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Abstract

Background

Local government (LG) is ideally placed to influence the determinants of public health (PH) and reduce inequalities, but opportunities are routinely missed.

Aims and objectives

The aim of the Local Authority Champions of Research (LACoR) study was to explore ways to embed a culture of evidence use in LG.

Methods

Five linked work packages were undertaken using mixed methods. In this paper, we report data from semi-structured interviews with UK local authority (LA) staff (n=14).

Findings

Findings show a changing culture of LG: embedded researchers can enhance connectivity and interaction, build linkages, use levers of influence, and learn alongside LG navigators. Understanding the diverse microcultures of evidence use in LG is critical. Research champions can help to navigate the social, financial, political and regulatory context of LG and academia, influencing change dynamically as opportunities emerge.

Discussion

Changing organisational subcultures is ambitious and unpredictable given the complexities of, and variability in, local contexts. Cumulative changes appear possible by recognising existing assets, using relational approaches to respond to LG priorities. In-house capacity remains underestimated and underutilised in efforts to embed evidence use in LG decision making. Co-located embedded researchers can use contextually specific knowledge and relationships to enhance evidence use in LG in collaboration with system navigators.

Conclusions

There is a need for academics to adapt their approach, to take account of the context of LG to achieve meaningful health and social impacts with LG and test the contribution of embedded approaches to wider system change.

Key messages

•Evidence use in local government is changing but in-house capacity remains underestimated

and under-utilised

•Embedded, co-located researchers can work with local government navigators to use levers of influence.

•Changes to academic funding, career paths, incentives and assumptions are required

•The influence and impact of embedded research in local government requires further testing

Summary

The question explored in this study was how to embed a culture of research and evidence use in local government (LG). Although studies of LG call for research to reflect the complexity of local populations and systems of influence, taking account of local political accountability requirements (Kneale et al. 2019), there are limited empirical studies of evidence use in public health which focus on the views of LG staff. Qualitative and ethnographic methods were used to understand the complex systems of LG, organisational microcultures and relationships involved. In this paper, we draw on analysis of in-depth qualitative interviews with LG staff in one UK authority to provide a nuanced understanding of context and efforts to influence evidence use. Empirical examples of knowledge mobilisation, co-production and embedded research are examined by a team comprising insider and outsider researchers. We identify the changes required in academia and LG to better utilise existing assets and support long term collaborative endeavours aimed at diffuse kinds of conceptual and attitudinal influence in LG.

Background and literature review

The relocation of public health responsibilities from the NHS to local government in England in 2013, following implementation of the Health and Social Care Act (2012) placed local government (LG) in an ideal position to generate and use evidence to influence the upstream determinants of public health and reduce inequalities (Hunter et al 2016). The reorganisation of PH structures means public health decision making processes are shaped by different actors and existing patterns of evidence

use have been disrupted (Kneale et al 2019), requiring qualitative methods to understand these in context.

In this study, we apply a complexity frame of reference which views local authorities as not just a single uniform entity but as a 'social system' with internal (i.e. staff, structures, cultural values) and external (i.e. political environment, national directives) influences (Rutter et al. 2017). Both academia and LG can be conceptualised as workplaces with complex, dynamic, ecological systems of interacting activity, social networks and feedback loops influencing one another (Hawe et al. 2009, South et al 2014)). A study of evidence use in LG then requires understanding of the multi-layered organisational context and culture (Haynes et al. 2020), the systems that influence such a culture, and which are in turn influenced by it (Braithwaite et al. 2018). Our co-produced study sought to harness opportunities to improve system-level research capability in collaboration with LG actors (Hawe et al 2009:4), given the emerging consensus that evidence is not generated in isolation and passed on to those who use it (Holmes et al. 2017, Cheetham et al. 2018).

Factors influencing evidence use

Multiple factors, including power and politics, influence evidence use and policy implementation, and these vary across LG decision-making (Armstrong et al. 2013, Lorenc et al. 2014, Oliver et al. 2014). Studies of UK LG show that the relationship between evidence, policy and practice is nuanced, dynamic, political and contested (Boaz et al. 2019), values- driven and contentious (Cairney 2019). Financial pressures in LG drive a focus on cost effective interventions to improve health and reduce inequalities (Hunter et al. 2016) with capacity of public health teams limited and control over resources negotiated and contested. Evidence use in LG has been described as patchy, slow and haphazard (Allen et al. 2014), suggesting different approaches are required to understand and encourage its use.

Organisational churn, rising demands, fragmentation, siloed thinking, governance and access issues, capacity, workload and resource pressures have been shown to limit the ability, time and space to

use evidence as a part of routine decision making (Allen et al 2014, Oliver et al 2014, Hunter 2019, Kneale et al 2019). The complex relationships between research, policy and practice are concerns which the COVID-19 pandemic has brought to prominence. The challenges are likely to have intensified in light of the pressures on LG as a result of the pandemic.

Much is known from previous research 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) and local evidence prioritised (Kneale et al 2019). Formal research evidence competes with informal knowledge 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 to improve outcomes (Nutley et al 2007), but progress remains slow (Boaz et al 2019). A systematic scoping review of barriers and opportunities to evidence use in English public health decision-making highlighted the importance of local experts in providing evidence and knowledge (Kneale et al. 2017). The need to develop a deeper understanding of evidence requirements from the perspective of LG decision-makers was identified, given that most published studies are from the perspectives of researchers (Kneale et al 2017). This study addresses this gap by focusing on LG actors' experiences and their perceptions of potential solutions.

Knowledge brokering

The world of academic research is sometimes seen as detached from the 'messy' and 'complex real-world' of commissioning (Wye et al. 2019), policy making (Cairney 2019) and practice (French et al. 2009), causing barriers to research impact in LG settings (Sanders et al. 2017). The absence of trusting relationships between researchers and LG partners has been identified as an important barrier to effective evidence use (Wye et al. 2019, Allen et al. 2014, Armstrong et al. 2013, Wilkinson et al. 2012). In acknowledging the importance of personal interaction, the concept of knowledge

brokering (KB) has emerged in efforts to facilitate social interaction between researchers and policy makers (Wye et al 2019). Although conceptually appealing, presentations of KB models have been criticised for failing to discuss the practical difficulties of operationalising roles with significant user investment in settings where politics matter and evidence is not considered neutral (Contandriopoulos et al 2010).

Whilst the strengthening of networks and communications between evidence producers and evidence users is seen as central to meeting the needs of decision makers in health (Wilkinson et al. 2012), the ways in which this applies to LG have been relatively under-researched. Policy makers and researchers are unhelpfully seen as occupying separate worlds (Mackillop et al. 2020) but limited research has been undertaken into efforts to address this perceived division. Further critical interrogation is required of the assumptions underpinning the distinction between research user and producer in the context of LG (Kneale et al. 2017).

Embedded research

Pragmatic efforts to enhance connectivity and interaction between research users and producers are growing, including through embedded research (ER) or researcher-in-residence initiatives (Vindrola-Padros et al 2019). These have been piloted in various forms in NHS settings and healthcare organisations (Coates et al. 2020, Wolfenden et al. 2017, Holmes et al. 2017) integrated care organisations (Gradinger et al. 2019), healthcare commissioning (Wye et al. 2019), public health (Lewis and Russell 2011), children's services (Wong et al. 2009) and education (Duggan 2014). The pros and cons of embedded models have been explored in health service quality improvement initiatives (Charucca et al. 2019, Vindrola-Padros et al. 2017) but factors influencing their scope and impact in LG require further exploration (Gagliardi et al. 2016). A study in NE England identified favourable contextual ingredients for ER in LG, but noted its limits in facilitating system wide organisational transformation (Cheetham et al. 2018), suggesting further research is required to understand its contribution alongside other measures in LG beyond PH.

Given the conceptual complexities surrounding the meanings of "research" and "evidence"

and because "use" itself is rarely a directly observable phenomenon (Gitomer and Crouse

2019:78), we explore how evidence is found, contextualised, mobilised and negotiated in

public health policy, practice and commissioning processes, including its 'deliberate, strategic and

inherently political role in persuasion' (Yanovitsky and Weber 2018:67). In this paper, we examine

participants' perspectives about evidence use in LG, including the views of LG officers, their

experiences and perceptions of embedded, co-located research models.

Theorising research-policy relations

The study draws on theoretical models which define collaborative problem-solving between

researchers and decision makers through linkage and exchange (Lomas 2000), resulting in mutual

learning through the process of planning, producing, disseminating and applying new or existing

research in decision making (Canadian Health Services Research Foundation cited in Graham et al

2006:15).

In calling for a re-think of policy impact drawing on political and social science, Boswell and Smith

(2017) outline four models of research-policy relations, each underpinned by distinct assumptions

about knowledge and policy, with implications for how to define and measure impact. These include

an alternative model of research-policy relations as 'autonomous spheres' each operating according

to separate logic and systems of meaning. Boswell and Smith (2017) challenge any assumptions that

research impact can be achieved by findings created independently of policy or politics through

externally generated researcher-led steps. Instead models are recommended which promote

engagement with knowledge users and are attentive to the complex pathways to research impact.

We return to these models in the discussion to help interrogate the political context of knowledge

utilisation in LG.

Our study addresses an under-explored topic of research use in local government, offering

pragmatic examples of collaborative efforts to build a culture of evidence use in public health.

It contributes to a growing literature on knowledge brokering (Phipps and Morton 2013, Wye et al 2019, MacKillop et al 2020), knowledge mobilisation (Powell et al 2018, Haynes et al 2020) and co-production (Metz et al 2019) in the context of LG. It offers a detailed analysis of the relationships between researchers and policy makers, contributing to an understanding of why valuable research insights may not be fully realised in efforts to address public health priorities.

Methods

Five linked work packages were undertaken using mixed methods. The views of LG staff who participated in four workshops across the UK (n = 54) are reported elsewhere (Van der Graaf et al 2021), informed by a rapid literature review, and an online scoping survey. In this paper, we report findings from qualitative interviews (n=14) undertaken in one Local Authority (LA).

Interviews

A purposive sample of LA staff and stakeholders from partner organisations in one area (n=14) were recruited to explore perceptions of what, why and how evidence is used in LG; factors influencing efforts to build a culture of evidence use and any examples of ways in which evidence had been used to affect change. The LA in [anonymised] was selected for pragmatic reasons, given the time and resource limitations of a nine month project. We recognise that generalisability is limited by the small number of participants working in a LA which is likely to be geographically, culturally and politically distinct, and findings may not be representative of views and experiences of LG staff across the UK.

One to one, face-to-face, semi-structured interviews were conducted between February to August 2019 by an experienced university-employed researcher with expertise in ER in LG. Two LA colleagues operated as organisational navigators, helping to familiarise the research team with LA structures and processes, and assisted with data analysis. Research team members included one LG employee and university employed researchers with backgrounds in LG commissioning, NHS health promotion and public health. As such, the research team

consisted of 'outsider' and 'insider' researchers, defined by Brannick and Coghlan (2007:59)

as 'complete members of organizational systems conducting research in and on their own

organisations' alongside university researchers with academic expertise in ER, evidence use,

knowledge mobilisation and co-production, who temporarily study an organization for

the purposes of research, each committed to learning through action research.

Participant Information Sheets (PIS) and consent forms were circulated on behalf of the

research team, to all potential participants by the Director of Public Health, 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 sample included LA staff (n=10), elected member (n=1), senior representatives from the

Clinical Commissioning Group (n=1), voluntary and community sector (VCS) (n=1) and an

academic co-located in the LA (n=1). Council officers who participated were located in three

different 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 (see Appendix 1) was piloted and amended using feedback from

one LG interviewee. Interviews lasted between 40 minutes and one hour 20 minutes

(average 65 minutes), were audio recorded with permission and transcribed verbatim.

Transcripts were coded and analysed thematically using a coding framework informed by

published literature. Interviews explored views about factors influencing evidence use; practical

examples of collaboration and co-production; relationships with, and implications for, academia.

Verbatim quotes (with interviewee signifier and page number where extract appears in transcript)

are included to illustrate participants' views about evidence use; experience of collaboration and

examples of ER. Some avenues of enquiry and participant responses may have been influenced by

our interests in knowledge mobilisation, ER and co-production. In the following section, we report

the findings from interviews with local government staff.

Views about evidence use in LG

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 mixed views about the perceived value of evidence, suggesting

multiple micro-cultures of evidence use co-exist in LG requiring different strategies of influence:

> *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).

Participants noted the effects of austerity and severe reductions in local government funding,

which underlined the importance of evidence-informed policy and practice in LG:

> *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* (IV14:1).

The luxury of having time for detailed evidence-informed scenario planning, was sometimes felt to

be sacrificed in place of a more pragmatic approach in which LG policy makers *"corral the evidence*

you think you've got…you almost start with what you want but then go back and see what evidence

would support it" (IV11:1). LA officers in and out of public health reported frustrations about missed

opportunities to use evidence to inform decision making:

> *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).

Academic peer reviewed research was not always accessible or seen as relevant. Lack of time, the

need to spend money quickly, reluctance to decommission and lack of knowledge about what works, beyond what neighbouring authorities were doing, and uncertainty over how to interpret research findings and jargon, were all said to hinder use of published evidence. Local data was prioritised, and information overload, workload pressures and concerns about data sharing, meant that available evidence was not routinely used or shared, particularly in light of reduced PH capacity.

Opportunities for collaboration

Despite significant workload and financial pressures, LG staff reported another trend in recent years:

> *…a desire to collaborate with different partners around how we actually build a more*
>
> *nuanced and rounded picture of- evidence* (IV14:1).

> *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* (IV8:1).

Moves to support research and evidence use in LG included LA staff with analytical skills supporting different LA teams to use existing data to inform planning and commissioning; partnerships with university-based academic researchers generating new evidence; and staff with research backgrounds being recruited to LA positions to build research capacity from within. It was suggested these developments coincided with, and reflected the changing profile and priorities of senior leadership in LG:

> *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).

Leadership (at all levels) was identified as important in normalising evidence use and addressing

some of the pressures that hampered its use . Participants identified the importance of leadership style, relational approaches; inter/intraorganisational dialogue and opportunities for in/formal interaction between researchers and practitioners, and an open learning culture within and between council departments and wider stakeholders.

Examples of co-production and capacity building

Universities were identified among a broad range of partners, engaged in a complex system of interactions between senior leaders, managers, officers, elected members, residents and wider stakeholders. Although academic expertise is not necessarily privileged in this system, our findings suggest there is energy and enthusiasm to build on existing assets and maximise the use of existing research capacity. People with finely tuned interpersonal, political and analytical skills were identified. They operated as 'research and evidence champions' 'system navigators' and 'boundary spanners' in LG, indicating these roles are being fulfilled by practitioners and policy makers working alongside academics to routinely integrate different types of evidence in LA decision-making processes, in and out of PH. The moves to build in-house analytical and relational capacity to enhance understanding, taking a systems approach to addressing public health priorities, was recognised as challenging and necessary across different departments:

> *It's about building understanding isn't it, as opposed to just counting* (IV3:9).

Many participants recognised the important role the LA working with partner organisations, to bring together multiple pieces of the evidence jigsaw, interpret local trends, and respond 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).

We identified examples of collaboration between LG analysts, officers, and elected members. In one council department, 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 to address complex needs:

> *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,*
>
> *and really that interpretational aspect of it and trying to develop an evidence base for*
>
> *the sort of policies that we might put in place* (IV13:2).

This role involved presenting complex information using *"lots of charts and lots of maps"* and

facilitating discussions to inform recommendations for possible multi-agency action as part of an

interconnected whole. 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):

> *The 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).

LG analysts experienced in the process of compiling evidence for Joint Strategic Needs Assessments

were valued for their ability to provide credible, evidence-informed judgements and interpret data.

The push towards embedding analytical capacity in different departments was not new, and was not

limited to PH. One participant had participated in a pilot project three years previously, in which LA

data analysts were embedded with children's social care teams:

> *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* (IV1:6).

Another participant involved in this pilot acknowledged the *'bravery'* and *'mutual trust'* required of these embedded analyst roles and their 'host' teams, who helped change attitudes, and opened discussions about possible solutions:

> *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).

University employed academic researchers 'hosted' by different local authority departments working alongside LA staff, including data analysts, is attracting growing interest. Many participants voiced enthusiasm about working alongside co-located, embedded researchers with understanding of local decision-making processes, who could identify new and existing sources of evidence, undertake and feed in academic research and use levers of influence to facilitate knowledge mobilisation in real time.

Perceptions of embedded research(ER) in LG

One participant outlined the potential benefits of ER: :

> *What I like about that [embedded] 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).

The 'counter argument' centred on concerns about perceived independence, academic credibility and rigour. Other participants suggested closer working relationships helped to challenge accepted norms and facilitate organisational change. Co-located models can help academic researchers build trust, recognise the assets available in LG and question assumptions held about LA staff's willingness

or ability to use evidence. One LG interviewee commented that some academics could be *"very very rigid and come with a little bit of a chip on their shoulder",* without necessarily appreciating the complexities of LG:

> *There is a lot of really skilled and talented and competent people in here (LA) 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).

Where collaborations were seen as successful, for example through visiting academics / internships working 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).

A move away from commissioning research towards embedded approaches was seen as mutually beneficial, enabling academic insights which took account of the messy reality of the context, as the following quote shows:

> *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).

Partnerships with Universities

Other interviewees commented on the need for Universities to cultivate relationships between staff at different career stages to build research capacity, including through secondments,

two way mentoring or shared teaching and learning opportunities. Future researchers with the necessary skills, expertise, attitudes and openness to new learning are needed to understand the context of LG. Researchers were said to have an influencing role, not just '*getting the right people in the room*' but joining in a meaningful process of long term change management, gathering and utilising the views of marginalised groups:

> *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... I also find it's a good way to influence using practitioners 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).

Recognising the perceived value of different kinds of evidence was seen as critical. Incorporating the voices of local communities and stakeholders was a legitimate and necessary part of planning and reviewing cycles, to ensure policy took account of the realities of people's lives. To enable sustainable changes, different methodological approaches were required, incorporating roles for researchers to be integral to decision-making processes. This suggests a move away from a transactional business model to a relational one where Universities are part of multi-agency efforts to address inequalities and *"connect researchers with citizens, going through a process of co-design and understand their views and how you actually some up with solutions"* (IV14:4):

> *The university has committed to the idea of social justice being something that's really important. Part of that wider commitment with the 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).

In efforts to realise their civic responsibilities, Universities gained from LG experience as part of a wider system promoting reciprocal, inclusive, community-centred, advocacy-based

approaches to impact. Co-located research posts with clear accountability and support structures in place can complement in-house capacity.

Jointly funded ER posts could bring potential benefits to both host and research organisations, resulting in improved understanding of LG decision-making processes and determinants of organisational culture and behaviour. ERs could support LA colleagues to access published evidence; spot researchable questions; work out how to respond; co-design and undertake timely research; understand the needs of local communities; secure external research funding, and increase awareness of the contextual factors influencing evidence use. ER is not without risks and these findings suggest that careful consideration is needed of the pros and cons of different embedded models (or combinations) and to evaluate their effects in LG.

Discussion and conclusion

This paper sets out findings from qualitative interviews undertaken as part of a wider study exploring evidence use in LG. Drawing on the perspectives of decision makers immersed in LG, we describe the context from those who have working knowledge of the complex, multi-layered organisational context of LG to understand factors influencing evidence use. Despite pressures on LG staff, we identified high levels of commitment, energy and enthusiasm to use evidence, with examples of 'sustained interactivity' between researchers, policy makers and practitioners, involving longstanding partnership approaches. Familiarity with the cultures, structures and pressures of both LG and academia helped the joint development, sharing and use of evidence.

Our findings concur with Oliver et al. (2019) who suggest that the current culture of 'hit and run' research (get funding, do research, achieve impact, leave) hampers meaningful opportunities to reflect and learn together. With an in-depth understanding of the social, political, financial and regulatory context of LG, a relational approach, and open attitudes, researchers can maximise opportunities for research evidence to inform, and support decision making as part of multi-agency teams, alongside other forms of knowledge, co-produced with policy makers, practitioners,

politicians and the public. In this study, traditional distinctions between research user and producer are blurred, with LG staff actively contributing to the co-production of research. Our findings provide reminders that interpersonal skills, including openness, honesty, humility, assertiveness, political astuteness and diplomacy are required for researchers to work alongside stakeholders in different parts of LG to normalise evidence use. Changes are required in academic methods, incentives, recruitment and funding arrangements to encourage this to happen routinely.

Our findings support multi-dimensional views of research implementation processes (Fox et al. 2019), requiring practitioner engagement, a nuanced 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, Kislov et al. 2014). Many of the organisational attributes and enablers that support evidence use in policy (Oliver et al. 2014, Cairney 2019) and practice (French et al. 2009) can be found in LG, including a supportive organisational culture that values and assimilates knowledge, and its application (Armstrong et al. 2013). An understanding of the specific micro-, meso- and macro-organisational contexts are critical to identify appropriate strategies that match the organisational culture .

In table 1, we highlight principles and recommendations drawn from our findings, including in-house champions in different LG departments who can help navigate different microcultures of evidence use and reduce fragmentation, through meaningful partnerships, localised and tailored approaches (Rushmer et al 2015, Van der Graaf et al. 2018), alongside understanding of the policy making Process and politics in LG, role of officers and elected members, relevance of the political cycle, use of electoral tactics, interests, ideologies, conflicts and alliances that characterise LG (MacKillop et al. 2020).

(Insert table 1 here)

Opportunities for collaboration

The importance of 'evidence champions' (Vindrola-Padros et al. 2017), 'credible intermediaries', boundary spanners and knowledge brokers have been identified in previous studies and reviews (Phipps and Morton 2013, Contandriopoulos et al 2010, Cheetham et al 2019). These roles already exist in LG, and have been shown to provide collective brokering opportunities (Wye et al. 2020). Identified as essential elements of co-creation, knowledge brokers can connect individuals and groups of people with evidence enabling timely knowledge exchange (Metz et al. 2019). Using embedded models of co-production, the examples we identified provide potential entry points for staff in LG and academia to collaborate, weaving in research evidence and local data when opportunities present themselves, such as those identified by Wye et al. (2019), informed by an understanding of the messy, nuanced social processes of decision making in LG (Cairney 2019). ER holds promise, but not all departments are equally open or receptive to these models of co-production in LG. Different kinds of methodological and topic specific expertise will be valued by stakeholders, requiring facilitation strategies to match the readiness of individuals, teams and context (Kitson et al. 2008). Further testing of diverse models is required by universities to harness LG capacity and build on the learning from embedded initiatives and researcher-in-residence improvement models in other settings, including health (Marshall et al 2021, Vindrola-Padros et al. 2019, Gradinger et al. 2019, Coates et al. 2020).

Implications for Universities

The challenges facing universities are significant, not least in defining and achieving meaningful impact. There is scope for universities to contribute by encouraging a more diverse, equally valued, academic research workforce, nurturing and supporting a full range of differing skills (Hunter 2019). Encouraging academics to work at the boundaries between academia, LG policy and practice, through knowledge mobilisation opportunities, secondments, internships, Knowledge Transfer Partnerships, joint training, work shadowing, co-funded PhD, masters and apprenticeship

opportunities will address questions of mutual interest (Allen et al. 2014). With carefully matched

skills and expertise, potential risks related to social and academic isolation and possible conflicts

managed, University based staff could also broker links between stakeholders and relevant academic

teams, thereby strengthening connections between Civic Universities and the places where they are

based.

Our findings indicate combinations of co-produced approaches can produce cumulative impacts

over time on questions of mutual interest. A shift in thinking is required akin to capacity building

approaches in healthcare organisations outlined by Kislov et al. (2014), who advocate practice-

based, multi-level approaches, developing relevant capabilities at different levels of complexity.

Measuring and evaluating their effects are important for accountability and learning (Boaz et al

2019) using tools adapted for use in local government (e.g. Canadian Foundation for Healthcare

Improvement 2014).

Moving forward, there is a need to develop methodological expertise, building on opportunities

presented by 'insider researchers' (Brannick and Coghlan 2007) and 'in-house ethnographers' (Hawe

et al (2009), able to navigate the political context and social networks of LG. Efforts to build a culture

of evidence use could be seen as interventions in complex systems that seek to improve outcomes

by changing ways of working and enhancing evidence-informed decision making (Hawe et al 2009).

Our study suggests that new interactions, conversational spaces and shared meanings can be

created through participation in research processes , but academics need to adapt their approach, to

take account of the context of LG. Learning across multiple LG sites can provide opportunities for

partners to come together to test and evaluate what is being done, and their impact.

Our findings suggests that significant attention is already being given to measuring what can be

counted and longitudinal qualitative research needs greater emphasis to develop an ecological

approach to evidence use in LG. This chimes with calls for more theoretically-informed approaches

to policy impact proposed by Boswell and Smith (2017), whose 'enlightenment' model suggests that

research impact involves incremental and diffuse ideational adjustments over long periods of time, generated by a wide range of research insights rather than through specific individual findings. In our study, elements of all four theoretical models outlined by Boswell and Smith (2017) could be identified in the accounts provided by LG staff, who said they valued opportunities to work alongside academic staff to use evidence to shape policy.

Others described how politics in LG could be seen to shape knowledge production, suggesting knowledge is employed for political rather than intellectual reasons, while others highlighted the benefits of co-production and collaboration, resulting in mutual gains.

ER models could be said to be better suited to impact frameworks which reward such collaborative endeavours that build incrementally on a wide body of work; that develop long term relationships with a range of non-academic audiences and that bring about subtle conceptual shifts rather than clearly identifiable policy changes.

Given the reminder that policy impact may not always be benign, attention also needs to focus on the unintended/unanticipated consequences of efforts to build a culture of evidence use in LG (Oliver et al. 2019). Our findings suggest these may include continued missed opportunities, increased workload pressures, reduced capacity and confidence, increased frustrations, inter/intra-organisational tensions, entrenched positions, political disagreements and pressures, competing priorities, reputational risks, disagreement about what kinds of evidence is valued and resistance to change among officers and/or elected members. Anticipating potential challenges would avoid the paradox that those advocating greater research use often struggle to practice in research-informed ways themselves (Powell et al. 2018). This study predates COVID-19, but provides a timely reminder of the importance of embedding a meso-level organisational focus in its social, political and economic context and understanding the dynamics of power relationships between different actors at local and national level (Geddes, Davies and Fuller 2007). Co-located embedded research offers opportunities to explore the profound consequences of the pandemic

with local communities affected, working through the tensions of co-production whilst generating insights about the complex relationships between local and central government in their use and interpretation of evidence.

Conclusions.

The findings from this study confirm there is an appetite to strengthen the use of evidence in LG, utilising personal networks and trusting relationships between academics and LA staff. Research champions, with relevant skills can act as change agents, as part of wider systems of evidence use. Further research is needed to capture the views of residents, elected members, and staff in NHS and partner organisations, funding bodies and academics working in LG. The study identified practical ways to build a culture of evidence use. ERs are one part of this changing landscape with the potential to enhance connectivity and interaction, build linkages and networks across LG, acting as a critical friend and knowledge broker alongside system navigators. They rely on a receptive organisational culture, and in-house alliances may extend their potential influence and impact.

In complex systems, like local authorities, change is unpredictable and emergent. Building social networks and relationships with officers and politicians enables researchers to make the case for evidence-informed approaches relevant to the organisational micro-cultures of LG, monitoring and influencing change as it happens. Sustainable funding and incentives are required to facilitate system wide changes, and grow networks of research champions within and between local authorities, connected to academia to address questions which reflect the priorities of LG and local communities.

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Ethics statement

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AA conceived the idea for the study, developed the study design and sought funding from the Health Foundation, with input from all authors and co-investigators. Data collection, analysis and interpretation were undertaken by AA, MC, SR, CH, DH and PvdG. MC wrote the first and subsequent drafts of the manuscript, which were commented on by all co-authors. All co-authors read and approved the final manuscript.

Conflict of interest statement

The authors declare there are no conflicts of interest.

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