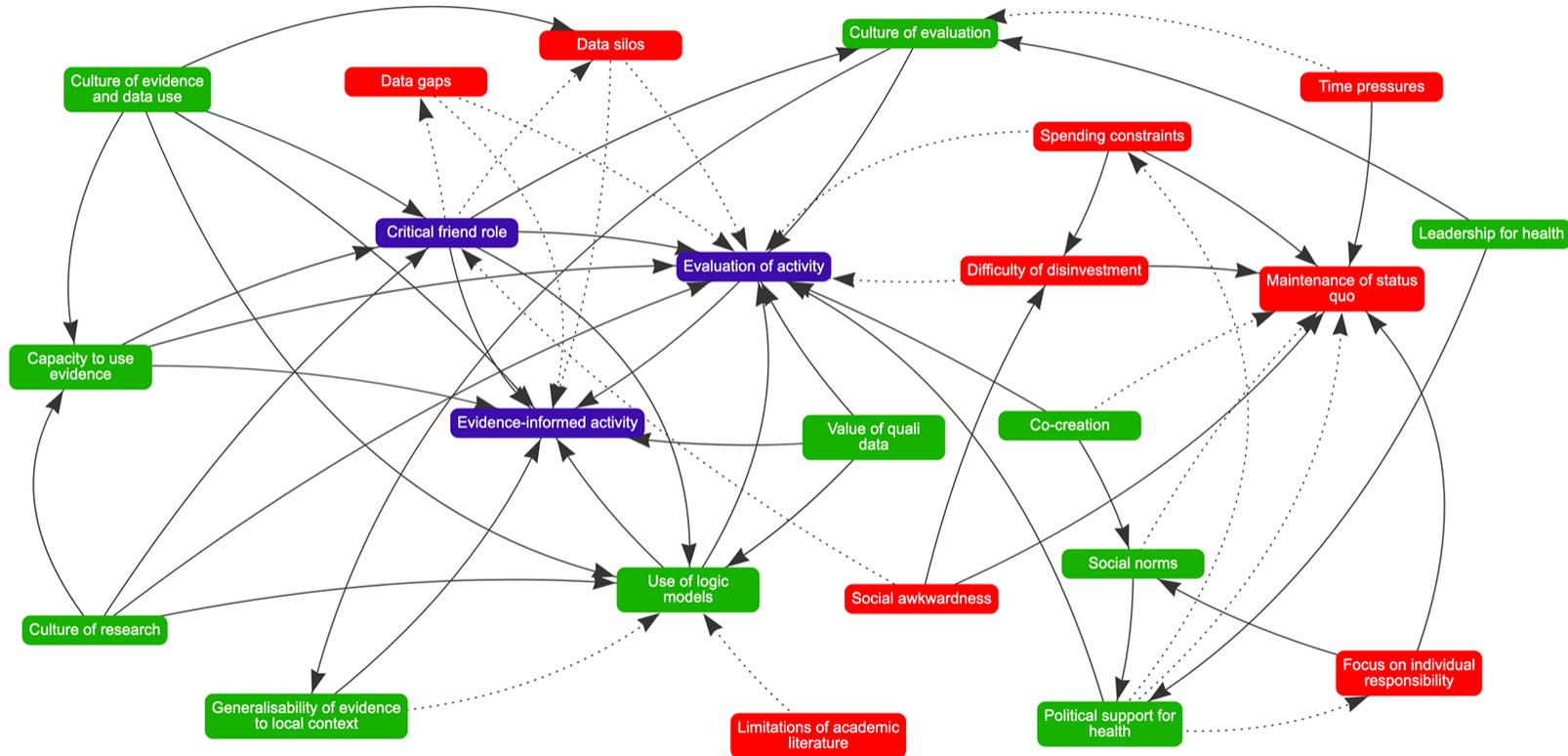
14. What would you say helps / hinders evidence-informed decision making in LG? Prompt what are the barriers / facilitators?
15. What needs to be in place for research use to be embedded in everyday practice?
16. What examples, if any, do you have of approaches or models or collaborations that you would recommend to other LAs?

Looking forward

17. How would you like to work with academic researchers in your LA to improve evidence use?
18. Are there messages for Universities / researchers / academics which would help ensure evidence is used in LG?
19. What would success look like for you?
20. How can we evaluate efforts to improve evidence use in this LA?
Prompt for example how can we measure success?
21. Anything else you would like to sa

8.6 Appendix F: Draft Systems map

Map Name: LACOR system 20/8/19 Connection Circle Diagram Search...



© Deakin University under license to Harry Rutter Community: GLOBE Project: Halsa Created with STICKE software <https://sticke2.deakin.edu.au>

8.7 Appendix G: Social Network Analysis (SNA) Questions

Introduction

The Local Authority Champions of Research (LACoR) study is a collaborative research project involving Newcastle University, Queens University Belfast, Southampton University and three Local Authorities in the UK.

Funded by the Health Foundation, we aim to explore ways to build a culture of evidence use to inform decision making in LG.

In the following short survey, we ask you a few questions about yourself, how you view and use evidence, and what you think our priorities should be for the LACoR project.

All information you give is treated in confidence. We will not identify people by name in the reports or publications we produce.

1. Please tell us where you work

Local Authority	<input type="checkbox"/>
NHS	<input type="checkbox"/>
Voluntary sector organisation	<input type="checkbox"/>
Public Health England / Public Health Agency	<input type="checkbox"/>
University	<input type="checkbox"/>
Other, please specify	

2. How long have you worked there?

Less than 1 year 1-5 years 6-10 years 11+ years

3. How do you define evidence? Please tick as many boxes as relevant

Local monitoring data	<input type="checkbox"/>
Local service evaluations	<input type="checkbox"/>
Joint needs assessment / future needs assessment	<input type="checkbox"/>
Public health surveillance data (e.g. from PHE)	<input type="checkbox"/>
Practice guidelines (e.g. NICE)	<input type="checkbox"/>

Systematic reviews (e.g. Cochrane)	<input type="checkbox"/>
Published scientific papers	<input type="checkbox"/>
Other (please give details)	

4. Where do you access evidence?

Public Health England / Public Health Agency Northern Ireland	<input type="checkbox"/>
Government websites (e.g. DHSC)	<input type="checkbox"/>
NICE	<input type="checkbox"/>
Professional bodies (e.g. Local Government Association)	<input type="checkbox"/>
International organisations (World Health organisation)	<input type="checkbox"/>
Online academic journals	<input type="checkbox"/>
Universities (please specify which)	<input type="checkbox"/>
Experts in the area	<input type="checkbox"/>
Other people (colleagues, friends)	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

5. Do you exchange evidence with anyone **inside** the Local Authority?

a. Please state the person's role

6. Do you exchange evidence with anyone **outside** the Local Authority?

a. Please state the organisation and the person's role

7. How do you use evidence in your work?

To plan services	<input type="checkbox"/>
To inform commissioning decisions	<input type="checkbox"/>

To understand what works to improve people's health	<input type="checkbox"/>
To help target public health interventions	<input type="checkbox"/>
Other (please specify)	

8. Have you contacted any individual with expertise in (*insert identified priority topic school readiness, inequalities etc.*) **inside** the Local Authority?
 - a. If so, what is the role / job title of the individual or the name of the team you have contacted?
9. Have you contacted any individual / group / organisation with expertise in...(*insert identified priority topic school readiness, inequalities etc.*) **outside** the Local Authority?
 - a. If so, what is the name / job title of the individual or the name of the group or organisation you have contacted?
10. Do you collaborate with any organisations or groups regarding... (*insert identified priority topic school readiness, inequalities*)?
 - a. If so, what is the name of the organisation with whom you collaborate?
11. Are there any organisations you think it would be useful to contact to gather evidence about... (*insert identified priority topic school readiness, inequalities*)?

If so, please state which organisation?
12. What are the three most important things for the Local Authority Champions of Research project to achieve? Please mark three boxes 1,2,3 in order of preference, where 1 is the most important

Build links between Local Authorities and Universities	<input type="checkbox"/>
Support LA employees to do their own research	<input type="checkbox"/>
Understand what works to improve health and wellbeing	<input type="checkbox"/>
Develop quantitative research skills in LA staff	<input type="checkbox"/>
Develop qualitative research skills in LA staff	<input type="checkbox"/>
Build internal networks in the Local Authority	<input type="checkbox"/>
Build networks between local authorities and wider stakeholders, including voluntary and community sector organisations	<input type="checkbox"/>

Understand the needs of local communities	<input type="checkbox"/>
Assist with research funding applications	<input type="checkbox"/>
Provide evidence briefings	<input type="checkbox"/>
Work with elected members to determine their research priorities	<input type="checkbox"/>
Facilitate changes in practice	<input type="checkbox"/>
Provide access to published papers	<input type="checkbox"/>
Other (please state)	

8.8 Appendix H: Local Authority Champions of Research (LACoR) workshop 2

Friday 21st June, 1.00 – 4.00pm Function Room, Laing Art Gallery, Newcastle

Programme and summary notes

Time	Content	Lead
1.00-1.30	<i>Lunch available</i>	
1.30- 1.40	Welcome and introductions: <ul style="list-style-type: none"> • Welcome and introductions • Introduce research team • Outline of workshop, overall context and other aspects including qual interviews (MC) <ul style="list-style-type: none"> ○ School Readiness • Request consent forms • Working agreement 	EM AA EM MC
1.40-2.10	Introduction of logic model Have A3 print outs of logic model on the tables Short presentation and questions	SR
2.10-3.25	Round table discussions to generate more insights and feedback on logic model	MC/SR/PvG
3.25-3.40	Comfort break Feedback of main discussion points about logic model as group	Participants
3.40-4.00	Summary, close and thanks Round up, next steps and final round of feedback	AA
4.00	<i>Tea available</i>	

Detailed notes from individual facilitated table discussions are available on request.

Summary of main points discussed grouped around the following 8 headings by David Hunter following observations and notes taken of the 3 table discussions at the workshop:

Defining success

Population is the ultimate impact of all a LA (LA) does. Not limited to services or to what LA alone does but needs to include Police, NHS, others. Focus should be on whole system – health and wellbeing.

A whole-of-Council approach is required to avoid a silo mentality being dominant or pervasive. This requires systems thinking and avoidance of ‘departmentalitis’.

Context is everything

The context in LG is one of retrenchment and outsourcing services in place of an expansionist setting where the LA did most things in-house.

Need to be more positive about promoting an ethos of doing a good job for the people the LA serves.

Politics

There is a need for choices and that’s a political role. The allocation of resources between departments and services is also a political matter as is the pooling of resources to achieve a particular objective or goal.

Political will in making the case for change is critical.

Leadership

Leadership is critical, both from elected members and from chief officers. It also needs to embrace the whole system including the LA and partners – a place-based approach.

Engagement

There are benefits from engagement whether from the community or other stakeholders but it needs to have a clear purpose – ‘coordinated collaboration’.

Temporal challenge

Balancing the pressure for quick wins and early success with the investment needed to show results longer term is a critical issue in the LA. Short-termism needs to be challenged when making investment decisions. Links to politics and leadership themes.

Policy and R&D capacity

A strengthened and more active research culture in the LA will help inform outcomes, and match what is done with what communities want so policy and R&D are closely linked. A higher value should be placed on research in demonstrating if something is worth doing for the wider

community. It's not a luxury add-on but a key part of the culture of policy formulation and implementation.

A public sceptical of the value of investment in R&D needs to be faced head-on with a positive case for R&D being made. This might include the value of an LA not reinventing the wheel by having access to evidence of what works (and does not work). There is also merit in evaluating what is being done and its cost to assess whether or not it is giving value for money. R&D has great practical value in prosecuting the business of the LA.

There is a need to look more objectively at what is being done informed by evidence. That might mean having a group of around 10-12 LAs doing the same thing across the country in order to evaluate its impact. There is a scale issue as one LA doing something may not yield sufficient, sound or reliable evidence. There is a need for LA partners to come together to test and evaluate what is being done.

There should be greater permission and a less risk-averse culture so that new ways of doing things are explored and evaluated. Being less wedded to legal imperatives is desirable. This requires trust. Qualitative research needs greater emphasis. Too much attention is given to the quantity of things and what can be counted. It's easier to count things.

Need to provide opportunities for easier access to research evidence, literature and data. Better sign-posting for staff needed. Also, consideration needs to be given to putting in place opportunities for staff to acquire and develop new skills in research – encourage joint posts between LA and universities, secondments, placements etc.

Data sharing and interoperability remain challenges. The governance of data sharing needs to be addressed to overcome protectionist practices.

LA as a learning organisation

LAs need to demonstrate high level of trust among their staff to allow new things to be tried out and tested. There needs to be an acceptance of failure and to ensure that lessons are learned from failure rather than staff being blamed for it.

8.9 Appendix I: Examples of embedded research and researcher-in-residence studies undertaken by respondents to the scoping survey

Research in to the roll out of Universal Credit in Gateshead and Newcastle

Following a community-led, place based study which identified structural and material factors influencing health and wellbeing, with particular concerns raised about the effects of welfare reform, Gateshead Council was keen to understand the experience of residents claiming Universal Credit (UC). An embedded researcher undertook a qualitative study of the impact of the roll out of Universal Credit in January 2018, soon after the roll out began. This formed part of a three year collaboration between Teesside University and Gateshead Council public health team, with additional support provided by Newcastle University. Interviews were undertaken with 33 UC claimants and 37 staff supporting them in Gateshead and Newcastle.

The findings added considerable detail to emerging evidence of the deleterious effects of UC on vulnerable claimants' physical and mental health and wellbeing, social and family lives. The digital claims process was experienced as complicated, disorientating, impersonal, hostile and demeaning. Claimants reported being pushed into debt, rent arrears, housing insecurity, fuel and food poverty through UC system failures and delays. The threat of punitive sanctions for failing to meet the enhanced conditionality requirements under UC added to claimant's vulnerabilities and distress. Staff reported concerns for claimants and additional pressures on health services, LG and voluntary and community sector organisations as a result of UC.

The research attracted national media attention, including in the Guardian

<https://www.theguardian.com/society/2018/nov/16/uk-austerity-has-inflicted-great-misery-on-citizens-un-says> . It was cited in a report by the UN Special Rapporteur for Extreme Poverty and Human Rights following his visit to the UK in November 2018

https://www.ohchr.org/Documents/Issues/Poverty/EOM_GB_16Nov2018.pdf

A co-authored paper was published in British Medical Journal Open in July 2019

<https://bmjopen.bmj.com/content/bmjopen/9/7/e029611.full.pdf>

and highlighted in the BMJ by Mahase, E. (2019) "Hostile and demeaning" universal credit system worsens physical and mental health, study finds in BMJ 2019;366:l4552 doi:

<https://doi.org/10.1136/bmj.l4552> (Published 04 July 2019).

The Director of Public Health, Alice Wiseman explained "*We wanted to understand what we might do locally to mitigate any negative impacts but also to have evidence to lobby for change nationally. A number of local actions have been taken in response, and we continue to hold*

conversations with national leaders, including senior colleagues at the Department for Work and Pensions”.

The full report is available by contacting M.cheetham@tees.ac.uk or from www.gateshead.gov.uk

Michael Dalili is an embedded researcher funded by the Clinical Research Network in South Gloucestershire. Here he describes a pilot project he undertook in 2019.

Mental Health and E-cigarettes Pilot at South Gloucestershire Council

While working as a senior research associate at the University of Bristol on a systematic review, network meta-analysis, and cost-effectiveness analysis of the effectiveness and safety of smoking cessation medicines and electronic cigarettes, I was put in touch with members of the South Gloucestershire Council Smoking Cessation & Tobacco Control team. The team were exploring piloting the provision of electronic cigarettes for smokers suffering from mental health problems attending their stop smoking service. As they had not previously offered electronic cigarettes for smoking cessation as part of their service, the team were interested in what the latest evidence was regarding their effectiveness and safety based on up-to-date published research. I met with the team and presented a review of the research on electronic cigarette safety to help inform their decision whether to move forward or not with the pilot. Based on the evidence I presented them, they decided to pursue conducting the pilot and I attended a stakeholder meeting organised by the team and attended by local colleagues and partners. Following this meeting, I contributed to the design of the pilot and helped it to gain approval through the council’s research governance process. I helped ensure that we would collect important and robust data so that we could effectively evaluate the pilot. From the outset, we designed the pilot and evaluation to be methodologically sound with the aim to report and publish its findings as a manuscript in a peer-reviewed journal following its completion. The pilot is currently ongoing and has already recruited participants.

For further information contact michael.dalili@nihr.ac.uk

Felix Gradinger is employed at the University of Plymouth, and works as a researcher-in-residence in South West England. With colleagues, he has recently published a paper entitled *Reflections on the researcher-in-residence model co-producing knowledge for action in an Integrated Care Organisation: a mixed methods case study using an impact survey and field notes*

Background/Aims/Objectives

'Embedded' approaches to knowledge mobilisation are gaining currency, as health and social care services come under increasing pressure to re-design services now rather than wait for research.

One such approach is the 'Researcher in Residence' (RiR) model which seeks to co-produce knowledge for action. The aim of this paper is to extend the evidence base regarding mechanisms of impact.

Methods

A two-year mixed-method case study of the experience and impact of two part-time RiRs, embedded within an Integrated Care Organisation to support the implementation of new models of care. Data included the results of an anonymous impact survey sent to 80 key stakeholders, field notes of meetings (n=112), and observations of naturally occurring events (n=68).

Findings

Impacts were identified in relation to use of co-produced evidence, capacity building, changes in ways of working, and to a lesser degree changes in operations or strategy. Impact involved learning which was mediated by three non-linear, non-predictable, positive and negative feedback cycles (learning/improvement, access, expectation). A mixture of technical skills, personal attributes and behaviours were identified as key to this mediation.

Discussion/Conclusion

The RiR model promises a timely, applied and transferable research model that contributes to the development, evaluation and adaptation of innovations that seek to integrate services where the evidence base is weak and uncertain. However, the model is not without challenges. These could be addressed by flexibility of research design and funding, and adequately supporting and developing key attributes of RiRs.

A full copy of the paper is available here <https://pearl.plymouth.ac.uk/handle/10026.1/14604>

8.10 Appendix J: Illustrative examples of evidence use in local government identified by interviewees

One example of data being used to track progress over time was in education, where information on children and young people's educational attainment is provided to all schools across the city to enable comparisons between years, analysis over time and targeting of support for schools if / when performance dips. Participants described the importance of evidence being used to generate and test hypotheses to explore differences in educational outcomes. For example, it was suggested that further analysis of pupil level data could be done to explore the possible relationship between attendance and school readiness:

It's a question or a theory to test...you might have excellent attendance in primary school and then in year 7, it just dropped which might suggest there needs to be more work done on that transition period by both primary and secondary schools (IV 7:11).

Demographic data about individuals and families is used by the LA to measure patterns of service use and predict potential demand for services for example, a shared dashboard of indicators for children and young people with special educational needs and disabilities (SEND) is being developed in partnership with the Clinical Commissioning Group:

We're working very closely with health on what they would like to see...It's this very fancy piece of information that has all this evidence around children and young people with SEND. Who they are, what their needs are, what information do we need to be able to inform that dashboard which will ultimately inform the city and our services to make sure that we're delivering the right services for children with SEND (IV9:12)

Routine monitoring data is used to measure the performance of local authority and/or commissioned services, or examine the effectiveness of services. Together with case studies and qualitative life story information, these are used to help understand the council's impact. Interviewees recognised that the LA has access to a large volume of data, but that this kind of evidence may not always be used in the most effective ways to inform the provision of services. Observing that the 0-19 service for children and young people reports data on 51 performance measures, one participant commented:

We do ask a lot of performance information, but it doesn't always go to the right places, or it's not always used in the right way (IV9:11)

Using models of co-production, these examples provide potential entry points for staff in LG and academia to collaborate, weaving in research evidence and local data when opportunities present themselves, informed by an understanding of decision making in LG.

8.11 Appendix K: Contextual factors influencing evidence use in local government

Organisational churn and fragmentation

Given the social nature of evidence use described by participants, organisational churn matters because of the importance of trusting relationships in and between LA departments and external organisations:

I think there has been a lot of change within the department and people leaving and not getting replaced (IV7:22)

There was recognition of increasing pressures on staff 'struggling to keep their heads above water', and the need to articulate the potential benefits of proposed system change, in ways which do not result in staff feeling further pressed:

I think sometimes we need to support staff and articulate some of the big evidence in a more effective way to frontline staff so they don't just feel forced and pressured and devalued within that process (IV4:13).

The budgetary pressures on managers in LG were clearly recognised, pulling away from investment in preventative research and quality improvement:

Of course there is a lot of pressure to just keep frontline capacity and put all your money into that, but they were really clear that if you don't have anyone supporting frontline capacity and providing some guidance or even just collecting data on how effective it is, then you're never going to be able to improve. You're just going to have lots of people trying to respond to issues without any direction of how to do it (IV12:6).

There was a clear perceived need to invest in meaningful co-production, with implications for recruitment:

I am completely in agreement that co-production can be a really positive thing but I'm also constantly wary of co-production done badly is still called co-production...I think you need a dedicated resource of people that are actually able to do a lot of the leg work, in between the co-production (IV12:11).

I think it's really important to have people who have the right skill set and mindset as well. I'm not aware more broadly across the council but I don't think there's that many people from a research background (IV12:15).

Many of the factors identified by participants as affecting evidence use in LG are not new, but progress in addressing them appears to be hampered by the effects of budget cuts, reduced capacity, time and space to think, plan and work together.

A lack of shared language hampers the ability to communicate effectively in and out of LG, which can in turn lead to misunderstandings.

One of the big barriers is we talk in a very different language. This is a health language, this is an education language, this is a public health language, and we can all have the same acronyms and mean very different things, and so it's about being clear about what you're talking about and what things mean (IV2:14)

Concerns about if, when and how data can be shared appropriately were identified by a number of interviewees, alongside anxieties about inappropriate data sharing:

The landscape for sharing data is weak and people don't really understand what they can and can't share, what's your framework for doing that, what's the legislation that allows you to do that, big differences in opinions and you have quite polarised views around some of that stuff...you just come up against this overwhelming tidal wave of barriers (IV13:8).

Data sharing appeared to be an issue both internally in the council and between the local authority and partner organisations:

There has to be some degree of interrelation between different council departments. One simple way to describe that would be data sharing, which seems like it shouldn't be that complicated within the council but is incredibly difficult and complicated and caught up in all sorts of internal politics and cultures and GDPR getting dropped in the middle of it which just brings confusion for everyone as well. Of course, the fear is what if you're sacked if you're the one who does something incorrectly with data because it's very important but, at the same time, there is a way to share data and do it in a safe way (IV 12: 16)

Entrenched attitudes to the principles and practices of data sharing between NHS and LG appeared to present ongoing concerns, with issues of trust surrounding data governance identified by several participants:

Our information flows aren't linked or we don't necessarily talk (IV4:6)

There's a distrust that the local authority, we don't hold data securely...we don't deal with data governance properly...I think sometimes the world of health misses out on the wealth of

information that sits within an authority and the skills and expertise that sits within a local authority (IV4:23).

Wider context

Regulation / changes at national level

LG is heavily regulated and many statutory responsibilities are prescribed at national level by government or regulatory authorities, such as Ofsted.

There's so much statutory responsibility. So that's why though lots of authorities are different, there's a lot similar about the way we do things because it's quite prescriptive (IV3:18)

This suggests that the room to negotiate when and how evidence is used may be somewhat restricted, requiring bold leadership and positive attitudes to risk and change management:

Occasionally you can see seismic shifts happen where somebody just goes, where you've got a very bold leader in one authority who just goes "Do you know what, I'm not going to do it that way (IV3:18)

Relationships with Universities

A number of interviewees talked about the challenges and opportunities of LG working with researchers and academics.

It's quite clear that double-blinded randomised controlled trials are simply not going to be practical in quite a lot of the instances that we're working in. I don't think that means that we shouldn't try and use those principles to design the way that we produce evidence around things that councils might do (IV8:2).

For this interviewee, the mismatch in timescales was a source of frustration, which led to missed opportunities to undertake research and publish results:

The point of all this, the examples I'm talking through is I think there is a mass of stuff going on that is really interesting, that's worth researching and is publishable and most of it is happening too fast, without people being there to say 'why don't we get those data now? Let's pull them together. We'll do a quick review. We can publish this. We can write papers.' Why would we not do that? Because we've got this substrate for research which is so much more fertile than a lot of clinical departments and has a huge impact on wellbeing and health...it's time, support, expertise (IV8:11)

Access to academic expertise / internships

Where collaboration had happened, for example through visiting academics / internships to work on specific policy issues, the fresh perspective was welcome:

I think it worked really well because she was able to bring in the expertise, the academic expertise that we don't have and that together was able to bring about change, and work together and look at what was the best way of doing things differently going forward (IV5:9).

Role of universities in helping to appraise quality and reliability of evidence

Credible, reliable academic insight was seen as useful but needed to take account of the 'messy' reality of the context, as the following quotes show:

I think there's a problem in that quite a lot of academics have fled the harsh realities of real life if I'm honest about it. Academia attracts people who like to be able to control out all of the extraneous noise, so there are quite a lot of academics who don't want that messiness...What I really want is academics who want to partner and who care about the outcome as you do and who want to get involved and do that, which is probably the reason for veering towards the embedded thinking, rather than just commissioning pieces of academic work (IV8:9-10)

There was recognition of the need for long-term partnership approaches to maximise University involvement in a multi-million pound regeneration scheme raised questions about its role in generating inequalities:

One of the opportunities or challenges for the university on that site is how do you make this feel like something that is relevant and adding value to the local place and the local people and not simply aspiring towers of academics that have absolutely nothing to do with those local communities (IV14:10)

This suggests the need for close working links between academics and practitioners, policy makers and managers in LG to build trusting relationships, help academics understand the complexities of LG and community concerns, and challenge any assumptions or preconceived ideas they may have about the realities facing staff in LAs:

I have had other experiences with the academics who are very, very rigid, and very, and come with a bit more of a little bit of a chip, I suppose, and I think—

I: What's the chip about?

R: *I think the chip sometimes can be, I don't know, it's that, I know more than you kind of chip, I suppose, in some ways, and I think that can be a little bit frustrating or they don't, I suppose, don't necessarily appreciate the complexities, some people come with a view of what a local authority is and it's not until they're in here that they realise it's really fast-moving, everybody's running around like a blue-bottomed fly and actually, there is a lot of really skilled and talented and competent people in here and sometimes it takes a bit of time for people to deal with some of their own perceptions, I think, who come from universities* (IV4:27)

This interviewee also commented on the need for Universities to cultivate relationships between staff at all career stages to build research capacity, perhaps through two way mentoring or shared teaching and learning opportunities. This would help Universities to equip current and future researchers with the necessary skills, expertise and attitudes to work in LG. This includes reflexivity, awareness of their limitations as a researcher, humility, openness to new learning and willingness to accept multiple perspectives. It was felt to be an influencing role, not just 'getting the right people in the room' but joining in a meaningful process of change management and gather the views of groups whose voices are not always heard:

The right people aren't necessarily the most powerful people at the top of the organisation. There is a lot of value in bottom up cultural change. If you try to encourage the services and individual practitioners to be involved, you can influence a lot more change. I also find it's a good way to influence using practitioner and people with lived experience, their perspectives as well. Senior managers are often quite reluctant to argue against the views of those individuals (IV12: 17).

Helping to build a culture of evidence use was seen as about helping people to continually review activities as a legitimate and necessary part of the planning cycle, working with communities to take account of the realities of people's lives. One example of this was highlighted in a neighbouring council:

There was an issue around debt where people were defaulting on council tax payments. There's some really interesting thinking about how do you actually, instead of thinking of it necessarily as a very neat, linear process, it's a bit more sophisticated than that, and actually you're evaluating and reviewing as you go along...you're evolving and learning and adapting your activity as a result (IV14:3).

This requires different methodological approaches and suggests a role for researchers to be part of the action as it unfolds. It also suggests a move away from a transactional business model to one where Universities are part of a wider commitment to address inequalities and “connect researchers with citizens, going through a process of co-design and understand their views and how you actually come up with solutions” (IV14:4):

The university has committed to the idea of social justice being something that’s really important. The part of that wider commitment with Newcastle University being a civic university, being part of the city and trying to work to improve things rather than the business led approach that universities take where it is completely around your career is based on maximising income for the university (IV12:20).

Differences in organisational and professional rewards and incentives, were recognised among other barriers to constructive partnerships between LG and academia, as summarised in table 3.