Mobilising knowledge to improve UK health care: learning from other countries and other sectors

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Scientific summary

Background

The research in health care counts for little unless the findings and insights that emerge are shared, understood and used. The past two decades have seen growing attention paid to these issues, with theoretical development, empirical study and a good deal of investment in infrastructure and activity to support 'research use' or, more broadly, 'knowledge mobilisation'. Yet, ironically, the lessons and learning from research in this area are not always reapplied to shape future work. This study aims to address this lack of connection.

Traditional thinking on research use suggested that it was a largely linear, rational, instrumental process and that the provision of particular organisational supports (e.g. continuing medical education, mechanisms to increase access to information and guidelines; clinical audit etc.) would be sufficient to ensure that health professionals' practice was in line with the evidence. This view has been subject to increasing challenge from a growing body of evidence that research use is an intensely social and relational process. This means that a range of interventions (around system design, organisational infrastructures, and the facilitation of relational and interactive knowledge exchange) are required to enable research-based knowledge to flow and have impact.

Despite rich conceptual development, and a wide variety of practical initiatives to mobilise knowledge by a variety of agencies, to date there has been little systematic effort to map, conceptualise and learn from these initiatives, or to investigate the degree to which they are underpinned by contemporary thinking as set out in the literature. This gap is particularly apparent when looking at knowledge mobilisation at the 'macro' level: the activities

undertaken by organisations that are major research funders, major research producers or key research 'intermediaries' (e.g. policy organisations, think tanks, boundary spanners).

Aims and objectives

The overall project aim was to harness the insights from a growing body of new approaches to knowledge creation, sharing and use, and to draw out practical lessons that could be used to make current and future initiatives around research use more effective.

The study had three key objectives with associated research questions (RQs):

1. ***Mapping the knowledge mobilisation (KM) landscape –***
    a. What knowledge mobilisation strategies have been *developed in health care* (in the UK and internationally) to better promote the uptake and use of research?
    b. What analogous knowledge mobilisation strategies have been developed *in social care and education* within the UK?
2. ***Understanding the models, theories and frameworks that underpin approaches to knowledge mobilisation –***
    a. What models, theories or frameworks have been used explicitly – or can be discerned as implicit underpinning logics – in the development of the knowledge mobilisation strategies reviewed?
    b. What evidence is available from existing reviews and secondary sources on the mechanisms of action of these models, theories and frameworks?
3. ***Learning from the success or otherwise of these enacted strategies –***
    a. What evaluative data are available on the success or otherwise of enacted strategies [i.e. the strategies and approaches being used by agencies], and what do these data suggest are the most promising approaches to successful knowledge mobilisation?
    b. What formative learning has accumulated through the practical experience of the programmes as implemented?

Methods

The study was multi-method and multi-phased, with considerable influence and interactivity between the data collected in different strands. Data were collected in the following ways:

- **Desk research (literature):** we conducted a review of published reviews on knowledge mobilisation (71 reviews) in order to map the theoretical and conceptual literature. A key output from this work was a 'conceptual map' of key issues in mobilising knowledge. [RQs 1a, 1b, 2a, 2b, 3a]
- **Desk research (agencies):** we identified key agencies for further examination (major research funders, research producers, and key research intermediaries; 186 in total), gathering basic information on their knowledge mobilisation activities from websites and other publicly available resources. Health care agencies were explored internationally (but only where websites had resources in English); social care and educational agencies were limited to those in the UK. [RQs 1a, 1b, 2a, 3a, 3b]
- **Interviews:** in-depth interviews with key individuals in agencies supplemented the data gathered from desk research (52 interviews with 57 individuals drawn from 51 agencies). [RQs 1a, 1b, 2a, 3a, 3b]
- **Web survey:** a bespoke web survey was used to add greater breadth to the understanding drawn from earlier strands of the work (response rate 57%; n=106). [RQs 1a, 1b, 2a, 3a, 3b]
- **Participatory workshops:** two workshops (month 6 and month 16) were used to create discussion and give additional insight into our emergent findings (28 and 35 participants respectively). [RQs 1a, 1b, 2a, 3b]
- **International advisory board:** we used regular teleconferences and email discussion with our international advisors to deepen and strengthen the work (eight members).

Findings

1: Review-of-reviews and the creation of a conceptual map

A wide range of models, theories and frameworks have been used to describe knowledge mobilisation. Few models have been tested empirically. Measuring knowledge use and

assessing what overall approaches or specific interventions promote that knowledge use are in their infancy. This means that there is a lack of practical guidance or robust empirical evidence on broad approaches to knowledge mobilisation or on many of the potential components of knowledge mobilisation strategies.

We read across the existing models to create a conceptual map that presents key issues, debates and conceptualisations. These are discussed under the six domains that emerged inductively from the set of reviews:

1. purpose(s) and goals (implicit or explicit);
2. knowledge (of all kinds);
3. connections and configurations (between people; between organisations);
4. people, roles and positions;
5. actions and resources available; and
6. context of operation (different in kind from the other five domains, but influential and interactive with each of them).

The six domains of our conceptual map, the arguments elaborated in each, and the interactions between the domains, provide a dynamic account of knowledge creation, communication and action. Our subsequent empirical work showed that agencies focus differently on the various domains, with varying assumptions and framings. More systematic investigation of the domains (and their interactions) would help agencies to uncover their assumptions, highlight tensions and create greater coherence in their overall strategies.

2: Agency accounts of developing knowledge mobilisation

The interviews explored each agency's approach to knowledge mobilisation. Data are presented on how agencies described their role in relation to knowledge mobilisation, how they had arrived at their approach, how they were evaluating those approaches, and what they had learnt from formal evaluations and from practical experience. Interviewees described three broad, overlapping roles in relation to knowledge mobilisation: developing and sharing research-based products; emphasising brokering; and emphasising implementation. Involving service users or members of the public in knowledge mobilisation activities was not a primary focus for the majority of agencies included in our study.

Of the three roles, most agencies were involved in producing research-based products and there was a sense that creating and sharing products had an irresistible attraction and momentum. Although there was some innovation and new types of products were being used, there was a tension between generating products and encouraging more interactive activities. The second role was brokering. Many agencies were enthusiastic and committed to brokering connections across multiple worlds. A range of innovative strategies had been developed to accomplish this, and agencies recognised the need to link talk and tools to action. On the third role, implementation, we found that some agencies had always had a mandate for implementation while for others this was a more recent development. Research funding agencies used a range of methods to encourage researchers to consider the potential for implementation. Other agencies that funded service innovation projects sought to ensure that these were underpinned by research. Many interviewees expressed concerns about implementation sustainability and spread.

A range of factors had contributed to shaping the knowledge mobilisation approaches in use. Agencies were building on: local experience and tacit knowledge; internal evaluations; personal inclinations and capabilities; and the interests of key individuals in the organisation. The influence of funders or other powerful stakeholders and the changing conditions in the sector were also significant drivers. Models and ideas from the knowledge mobilisation literature also played a part in some agencies, although often in an indirect or diffuse kind of way.

While many interviewees highlighted the importance of evaluation, most also commented on the challenges of evaluating their activities and on the lack of robust evidence to support knowledge mobilisation interventions. Learning from informal experience was more often seen as a better guide. There is now rich formative experience in agencies that could be used to shape new strategies and initiatives.

3: Data from a web-based survey on knowledge mobilisation

The survey provided a broader assessment of the agencies' activities. Data are presented on six aspects of knowledge mobilisation:

1. Terminology used around knowledge mobilisation;

2. Knowledge mobilisation activities used by the agencies;
3. Models and frameworks used by the agencies in developing their work;
4. Propositions for effective knowledge mobilisation;
5. Key factors underpinning agencies' knowledge mobilisation plans;
6. Evaluating knowledge mobilisation activities and impact.

The data from the survey provide important extensions to the interview data. They paint a picture of diverse terminology and fragmented use of theory. Many of the models, theories and frameworks in the literature were only being used by agencies in a limited way. Nevertheless there is some emerging consensus around the features and factors that underpin successful knowledge mobilisation. These data thus provide an important foundation which agencies could use to examine the implications of the emerging consensus and consider their own position.

4: Emerging archetypes of knowledge mobilisation practices

Working inductively from our data sources (website review; formal literature; grey literature; in-depth interviews; and web survey) we derived eight archetypes that could be seen to underpin the practices of the agencies in the study.

Archetypes may be thought of as idealised types or configurations of agencies (i.e. they are not necessarily actual or real). They provide accounts that can be used as interpretive heuristics, allowing us to assemble and interpret observations. 'Idealised' here contains no normative intention: it draws attention to the potential for creating basic building blocks to describe or assemble agency strategies.

There is considerable overlap between the archetypes on many of the six domains of the conceptual map and some form natural pairs (these are identified below).

- **Archetype A**: Knowledge production (product pushers)
- **Archetypes B & C:** Brokering and intermediation (own research; wider research)
- **Archetype D**: Evidence advocacy (proselytisers for an evidence-informed world)

- **Archetypes E & F:** Research and practice (research into practice; research in practice)
- **Archetype G**: Fostering networks (building on existing; developing new ones)
- **Archetype H**: Advancing knowledge mobilisation (building knowledge about knowledge work)

The archetypes could be used to explore the existing mix of activities in any agency or across a mix of agencies. This type of analysis could be extended longitudinally, to examine changes over time and the reasons for these. In addition, it would be possible to explore with agencies the degree of coherence or incongruence across the archetypes, and the implications of these for agency activities, future strategies and stakeholder perspectives.

Discussion

Our findings have enabled us to map the knowledge mobilisation landscape, understand the theoretical and other underpinnings of the strategies in use and learn from the success or otherwise of agency activities. The knowledge mobilisation practices in our agencies ranged from the standard and commonplace to the highly unusual and innovative. The distinctive patterns of practice within agencies created significant dissonances, tensions and trade-offs. We found parallel debates across the three sectors we investigated but we noted that many social care and education agencies were both smaller and younger than their healthcare counterparts, and yet they were nevertheless engaged in promising and innovative work of some ambition. There was also a sense that the knowledge mobilisation field might be moving more rapidly in social care and education than in health care, which had seen a 'slow burn' over several decades.

We observed a fair degree of frustration with the limitations of the existing models, theories and frameworks, which were perceived as overly complex and hard to operationalise. Although theoretical models, theories and frameworks were rarely the main drivers of agencies' knowledge mobilisation strategies, many of our agencies reported being influenced in more diffuse ways by the ideas and debates in the knowledge mobilisation literature.

An absence of evidence meant that agencies struggled to learn from the success or otherwise of agency activities. Existing evaluative work by agencies is patchy, under-developed and under-funded. Agencies needed to rely on experience and informal learning opportunities. However, few agencies had systematic mechanisms for learning from other organisations, which was perhaps surprising given the field.

Our study revealed a range of opportunities for developing future knowledge mobilisation practice and research. We have summarised below the main implications for both effective knowledge mobilisation and future research on knowledge mobilisation.

Implications for effective knowledge mobilisation:

- There is merit in looking across sectors when developing knowledge mobilisation approaches;
- Cross-sector and inter-agency learning are limited at present and there is scope to facilitate these;
- There are insights and potential benefits to be gained from reflecting conceptually on current knowledge mobilisation activities, and the archetypes developed as part of this study provide a basis for this;
- There is scope for some constructive dialogue around terminology and theoretical development in the academic literature and the study's conceptual map provides a structure for this;
- There is a need for sustained attention and support for the evaluation of knowledge mobilisation activities.

Implications for future research on knowledge mobilisation:

- It would be useful to draw out knowledge mobilisation lessons from a wider range of emergent literatures;
- More evaluation is needed of knowledge mobilisation approaches;
- Research on scaling up and sustaining knowledge mobilisation activities and approaches would be beneficial;
- Further evaluation of the existing approaches for assessing research use and impact would help to identify the value and impact of these approaches;

- Research on applying systems theory to knowledge mobilisation is much needed;
- Further research is also desirable on knowledge mobilisation archetypes and on what combinations and configurations of archetypes work well.

(2361 words)

Plain English summary

The study looked at the approaches to encourage research use (sometimes called 'knowledge mobilisation') chosen by research agencies that fund, produce or share research in health care, social care and education in the UK and (in health care only) internationally. The study aimed to map the approaches being used, discover what factors were driving their use and learn from any formal or informal evaluations. The study used a combination of research methods including a review of the literature, a review of the agencies' websites, 52 in depth interviews with key individuals from the agencies, an online survey and two stakeholder workshops.

Key findings included the following:

- research agencies are using a range of knowledge mobilisation approaches, from the traditional to the more innovative, but often do so in a rather makeshift way;
- agencies struggle to apply the theoretical literature in developing these approaches, and find it hard to evaluate them in practice;
- there is rich learning and experience within agencies, but relatively little cross-learning between agencies and sectors.

Key outputs from the study include:

- a 'conceptual map' to help make sense of the published literature on knowledge mobilisation;

- the development of eight ‘archetypes’ or ‘bundles’ of knowledge mobilisation activities to demonstrate the range of options that agencies can explore.

These two outputs are being developed into practical tools to help research agencies to develop more effective knowledge mobilisation activities and thus help to increase research use in the NHS to improve patient care.

(251 words)