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Knowledge brokers or relationship brokers? The role of an embedded knowledge mobilisation team

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Abstract

Aim: Policymaking decisions are often uninformed by research and research is rarely influenced by policymakers. To bridge this 'know-do' gap, a boundary-spanning knowledge mobilisation (KM) team was created by embedding researchers-in-residence and local policymakers into each other's organisations. Through increasing the two-way flow of knowledge via social contact, KM team members fostered collaborations and the sharing of 'mindlines', aiming to generate more relevant research bids and research-informed decision-making. This paper describes the activities of the KM team, types of knowledge and how that knowledge was exchanged to influence 'mindlines'.

Discussion: KM team activities were classified into: relational, dissemination, transferable skills, evaluation, research and awareness raising. Knowledge available included: profession-specific (e.g. research methods, healthcare landscape), 'insider' (e.g. relational, organisation and experiential) and KM theory and practice. KM team members brokered relationships through conversations interweaving different types of knowledge, particularly organisational and relational. Academics were interested in policymakers' knowledge of healthcare policy and the commissioning landscape. More than research results, policymakers valued researchers' methodological knowledge. Both groups appreciated each other as 'critical friends'.

Conclusion: To increase research impact, 'expertise into practice' could be leveraged, specifically researchers' critical thinking and research methodology skills. As policymakers' 'expertise into practice' also bridges the 'know-do' gap, future

impact models could focus less on 'evidence into practice' and more on fostering this mutual flow of expertise. Embedded knowledge brokers from the two communities working in teams can influence the 'mindlines' of both. These ambassadors can create improvements in 'inter-cultural competence' to draw academia and policymaking closer.

4 Key messages of 100 characters each

- An embedded knowledge mobilisation team brokered relationships by interweaving different knowledge types.
- Conversations are crucial to exchange knowledge and influence 'mindlines'.
- 'Expertise into practice' is a valuable, largely unexplored lever to bridge the know-do gap.
- Improving both communities' 'inter-cultural competences' is necessary to increase research impact.

Background

The challenge of influencing 'how to do things'

Despite thousands of papers addressing the difficulties in 'getting research into practice', policy and practice decisions often remain uninfluenced by research (Bowen and Graham, 2013) and similarly research is largely uninformed by policy-makers and practitioners (Bowen S et al., 2017). These papers highlight fundamental challenges, for example Van der Ven distinguishes between the scientific knowledge held by researchers and the practical knowledge of "how to do things" (Van de Ven, 2007). This paper focuses on an initiative to bring together the scientific knowledge of primary healthcare researchers with the practical knowledge of local healthcare policy-makers in an attempt to bridge the 'know-do' gap.

In England, local healthcare policy-makers, called 'commissioners', manage about £140 billion of annual funding for the National Health Service (NHS). They plan, contract, fund, modify and assure the quality of services in hospitals, community healthcare and increasingly primary care. As such, they hold pivotal roles in influencing clinical practice.

Two types of organisations involved in healthcare commissioning are 'clinical commissioning groups' (CCGs) and 'commissioning support units' (CSUs). Over 200 'clinical commissioning groups' (CCGs) have financial responsibility and accountability for the NHS budget, while CSUs support CCGs, for example with

project management and business analytics. For the purposes of this paper, we use the term 'commissioners' to refer to those working in either organisation.

Healthcare commissioning is "messy and fragmented" and largely accomplished in meetings (Checkland et al., 2013). Those meetings can include public meetings with senior directors and the governing boards, private discussions between commissioners and healthcare providers, regular weekly meetings of teams working on particular projects and informal encounters between colleagues in the kitchen making tea. Incremental progress happens in "bite-sized pieces of work" requiring substantial effort (Shaw et al., 2013), as commissioners need to iteratively engage and persuade all concerned while building a compelling case for a particular action (Wye et al., 2015). Priorities and work plans are constantly changing with modifications in services, turnover in staff and new directives from their 'masters' located in national and regional policy-making bodies.

But research (and researchers) have little impact on commissioning. In their day-to-day business, scientific journals are not often consulted by commissioners (Clarke et al., 2013). Reasons include: lack of relevant research, limited access to academic journals, use of search engines that frequently do not locate scientific papers, challenges in understanding academic jargon and interpreting findings and difficulties in applying scientific knowledge to local contexts (Wye et al., 2015). Instead, commissioners commonly source information through personal contact (Oliver et al., 2014, Innvaer et al., 2002), especially trusted colleagues, usually stationed nearby in open plan offices because it is fast and perceived as more

efficient (Wye et al., 2015). The importance of being 'within sight' and 'on site' is well-known to management consultancies and public health departments, who often embed their staff within commissioning organisations with the intention of influencing commissioners (Wye et al., 2015). But academics usually work in separate university buildings. Consequently, personal contact and trusted collegial relationships fail to develop and academic influence on commissioners is minimal.

The discrepancy between how decision-makers gain their practical knowledge and how researchers disseminate their scientific knowledge may partly explain why research has minimal influence in the healthcare policy-making arena. Clearly, researchers are successfully disseminating scientific knowledge to other scientists, but commissioners access information differently. Researchers like to write; commissioners like to talk. If research is to make a difference, then researchers need to change the medium and method to spread scientific knowledge. We have to find ways for researchers to become 'trusted colleagues' and operate more effectively within the ever-changing commissioning world. Moreover, commissioners need to know more about the research world to have greater influence over the research agenda so that researchers ask the questions that commissioners want answering.

Bringing together commissioners and researchers

Within Bristol, a city in southwest England, several intermediary organisations were working to tackle the longstanding divide between researchers and commissioners including:

- Avon Primary Care Research Collaborative (APCRC www.apcrc.nhs.uk (Avon Primary Care Research Collaborative, 2014)), the local research and development function located within Bristol CCG, which had championed research evidence and evaluation since 2006.

- Bristol Health Partners, which established 'Health Integration Teams' (HITs), collaborations between academics, clinicians and commissioners around particular topics e.g. unplanned hospital admissions (www.bristolhealthpartners.org.uk/) (Redwood et al., 2016).

- West of England Academic Health Science Network, a NHS funded body aiming to support the development and implementation of new innovations (www.weahsn.net).

- CLAHRC West, a National Institute of Health Research (NIHR) funded collaboration of academics, practitioners, policymakers, local authorities and healthcare provider organisations which aimed to promote applied health research (clahrc-west.nihr.ac.uk).

Through these initiatives and others, senior leaders from academia and the Bristol-based commissioning organisations had developed good working relationships, which also helped create a fertile environment.

The Bristol KM team (2013-2016):

Into this receptive context, APCRC and the academic primary care unit at the University of Bristol set up a natural experiment - the Bristol Knowledge Mobilisation (KM) team. We use the term 'knowledge mobilisation', defined as "making knowledge readily accessible and useful to individuals and groups by developing

ways to work collaboratively" (Health Information Research Unit) The KM team was made up of commissioners embedded within academia (known as management fellows) and researchers embedded within commissioning (known as researchers-in-residence).

This idea of embedding was not new. In a national NIHR-funded programme, healthcare managers were attached for 12 months to research teams; the primary benefit was greater "insider" knowledge for research teams (Morris et al., 2013). Likewise, 'researchers-in-residence' from the fields of healthcare, education and justice have been embedded into policy and practice settings with potential outcomes such as better understanding of organisational culture, securer staff engagement to help translate findings and improved local capacity to integrate research skills (Vindrola-Padros et al., 2016).

Although schemes featuring embedded professionals are spreading, the initiative in Bristol was unique for four reasons:

1. The focus was on commissioning rather than clinical care.
2. The exchange of staff was two-way with simultaneous placements of both researchers and commissioners creating a boundary spanning team.
3. The 'embedded' element was crucial with KM team members spending at least one day a week in their host organisation.
4. Evaluation, both internal and independent, was continuous.

The Bristol Knowledge Mobilisation team ran from September 2013 - December 2016. Over this period, four management fellows and two researchers-in-residence were seconded to the KM team and embedded into an academic primary care unit (management fellows) or Bristol CCG (researchers-in-residence). Management fellows were attached to a research group and researchers-in-residence were attached to a commissioning team. They were supported by a university-based communications officer and line managed by Lesley, a qualitative researcher with twenty years' experience in policy and change management. In 2014, Lesley was awarded an NIHR Knowledge Mobilisation Research Fellowship to lead and critically evaluate the KM team. All posts (except Lesley's) were funded with 'research capacity funding' managed by APCRC. The annual cost of four part-time KM team members plus Lesley's salary was £150,000. Table 1 summarises the KM team members' role within their home and seconded organisation, pre-existing experience and specific area of work.

Theoretical conceptualisation

In establishing the KM team, members acted as 'knowledge brokers' to "facilitate, mediate and negotiate" (Lomas, 2007) the creation of "productive relationships" (Dwan and McInnes, 2013) between researchers and commissioners. Several other concepts were also useful including:

a) the socialization of knowledge whereby knowledge flows in social networks (Brown and Duguid, 2000)

b) communities of practice (CoP) when "groups of people who share a common set of problems or passion about a topic deepen their knowledge and expertise by interacting on an ongoing basis" (Wenger et al., 2002)

c) co-production or 'engaged scholarship' which is a participative form of research that involves others as authentic partners in the research process (Van de Ven, 2007)

d) change management principles such as starting small and working with the most fertile areas (Wye and McClenahan, 2001, Evans and Haines, 2000).

e) 'mindlines' which suggests that professionals meld various sources of knowledge (e.g. guidelines, experiential, tacit) through dialogue with others to collectively make sense of new ideas and change behaviour (Gabbay and le May, 2004). Mindlines are a form of 'knowledge-in-practice-in-context' whereby professionals move from simple understanding to sophisticated application of knowledge integrating the full range of demands and constraints that affect decisions within a particular set of circumstances (Gabbay and le May A, 2011). This more complex, often unconscious decision-making demonstrates 'contextual adroitness', the ability to draw skilfully and appropriately on a wide range of useful knowledge in any given situation. (Gabbay and le May, 2016).

Aims

Our hypothesis was that by embedding researchers and commissioners within each community, the two-way flow of knowledge would increase through social contact, as KM team members fostered collaborations. This would facilitate the sharing of 'mindlines' within mixed commissioner/ researcher 'communities of practice'. Ultimately, knowledge from outside communities would be applied to decision-making in the context of research project development and commissioning initiatives. This co-produced knowledge would result in research bids of greater relevance to commissioners and research-informed commissioning decisions. We set several aspirational goals at the outset (Box 1).

In describing KM team activities, this paper answers the question: what knowledge is useful and how can it be exchanged to influence the 'mindlines' of those who need it? Using independent evaluations and other data, future papers will report on how the KM team influenced decision-making, the KM team model and its impact.

Types of knowledge

The following diagram depicts the knowledge sources available. (Figure 1)

KM team activities

The following sections describe how KM team members interwove and applied different knowledge types through diverse activities. An independent evaluation team classified these activities as (Beckett et al., 2016):

1. Relational
2. Dissemination
3. Transferable skills
4. Evaluation
5. Research
6. Raising awareness

Although this classification implies that activities fell into distinct silos, in reality there was significant overlap. For example, the overall purpose of the 'wine and literature' evenings of the KM team was to develop transferable skills, but this could also be categorised as 'relational' or 'dissemination'. However for the sake of simplicity, the following sections describe activities in a sole category.

Relational

To foster collaborations, the KM team set up encounters (or 'linkage and exchange' (Lomas, 2000, Goering et al., 2003)) between commissioners and researchers, usually at the request of researchers who wanted feedback on their research ideas or commissioning participants for their studies. With their extensive understanding of health and social care organisations, knowledge of local experts and skills in how best to approach them, management fellows could "efficiently" and "quickly" identify

the right people (Wye and Baxter, 2014). These contacts occasionally led to research grants with commissioners as co-applicants, but many were one-off. For example, after identifying the common ground of 'risk prediction', Rachel proactively set up a fruitful meeting between CSU analysts and a local academic expert. The CSU analysts offered experiential knowledge of a particular risk prediction tool while the local academic expert provided research-based information about other models, resulting in the CSU analysts finding alternative ways to produce output (Wye and Baxter, 2014).

Sometimes, KM team members helped troubled pre-existing networks. For example, a collaboration working on antibiotic resistance had reached an impasse, as commissioners thought the research agenda dominated. Using her persuasion and influencing skills, Becca had separate conversations with various stakeholders, translating 'jargon' and explaining the differing motivations, needs and priorities, and eventually contact resumed.

KM team members created valued relationships between themselves and their attached teams by becoming 'critical friends'. KM team members' lack of knowledge enhanced this role. For example, with no experience of domestic violence services or research, Jude employed "naïve questioning" skills in an unthreatening manner to help the research team re-examine basic assumptions (Wye and Baxter, 2014). Likewise Helen C knew little about commissioning. Drawing on her anthropological experience and with explicit permission, she observed her attached commissioning

team and fed back her reflections to help the team improve its effectiveness. Commissioners reported that this was highly useful (Beckett et al., 2016).

Dissemination

Three management fellows were responsible for dissemination for their attached research teams, with one becoming adept at using social media, animations, workshops and her own networks. Employing her knowledge of the health and social care landscape and effective dissemination strategies derived from her literature review, Jude used her skills in event planning and project management to co-organise a conference where two-thirds of participants were from the public or health, social or voluntary care organisations. This became a model for other conferences, thereby spreading the learning of how to access and attract non-academic audiences to other researchers.

Transferable skills

All management fellows developed skills in literature reviews and three gained qualitative skills from KM team members, their research teams and other academics. Opportunities in experiential learning such as conducting interviews and observations were provided by research team attachments and through co-produced service evaluations (see below). Experiential learning was supplemented by formal academic courses, individual sessions with systematic reviewers, a monthly qualitative learning set and bimonthly KM team 'wine and literature evenings', where scientific papers were discussed. Post-secondment, management fellows applied their literature review skills to find evidence for commissioning initiatives and

business cases. Moreover, Becca, Jude and James designed the qualitative component of several evaluations. James also negotiated time from his employers to set up a CSU 'evaluation and evidence unit'.

But skills development was not one way; researchers also gained new skills. For example, the researchers-in-residence took a course in developing business cases. Moreover, Becca spread her project management knowledge of 'action logs' and 'event planning templates', which were taken up by her research team and others.

Evaluation

The KM team carried out three evaluations for the CCGs, combining the evaluation design and methods skills of academic KM team members (and sometimes other researchers) with the management fellows' commissioning knowledge. Becca's clinical knowledge helped to interpret findings for one evaluation. In crafting and conducting these evaluations, organisational and relational knowledge were crucial.

In designing an evaluation of a community-based telehealth service, we constructed a 'community of practice' including academics, commissioners, provider managers and community nurses. Identifying who and how to engage relied on:

- the management fellows' understanding of local services and ways of approaching managers and clinicians, and

- academic KM team members' persuasion abilities and knowledge of researchers' motivations and expertise to secure the involvement of academics with the right skills.

Both Lesley and Helen C provided qualitative methodological knowledge, while James modified academic jargon for topic guides and information sheets. With her knowledge of how decisions are made within commissioning organisations, Jude secured the ongoing support of the CCG senior management team.

Research

In the first year of the KM team, the management fellows became co-applicants on several grant applications. Researchers wanted commissioning knowledge of the healthcare landscape, local contacts and KM theory and practice. But these were exclusively researcher-led proposals. With the inclusion of researchers-in-residence post-2014, we had more success in developing commissioner-relevant research.

Using her knowledge of commissioning interests gained from attending CCG urgent care meetings, Helen B identified several potential research topics. These were shaped into grant proposals through iterative conversations with commissioners, researchers and the management fellows, drawing on knowledge of organisational priorities, current service provision, sensitive issues, methodological expertise, funding sources and bid development. This approach resulted in successful funding for five research projects valued from £15,000 to £50,000.

This success belies the challenges in co-producing research projects, as many elements had to align. These included:

- A relevant topic of interest to both communities that generated knowledge of potentially publishable quality and of practical application, classified as 'research' not 'service evaluation'.
- An experienced researcher with the appropriate skills, networks, drive, interest and availability to lead the project.
- Enough of the right commissioners and practitioners, who knew how to find their way round the system, wanted to support the project, and stayed in the same post for several years.
- Willingness on the part of commissioning and healthcare provider organisations to release staff time to work on the bid application and project.
- A funding call with ideally at least 6-9 months' advance notice, as co-produced projects took approximately 2.5 times longer to construct.

Clearly, crystallising these elements was challenging.

Raising awareness

The KM team gave over 15 presentations and workshops at national, regional and local conferences, in addition to seminars at CCG and academic primary care premises. Management fellows tended to describe the health and social care landscape to academic audiences, often using an animation (King's Fund, 2014). The KM team explained cultural differences between commissioning and academic organisations and knowledge mobilisation theory and practice. KM team presentations tended to be well-attended by researchers, with variable interest from

commissioners. The KM team also organised seminars led by outsiders, such as public health consultants, to increase researchers' understanding of the health and social care system (Wye and Baxter, 2014).

Less successful endeavours

Not all of our activities were successful, especially those related to transferring research findings. For instance, we tried creating 'actionable messages' (Hanney et al., 2003) from combining commissioners' organisational and commissioning knowledge and academics' knowledge of research findings. However, commissioners preferred recounting their own experiences and many researchers lacked sufficient knowledge of the healthcare landscape, priorities and ways of working to suggest appropriate action.

We also had limited success with 'evidence briefs', short policy-related documents summarising research findings (Lavis et al., 2009). Helen C drafted five evidence briefs for the Long Term Conditions Steering Group. Although the commissioners expressed gratitude, the briefs made little difference. Verbally transmitting research findings was no easier. Having conducted research on chest pain clinics, Helen C thought she could contribute to commissioners' discussions in this area. But she struggled to translate her qualitative and theoretical knowledge into practical suggestions. Moreover, she had concerns that her knowledge could be used to cut services.

Discussion

Summary of findings

This paper describes how KM team members skilfully and sensitively drew on different knowledge types to inform and influence others. Types of knowledge included profession-specific knowledge held by KM team members and their colleagues (e.g. research methods, healthcare landscape) and common 'insider knowledge', held by both researchers and commissioners for their particular worlds (e.g. relational, organisational and experiential). In addition, specifically for their knowledge brokering roles, KM team members developed expertise in knowledge mobilisation theory and practice.

Often several kinds of knowledge were needed within the same encounter, as KM team members subtly crafted and adapted the knowledge to fit. The skilful application of different types of knowledge was particularly evident when KM team members acted as 'critical friends', diplomatically using their 'outsider' knowledge to offer an alternative perspective. Throughout, the purpose of exchanging knowledge was to build relationships. In effect, KM team members were 'relationship brokers', a term coined by Bowen et al (Bowen S et al., 2017), who navigated between the competing agendas and relationships of researchers and commissioners, within teams and across different organisations, continually looking for common ground.

The absence of patient knowledge, except in service evaluations, is regrettable. A further limitation was that the KM team could only draw on the knowledge they held

themselves or was locally available. For example, a service evaluation using statistical process control was designed, but floundered, without a resident expert. However, the team approach meant that individual members had access to more sources of knowledge and networks than sole knowledge brokers.

Implications

While knowledge brokering as a profession is not well developed in the UK, adding knowledge brokering to already full role descriptions creates risks of the function being implemented in a less optional fashion. Fortunately in this scheme, the time for both researchers-in-residence and management fellows was bought out from their usual positions with a corresponding reduction in the duties of their substantive posts. As recommended by Ryecroft-Malone and colleagues, sufficient resources were invested in "credible and appropriately prepared individuals working in brokering and facilitation roles", which fostered the bridging of boundaries and the catalysing of knowledge mobilisation activity (Rycroft-Malone et al., 2016).

Within this model, knowledge flowed both ways; the 'mindlines' of researchers were as influenced as those of commissioners. For example, embedded management fellows became trusted allies by acting as 'critical friends' through asking naïve questions. Moreover, commissioners navigated researchers through the confusing world of policy and commissioning healthcare. Most researchers were ignorant of the role of commissioners and who commissioned services in their research area. They did not know commissioning priorities and the way the health and social care systems operated overall. This raises the question of how researchers can hope to

design relevant studies or influence such a complex environment, without embedded management fellows on hand transferring their organisational, relational and commissioning knowledge. Verbal modes of communication were especially helpful to address researchers' particular queries.

Academics often mistakenly assume that knowledge of research findings are their greatest asset. But like others (Wilson et al., 2017), we found that, although appreciated, research results were of limited interest, even if packaged into tailor-made products such as evidence briefs. Without translation, commissioners could not apply research knowledge to their particular circumstances. Verbal transmission had more success, but sometimes even expert researchers struggled to articulate and translate complex information into practical knowledge for particular contexts. Commissioners were receptive to messages from research findings, but their usefulness was minimal.

Instead, commissioners valued 1) researchers' as 'critical friends' to help consider novel ways of understanding commissioning challenges and 2) researchers' methodological knowledge, particularly in qualitative evaluation and literature reviews, to inform their own research projects and evaluations. Theoretically, methodological knowledge could be obtained through attending courses, but one-off didactic instruction is often insufficient to navigate the complexities of the research world. Conversations and discussions, which are commissioners' preferred information-seeking mode, are better vehicles as they are quick, adaptable, relevant and personalised. Thus, the presence of embedded researchers-in-residence was

helpful in offering ongoing, frequent, interactive contact. These trusted researchers influenced commissioners' 'mindlines' by providing accessibly-packaged, contextually-appropriate knowledge, making research (and researchers) more valued.

This raises queries about dominant models of research to impact such as the Payback (Buxton M and Hanney S, 1996) and Knowledge to Action frameworks. (Graham et al., 2006) The 'know-do' gap may be less about research having an applicable 'solution' that needs to be implemented or transferred, with researchers as 'solution generators', and instead about researchers fostering learning, reflection and/or challenge about what will work in this context, for this person, here, today. Thus far, the emphasis within impact models has largely been about getting 'evidence into practice', but 'expertise into practice' may be a fruitful way for research(ers) to increase their influence.

Conclusion

A recent review found that knowledge brokers performed many roles, as 'knowledge managers', 'linkage agents' and 'capacity builders' (Bornbaum et al., 2015). However, 'critical friend' and 'relationship broker' were missing. KM team members brokered relationships through conversations interweaving different types of knowledge. Knowledge was the currency; relationships were the pay-off.

Through these relationships, researchers became trusted colleagues whose roles as critical friends and methodological experts were more highly valued than their knowledge of research findings. Similarly, encouraging commissioners' 'expertise into (research) practice' also helped bridge the 'know-do' gap. In considering pathways to impact, the future focus could be less on 'evidence into practice' and more on fostering this mutual flow of 'expertise into practice'.

Within this highly-skilled practice of combining, crafting and applying knowledge to build relationships, the KM team developed 'inter-cultural competence'

> *"…which demands nothing less than reconfiguring one's original worldview… to allow one to function in one and another system…[creating] bilingual-bicultural (or multilingual-multicultural) perspectives…that neither of the two individual systems can ever possibly have [alone]."*(Fantini and Tirmizi, 2006)

Being embedded was crucial to fully experience the host environment and become a 'quasi-insider' to influence its 'mindlines'. In effect, KM team members became ambassadors, who attempted to improve the 'inter-cultural competence' of their colleagues. This goes far beyond the roles of knowledge brokers usually reported in the literature.

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References

AVON PRIMARY CARE RESEARCH COLLABORATIVE. 2014. Available: http://www.apcrc.nhs.uk/ [Accessed 15 December 2014].

BECKETT, K., FARR, M. & LE MAY A 2016. Evaluation of the Knowledge Mobilisation Team From September 2013 – April 2016. Bristol: University of West of England.

BORNBAUM, C., KORNAS, K., PEIRSON, L. & ROSELLA, L. 2015. Exploring the function and effectiveness of knowledge brokers as facilitators of knowledge translation in health-related

settings: a systematic review and thematic analysis. *Implementation Science*.

BOWEN S, BOTTING I, GRAHAM ID & LA, H. 2017. Beyond "two cultures": guidance for establishing effective researcher/health system partnerships. *International Journal of Health Policy Management,* 6**,** 27-42.

BOWEN, S. & GRAHAM, I. 2013. From Knowledge Translation to Engaged Scholarship: Promoting Research Relevance and Utilization. *Archives of Physical Medicine and Rehabilitation,* 94**,** S3-S8.

BROWN, J. & DUGUID, P. 2000. *The social life of information* Boston Mass USA, Harvard Business School Press.

BUXTON M & HANNEY S 1996. How can payback from health services research be assessed? *Journal of Health Services and Research Policy,* 1**,** 35-43.

CHECKLAND, K., HARRISON, S., SNOW, S., COLEMAN, A. & MCDERMOTT, I. 2013. Understanding the work done by NHS commissioning managers: an exploration of the microprocesses underlying day to day sensemaking in UK Primary Care Organisations. *Journal of Health Organization and Management,* 27**,** 149-171.

CLARKE, A., TAYLOR-PHILLIPS, S., SWAN, J., GKEREDAKIS, E., MILLS, P., POWELL, J., NICOLINI, D., ROGINSKI, C., SCARBOROUGH, H. & GROVE, A. 2013. Evidence-based commissioning in the English NHS: who uses which sources of evidence? A survey 2010/2011. *BMJ Open* 3.

DWAN, K. & MCINNES, P. 2013. Increasing the influence of one's research on policy. *Australian Health Review,* 37**,** 194-198.

EVANS, D. & HAINES, A. 2000. *Implementing evidence based changes in healthcare,* Abingdon, Oxford University Press.

FANTINI, A. & TIRMIZI, A. 2006. Exploring and Assessing Intercultural Competence. *World Learning Publications, Paper 1.*

GABBAY, J. & LE MAY, A. 2004. Evidence based guidelines or collectively constructed "mindlines?" Ethnographic study of knowledge management in primary care. *BMJ,* 329**,** 1013-1018.

GABBAY, J. & LE MAY, A. 2016. Mindlines: making sense of evidence in practice. *British Journal of General Practice,* 66, 402-403.

GABBAY, J. & LE MAY A 2011. *Practice-Based Evidence for Healthcare,* Oxford, Routledge.

GOERING, P., BUTTERILL, D., JACOBSON, N. & STURTEVANT, D. 2003. Linkage and exchange at the organizational level: a model of collaboration between research and policy. *Journal of Health Services Research & Policy,* 8, 14-19.

GRAHAM, I., LOGAN, J., HARRISON, M. B., STRAUS, S. E., TETROE, J. & CASWELL, W. 2006. Lost in knowledge translation: Time for a Map? *The Journal of Continuing Education in the Health Professions,* 26, 13-24.

HANNEY, R., GONZALEZ-BLOCK, M., BUXTON, M. & KOGAN, M. 2003. The utilisation of health research in policy-making: Concepts, examples and methods of assessment. *Health Res Policy Systems,* 1, 1-28.

HEALTH INFORMATION RESEARCH UNIT. *What is KT?* [Online]. Available: http://whatiskt.wikispaces.com/ [Accessed 3 December 2014].

INNVAER, S., VIST, G. E., TROMMALD, M. & OXMAN, A. D. 2002. Health policy-makers' perceptions of their use of evidence: a systematic review. *Journal of Health Services Research & Policy,* 7, 239-244.

KING'S FUND 2014. Alternative guides to healthcare. London: King's Fund.

LAVIS, J., PERMANAND, G., OXMAN, A., LEWIN, S. & FRETHEIM, A. 2009. SUPPORT Tools for evidence-informed health Policymaking (STP) 13: Preparing and using policy briefs to support evidence-informed policymaking. *Health Research Policy and Systems*

7(Suppl 1)

LOMAS, J. 2000. Using 'linkage and exchange' to move research into policy at a Canadian foundation: Encouraging partnerships between researchers and policymakers is the goal of a promising new Canadian initiative. *Health Affairs,* 19, 236-240.

LOMAS, J. 2007. The in-between world of knowledge brokering. *BMJ,* 334**,** 129-132.

MORRIS, Z., BULLOCK, A. & ATWELL, C. 2013. Developing engagement, linkage and exchange between health services managers and researchers: Experience from the UK. *Journal of Health Services Research and Policy* 18**,** suppl 23-2.

OLIVER, K., INNVAR, S., LORENC, T., WOODMAN, J. & THOMAS, J. 2014. A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC Health Services Research,* 14.

REDWOOD, S., BRANGAN, E., LEACH, V., HORWOOD, J. & DONOVAN, J. 2016. Integration of research and practice to improve public health and healthcare delivery through a collaborative 'Health Integration Team' model - a qualitative investigation. *BMC Health Services Research,* 16.

RYCROFT-MALONE, J., BURTON, C. R., WILKINSON, J., HARVEY, G., MCCORMACK, B., BAKER, R., DOPSON, S., GRAHAM, I. D., STANISZEWSKA, S., THOMPSON, C., ARISS, S., MELVILLE-RICHARDS, L. & WILLIAMS, L. 2016. Collective action for implementation: A realist evaluation of organisational collaboration in healthcare *Implementation Science,* 11.

SHAW, S. E., SMITH, J. A., PORTER, A., ROSEN, R. & MAYS, N. 2013. The work of commissioning: a multisite case study of healthcare commissioning in England's NHS. *BMJ Open,* 3.

VAN DE VEN, A. 2007. *Engaged Scholarship: A Guide for Organizational and Social Research,* Oxford, Oxford University Press.

VINDROLA-PADROS, C., PAPE, T., UTLEY, M. & FULOP, N. 2016. The role of embedded research in quality improvement: a narrative review. *BMJ Quality and Safety,* 26**,** 70-80.

WENGER, E., MCDERMOTT, R. & SNYDER, W. 2002. *Cultivating communities of practice,* Boston Mass USA, Harvard Business School Press.

WILSON, P., FARLEY, K., BICKERDIKE, L., BOOTH, A., CHAMBERS, D., LAMBERT, M., THOMPSON, C., TURNER, R. & WATT, I. 2017.

Does access to a demand-led evidence briefing service improve uptake and use of research evidence by health service commissioners? A controlled before and after study. *BMC Implementation Science,* 12.

WYE, L. & BAXTER, H. 2014. NHS fellows evaluation 2013-2014. Bristol: University of Bristol.

WYE, L., BRANGAN, E., CAMERON, A., GABBAY, J., KLEIN, J. & POPE, C. 2015. Evidence-based policy-making and the 'art' of commissioning - how English healthcare commissioners access and use information and academic research in 'real life' decision-making: An empirical qualitative study. . *BMC Health Services Research,* 15.

WYE, L. & MCCLENAHAN, J. 2001. Getting better with evidence. London.