



HOW CAN CAPACITY DEVELOPMENT PROMOTE EVIDENCE-INFORMED POLICY MAKING?

Literature Review for the Building Capacity to Use
Research Evidence (BCURE) Programme

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April 2016

Contents

Contents.....	2
Acronyms	3
Executive summary	4
Background	7
Methodology.....	10
1. What is ‘building capacity for evidence-informed policy making’?.....	17
1.1. What is ‘research evidence’, and what makes it ‘good quality’?	20
1.2. What is ‘policy’, and how can evidence benefit policy making?	22
1.2.1. Theories of policy processes and the role of evidence in decision making.....	22
1.2.2. Theories relating to researcher-policy relationships and networks	25
1.2.3. Theories relating to cognitive processes.....	27
1.2.4. How does evidence use contribute to policy quality?.....	28
1.3. What is ‘capacity’ for EIPM and how do we ‘build’ it?	30
1.3.1. Theories of capacity development.....	30
1.3.2. Theories on the characteristics of adult learners, and principles of adult learning	32
1.4. Conclusions and implications for the BCURE evaluation	35
2. What factors promote and constrain evidence-informed policy making?	37
2.1. Individual-level factors affecting EIPM	41
2.2. Interpersonal factors affecting EIPM	44
2.3. Organisational factors affecting EIPM	45
2.4. Institutional factors affecting EIPM	46
2.5. Conclusions and implications for the BCURE evaluation	52
3. What is the evidence on how to build capacity for evidence-informed policy making?	55
3.1. Individual change	57
3.2. Interpersonal change	64
3.3. Organisational change	74
3.4. Institutional change	79
3.5. Policy change and policy quality	79
3.6. Conclusions and implications for the BCURE evaluation	83
References	85
Annex 1. Full search strategy and search terms.....	90

Acronyms

AFREPERN	African Energy Policy Research Network
AIDS	Acquired Immune Deficiency Syndrome
BCURE	Building Capacity To Use Research Evidence Programme
BSE	Bovine Spongiform Encephalopathy
CoP	Community of Practice
CSO	Civil Society Organisation
DDM	Data For Decision Making Programme
DFID	UK Department For International Development
EIPM	Evidence-Informed Policy Making
FAO	Food And Agricultural Organisation
GRADE	Grading of Recommendations Assessment, Development and Evaluation
HIC	High-Income Country
HIV	Human Immunodeficiency Virus
ICAI	Independent Commission For Aid Impact
ICT	Information And Communications Technology
KB	Knowledge Broker
LIC	Lower-Income Country
NGO	Non-Governmental Organisation
NHS	UK National Health Service
OECD-DAC	The Organisation For Economic Co-Operation And Development's Development Assistance Committee
OR	Other Review
PEPFAR	President's Emergency Plan For AIDS Relief
PHSI	Partnerships For Health System Improvements Programme
PRSP	Poverty Reduction Strategy Papers
RCT	Randomised Controlled Trial
SR	Systematic Review
UK	United Kingdom
UMIC	Upper Middle Income Country
US	United States
USAID	United States Agency For International Development
WHO	World Health Organisation

Executive summary

How can capacity development promote evidence-informed decision making? This review discusses the messy, complex nature of evidence use in policy processes; casts a spotlight on some of the individual, interpersonal, organisational and institutional factors that promote and constrain use of evidence; and examines the primary evidence base to investigate what works to build the capacity of decision makers to use evidence, for whom, in what circumstances, and why.

Why this review? The Building Capacity to Use Research Evidence (BCURE) programme works with policy makers in low and middle-income countries, developing skills, knowledge and systems to improve the use of evidence in decision making. Funded by the UK Department for International Development (DFID) and launched in 2013, BCURE will invest £13 million over three years in a number of linked capacity development projects across Africa and Asia. This literature review was written as part of the evaluation of BCURE, which runs alongside the programme and aims to strengthen the evidence base on capacity development for evidence-informed policy making (EIPM).

The BCURE evaluation team recognise that there is a large, growing and disparate evidence base of relevance to EIPM, spanning a wide range of disciplines. This review attempts to synthesise some of this evidence, in order to provide a practical resource summarising existing knowledge about EIPM and how to promote it. It also plays a crucial role in the evaluation design, in examining, testing and refining the draft Theory of Change for the programme, and contributing to answering the evaluation questions.

Structure of the review: This paper is structured in three sections, each standing alone with its own conclusion:

Section 1 discusses **the theories and assumptions underpinning the BCURE programme and the concept of 'EIPM'**, providing an overview of the diverse and rich theoretical literature on this topic.

Section 2 outlines the most significant and well-evidenced **barriers to and enablers of evidence use by decision makers**. It then examines some of the individual, interpersonal, organisational and institutional factors that promote or constrain evidence use in policy making,

focusing particularly on political, psychological and cultural factors that are less frequently discussed in existing secondary reviews.

Finally, Section 3 examines primary evidence from studies of interventions aiming to build capacity for EIPM. It adopts a realist synthesis approach to examine **what works, for whom, in what circumstances, and why.**

Section 1: What is 'building capacity for evidence-informed policy making'? The concept of EIPM is underpinned by a **growing and highly interdisciplinary literature**, comprising a large number of overlapping theories and models. These range from evidence hierarchies to learning theories; models of policy processes to concepts of complexity. We believe it is important for policy makers and practitioners to get to grips with the theory underpinning EIPM, especially given criticism that EIPM research and interventions fail to account of the messy reality of policy processes. Building theoretical insights into interventions can help practitioners avoid common traps and design programmes that are more likely to lead to change. Section 1 asks three questions:

What is 'research evidence', and what makes it 'good quality'? There is widespread agreement that research evidence is just one type of evidence required for policy. Although there is some agreement over what counts as 'good quality' evidence, 'evidence hierarchies' should be used with caution, as appropriateness of evidence may be more important than its position on a hierarchy. Several writers argue that research evidence is not neutral – first because it reflects pre-existing views and beliefs of researchers and commissioners, and secondly because it rarely points to an obviously optimal solution, implying that contestation over its interpretation is inevitable.

What is 'policy', and how can evidence benefit policy making? The rational 'policy cycle' model is now largely discounted in theoretical work on EIPM, with more recent models and empirical evidence emphasising the non-linear nature of policy change, the importance of interactions between various networks of actors, and the role of power and politics in shaping evidence use. Insights from psychological literature also emphasise the importance of mental models, contextual cues and social norms, which affect how people understand and interpret evidence.

However, definitions of policy quality considered in this review – such as those used by the UK Civil Service – retain close links to linear and rational models; or at least retain assumptions about the objectivity of knowledge and evidence interpretation which several theories discussed in this section challenge. The BCURE evaluation will need to navigate this tension, given its remit to measure improvements in policy quality as a result of BCURE interventions.

What is 'capacity' for EIPM and how do we 'build' it?

Recent thinking on capacity development suggests that capacity is complex and multi-dimensional. Capacity development therefore demands involves more than a focus on individual skills, requiring intervention at individual, interpersonal, organisational and institutional levels. Theories and models of adult learning provide insights into how individual learning takes place, which is important given the strong emphasis on training within the BCURE programme. Different theories of learning provide a diverse set of theoretical frames for understanding the mechanisms that link training to individual behaviour change.

Section 2: What factors promote and constrain evidence-informed policy making? There is a large amount of evidence on the barriers to and facilitators of EIPM, synthesised in a number of secondary reviews. However, this evidence has been criticised for focusing on single elements of the policy-making process and relying on the perceptions of research producers and users; rather than considering how evidence is actually used within policy processes as a whole. This section therefore considers some of the primary evidence on psychological, political, cultural and institutional factors affecting EIPM (and the interrelationships between them) – taking into account theories of power, politics, networks, cognitive processes and complexity discussed in Section 1. This evidence finds that:

- **Individual beliefs, attitudes and motivations to use evidence are connected to pre-existing beliefs, and to prevailing norms and values.** Evidence may be ignored or side-lined if it counters past experience, beliefs about what counts as 'good' evidence may result in useful knowledge being discounted, and certain evidence findings may be viewed as 'unacceptable' in particular contexts and so ignored.
- **Organisational factors can affect individual motivation or ability to use evidence.** Individual

motivation for EIPM may be increased if evidence is promoted or valued within an organisation, lack of time to access and appraise research partly reflects an organisation's 'culture' of evidence use, and hierarchical management of information, organisational silos and poor organisational memory can limit access to research.

- **Non-government actors can influence the extent and nature of EIPM.** International donors can both promote and constrain the effective use of evidence in decision making depending on their priorities, private sector actors can exert pressure which 'blocks' evidence-informed decisions, and the media (and the general public) may act as a barrier to EIPM. Civil society can put pressure on government actors to use evidence, build momentum behind ideas, and bring together different forms of knowledge.
- **Institutional factors** such as sudden change (e.g. crises or regime changes), levels of decentralisation and levels of democracy can all generate opportunities for or barriers to EIPM.

Section 3: What is the evidence on how to build capacity for evidence-informed policy making? A realist synthesis approach was used to examine primary evidence on interventions aiming to build capacity for EIPM. This involved examining the *mechanisms* through which interventions lead to particular *outcomes*, along with the *features of interventions* and the *wider context* that either enable or hinder these mechanisms. The interventions examined in this review largely aimed to **develop capacity for evidence use or public sector decision making in health**, and around half were based in lower and middle-income contexts.

Overall, **the intervention evidence on capacity development for EIPM is limited.** Most evidence relates to training courses, with more limited evidence on the impact of networks, knowledge brokers, champions, organisational systems and tools. Most studies did not contain explicit information on mechanisms of change – identifying these involved reading between the lines, looking for common themes and making links to the theoretical literature. Few intervention studies refer to the more recent theories of EIPM discussed in Section 1, which emphasise the messy, contested and political nature of evidence use in policy making.

Despite the small evidence base, useful lessons can be distilled from these studies on *how* and *why* different interventions may have resulted in (or not resulted in) change, and the contextual and intervention factors that helped or hinder success. Some of the most significant findings are as follows:

- Studies examining **individual-level** interventions, particularly training, suggest that combining classroom learning with on-site projects and actively engaging participants' organisations may be linked to training success; especially as supportive organisations appeared to be an important contextual factor influencing training impact. One helpful way of understanding the mechanism through which training can improve capacity is the theory of **self-efficacy** – training increases participants' confidence in their capability to perform a certain task or handle a particular situation.
- Studies relating to **interpersonal-level interventions** discussed the role of networks, knowledge brokers and champions in promoting EIPM. Individuals can lead to change through the mechanisms of '**cheerleading**', acting as '**transformational leaders**' or '**network facilitators**,' or promoting '**social learning**' through role-modelling EIPM behaviours. Effective champions and knowledge brokers appear to possess specific interpersonal skills, vision and commitment, and an appropriate level of seniority in an organisation. The evidence on networks suggests they may lead to change through the mechanism of '**social processing**' – in which beliefs within a group shift towards a consensus – and this may lead away from EIPM as well as towards it.
- **Organisational tools and systems** appear to work by **facilitating** behaviour change (making a person's job easier), or **reinforcing** it through for example rewards, audit or feedback. EIPM tools may also lead to change by **increasing the value staff place on evidence**, through convincing them of the benefits that data can bring to decision making. A virtuous

circle may emerge, in which increased use of evidence leads to greater demand for it, and so on.

What are the lessons for the BCURE evaluation, and for others interested in promoting evidence-informed policy?

- **Policy and practice can be strengthened by consideration of theories:** around power and policy processes, networks, complex systems, cognitive features, capacity development, and individual learning. These may help policy makers and practitioners avoid unintentionally basing their ideas about evidence use on linear and rational models, which are now widely discounted.
- **It is important to consider the political, psychological, cultural and institutional factors promoting and constraining evidence** use, drawing on the theories mentioned above. This implies the need for the BCURE evaluation team to collect data on individual beliefs, attitudes and motivations, and how they link to organisational factors and to social norms and values. The evaluation should also consider the influence of the wider institutional environment on evidence use in BCURE contexts – for example the role of international donors, private sector actors, the media and civil society, and the influence of historical events on the ways in which evidence is used and understood.
- **The evidence base on capacity development for EIPM is small**, largely derived from the health field, and weighted towards studies examining the impact of training on individual capacity. There are significant evidence gaps around the role of interpersonal and organisational interventions in promoting change, and regarding the influence of EIPM capacity development on policy change and policy quality. However, useful evidence suggesting *how* and *why* EIPM capacity development can lead to change have emerged from this study. The BCURE evaluation will explicitly draw on the theory and evidence discussed in this review to test and further illuminate these mechanisms, and the features of context and intervention design that lead to (or inhibit) change.

Background

The Building Capacity to Use Research Evidence (BCURE) programme works with policy makers in low and middle-income countries, aiming to develop skills, knowledge and systems in order to improve the use of evidence in decision making. Funded by the UK Department for International Development (DFID) and launched in 2013, the BCURE programme will invest £13 million over three years in a number of linked capacity development projects across Africa and Asia.¹

Itad (in association with The School of Public Leadership of Stellenbosch University and CommsConsult) are conducting an independent impact evaluation of BCURE, which is running alongside the programme. The aim of the evaluation is to strengthen the evidence base to support evidence-informed policy making (EIPM) in developing countries – by drawing on both primary data from BCURE programmes (collected between 2015 and 2017) and the existing evidence base (as summarised in this review).

There is a large and disparate literature of relevance to EIPM, spanning a wide range of disciplines. The review attempts to synthesise some of this evidence in order to provide a practical resource summarising existing knowledge about EIPM and how to promote it. It also plays a crucial role in the evaluation design; through examining, testing and refining the draft Theory of Change for the programme, and contributing to answering the evaluation questions.

This review is structured in three parts. Each part stands alone, so readers can navigate directly to the section of most interest. [Section 1](#) discusses the theories and assumptions underpinning the BCURE programme and the concept of ‘EIPM’, providing an overview of the diverse and rich theoretical literature on this topic. [Section 2](#) outlines the most significant and well-evidenced barriers to and enablers of evidence use by decision makers, and examines some of the individual, interpersonal, organisational and institutional factors that promote or constrain evidence use in policy making. Finally, [Section 3](#) examines primary evidence from studies of interventions aiming to build capacity for EIPM. It adopts a realist synthesis approach to examine *what works, for whom, in what circumstances, and why*.

The BCURE Theory of Change

This review was driven by and structured around the BCURE evaluation Theory of Change. This represents the evaluation team’s theory about how the different BCURE projects will result in change across their varied contexts.

The Theory of Change depicts the **activities** (interventions and outputs) of BCURE providers. These involve **individual-level interventions** (such as training); **interpersonal-level interventions** (such the use of ‘evidence champions’ in organisations, and the development of policy and evidence networks); and **organisational interventions** (including the development of policies, systems and procedures for evidence use). These activities predominantly target high-level government policy makers (such as ministerial staff) and mid-level government policy makers (such as mid-level civil servants).

These interventions are anticipated to lead to change at **individual, interpersonal, organisational and institutional** levels. Change at each of these four levels is expected to influence changes in others, in non-linear ways.

¹ Further information on the BCURE programme and the evaluation is available here: <http://www.itad.com/knowledge-and-resources/bcure>.

At **individual level**, BCURE activities will improve the skills and knowledge of targeted stakeholders, increasing their capacity for EIPM. Activities will also result in increased positive intention among and commitment of individuals to use evidence, and in individuals placing greater value on evidence in their work. At **interpersonal level**, organisational ‘champions’ will endorse EIPM and help move the agenda forward in their institutions, and networks will be developed and strengthened between national and international institutions – providing an environment for learning and engagement.

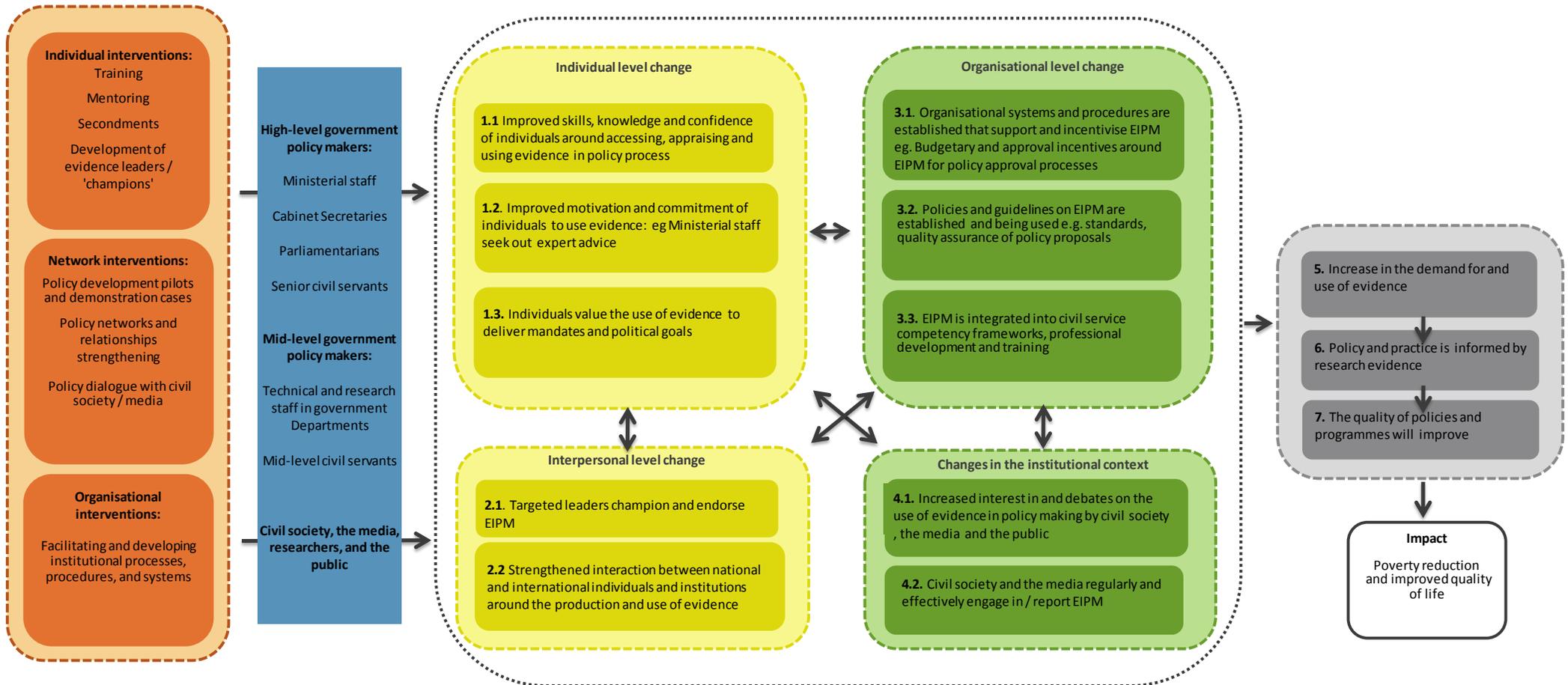
Individual and interpersonal-level changes, together with direct interventions targeting organisational processes, are expected to contribute to **organisational-level change**. This includes the development of systems and procedures, policies and guidelines, and professional development opportunities; which together will support and incentivise EIPM. Individual, interpersonal and organisational-level change will also contribute to change at **institutional level**, including increased interest in EIPM within civil society, the media and the public; facilitating these actors to more effectively engage with EIPM.

Finally, the combination of individual, organisational, network and institutional change will **increase demand for and use of evidence** among targeted stakeholders, which will result in **policy and practice being increasingly informed by evidence**. This in turn will lead to **improved quality of policies and programmes**. These long-term changes will lead to the programme impact: **poverty reduction and improved quality of life**.

The Theory of Change can be summarised in two sentences as follows:

Developing the capacity of decision makers to use research evidence (through building knowledge, skills, commitment, relationships and systems at individual, interpersonal, organisational and institutional levels) will allow them to access, appraise and apply good quality evidence more effectively when forming policy. This will improve the quality of policies, ultimately benefitting more poor people.

The BCURE Theory of Change²



² Notes:

- The Theory of Change is intended to be non-linear, but the limits of the schematic mean that it is represented as a progression from left to right.
- Although we have presented the programme interventions at the left-hand side of the diagram for ease of reading, BCURE partners are planning interventions at different entry points across the Theory of Change.

Methodology

1. The aim of this paper: This study aimed to **identify evidence to test and further articulate the *theory* of how the BCURE programme is expected to lead to change.** The review is therefore structured around the draft BCURE Theory of Change described above – drawing on evidence to support, challenge and further articulate the hypothesised causal links, planned outcomes and assumptions underpinning the BCURE programme. In building the capacity of decision makers to access, appraise and apply research evidence, BCURE focuses on the ‘demand side’ of EIPM (Newman et al. 2012). As a result, **this review focuses on evidence relating to ‘demand side’ strategies for promoting evidence use in policy making,** and deliberately excludes the growing evidence base on ‘supply side’ interventions (for example, on how to effectively disseminate research and encourage research uptake).

2. Approach and research questions: This review adopts a ‘realist synthesis’ approach. Rather than asking ‘what works?’, a realist synthesis aims to identify what exactly it is about interventions that results in change, in which contexts, for whom, and why (Pawson & Tilley 1997). This approach complements an overarching realist design for the BCURE evaluation – which aims to develop and test *theory* about how and why different BCURE projects lead to (or do not lead to) change.

Unlike a systematic review, a realist review does not aim to identify all potentially relevant papers, systematically extract information from them and then aggregate it. It also does not attempt to locate all relevant evidence – recognising that there is no finite set of ‘relevant papers’, particularly on a topic as broad as the use of evidence in decision making. Instead, **a realist review aims to locate the most *relevant* evidence, in order to draw out lessons on how past interventions have worked (or not worked), in what ways, for whom, in what circumstances, in what respects, and why** (Pawson 2006a).

The review therefore adopted an iterative search strategy, with new searches conducted as understanding grew about particular theories (and as new theories were uncovered in the literature), using additional and revised search terms. Searches for relevant evidence continued throughout the synthesis and write-up stages of the report. A paper was deemed relevant if it was judged to contribute to our understanding of the BCURE Theory of Change: did it provide evidence to support, challenge or further articulate the outcomes, the hypothesised causal links, or the assumptions?

Research questions

Six research questions (RQs) guided the searches; aligning closely with the Theory of Change. The review has not been structured using these questions, as the scope and emphasis shifted throughout the search process (discussed further below). However, broadly speaking RQ 1 is largely addressed in Sections 1 and 2, and RQs 2-6 in Section 3.

1.	What factors can promote and constrain EIPM in public sector environments?
2.	What factors lead to professional skills and/or knowledge being acquired by public sector workers through teaching and training?
3.	How and in what circumstances can capacity development interventions promote <u>individual</u> behaviour change within organisations?
4.	How and in what circumstances can capacity development interventions promote <u>organisational</u> , <u>network</u> and <u>institutional</u> change?
5.	How and in what circumstances can capacity development interventions increase the demand for and use of evidence in policy making?
6.	How and in what circumstances can interventions that increase demand for and use of research evidence lead to improved policy quality?

3. Search strategy and inclusion criteria: Structured database and snowball searches were conducted using search strings to identify relevant literature. We focused our search on academic fields above and beyond the international development literature, as initial scoping suggested these may contain useful insights. Academic fields included: political science, health, public administration, health, psychology, and adult education and training (described in more detail in Annex 1).

Inclusion criteria:

In line with the realist synthesis approach described above, the primary consideration guiding the literature searches was *relevance* to the BCURE Theory of Change. We also adopted the below set of inclusion criteria to guide the literature search and selection.

- We only considered papers available in English.
- We generally only considered papers that were published since 2000. However, if an earlier paper was considered highly relevant it was included.
- We focused our search primarily on published and unpublished papers and reports. However, we also considered project documentation if it was made available and deemed relevant (e.g. Theories of Change, project reports).
- We prioritised primary empirical studies, given our aim of providing a practical summary of evidence on what works to promote EIPM. However, in practice much of the relevant literature was theoretical or conceptual in nature. We excluded models, theories and opinion pieces not based on empirical evidence.
- We prioritised papers examining low and middle-income country contexts. However, in practice much of the relevant primary evidence (particularly evidence discussing intervention outcomes) related to high-income contexts.
- We generally only considered papers available in electronic formats. Books that were found in the search were only included if a) one of the evaluation team had a copy; or b) the book was available on Google Books.
- Papers behind paywalls were included if they could be accessed via open-source formats, or via the institutional access of a member of the evaluation team.

Our search approach involved structured database searches and snowball searches.

Structured database searches:

We used search strings to retrieve literature from websites and online databases. Our approach to structured searching was as follows:

- Hand searches were conducted of selected databases, by systematically reviewing all listed titles to locate literature relevant to the RQs. The following databases were hand searched:
 - All outputs listed related to the Research and Policy programme on the Overseas Development Institute website [405] = (17 relevant results).
 - All articles from 2012, 2013 and 2014 of the journal Evidence & Policy: A Journal of Research, Debate and Practice [89] = (15 relevant results).
 - All World Development Reports since 2000 [15] = (1 relevant result).
 - All systematic reviews listed in the 3ie Systematic Review Database [280] = (0 relevant results).
 - All case studies categorised as ‘research to policy’ in the Eldis database [44] = (0 relevant results).

- Selected websites were then searched using Boolean searches and smart Google search functions, using the search terms listed in Annex 1. The websites searched included the databases listed above, and also the websites/databases of: the Institute of Development Studies, the British Library of Development Studies, the Overseas Development Institute, the International Development Research Centre, the United Nations Development Programme, and AusAID.
- General Boolean searches were then conducted on Google and Google Scholar.
- We intended to conduct additional searches on scholarly and international development databases (including Research for Development (R4D), Emerald, and Southern Open Access repositories such as African Journals Online). However, this was not possible due to time constraints.

Snowball searches:

Bibliography search: We searched the bibliographies of relevant literature to identify additional sources. Given time constraints, this searching was limited to the bibliographies of BCURE provider proposals and the most relevant secondary review papers.

Expert recommendations: We reached out to the evaluation team’s wide network of contacts with expertise in various fields, to ask for suggestions on potentially relevant sources as well as further contact details for additional experts who may be able to assist. We also communicated our work on the literature review to wider EIPM networks, including the Research to Action (R2A) website and the Evidence Based Policy in Development Network (EBPDN) mailing list. This strategy resulted in 51 recommendations of sources for this review, which were all screened for relevance.

4. The evolution of the search strategy: In line with the RQs, the searches originally focused on primary studies relevant to the evaluation Theory of Change. As anticipated, most relevant published literature was secondary and/or conceptual in nature. **This rich conceptual literature reveals that the concept of ‘evidence-informed policy’ is underpinned by a large number of diverse and overlapping theories and assumptions**, including those around the nature of evidence and policy processes, the links between knowledge, power and politics, and the ways in which people understand evidence in light of existing mental models.

Although we originally intended to draw on this theoretical literature sparingly and focus predominantly on synthesising primary evidence (in line with the inclusion criteria above), during the search process the importance of the theoretical literature became apparent. First, a realist review is fundamentally about articulating and testing *theories* about how and why change happens (Pawson et al. 2004; Pawson 2006a). **The theoretical literature provides a large number of rich and useful insights** into how EIPM might (or might not) work, which will help the evaluation team articulate and measure the various ways in which BCURE projects contribute to (or fail to result in) change. Second, some recent literature on EIPM **is critical of other evidence in this field** for failing to recognise the complexity of policy change, utilise theoretical learning from policy studies, or make explicit underlying assumptions about policy processes (Oliver, Lorenc, et al. 2014; du Toit 2012; Wesselink et al. 2014) – as discussed in [Section 1](#) below. The scope of this review was therefore expanded – both to avoid this criticism, and to provide a detailed summary of relevant theoretical literature for the benefit of other policy makers and practitioners working on promoting EIPM.

5. Classifying the literature: Throughout the search process, relevant literature that met the inclusion criteria (retrieved from both snowball and structured searches) was classified in an Excel matrix; available alongside this review.³ The classification process documented:

- **Basic details:** Full citation, year of publication and URL.
- **Source:** whether evidence was located through database or snowball searches. This helped the researchers keep track of whether snowball searches were steering the evidence in a particular direction, in order to help counter bias.
- **Domain:** the academic field the literature was drawn from; although this is a relatively crude classification, as many sources relevant to EIPM are interdisciplinary and span different domains.
- **Publication status:** peer reviewed publication, organisational report, unpublished/internal report, thesis, book, or webpage.
- **Type of evidence:** primary empirical study, secondary review study, or theoretical/conceptual paper. This classification follows the DFID How To Note on Assessing the Strength of Evidence, (DFID 2014a). Primary studies were also classified according to whether they were ‘intervention studies’ (reporting evidence relating to a specific intervention – for example a capacity development programme) or not.
- **Research design:** experimental, quasi-experimental or observational for primary studies; systematic review or other review for secondary studies (also following guidance in the DFID How To Note, 2014a).
- **Research methods:** e.g. RCT, case study, qualitative methods such as interviews and focus groups, large-n survey, participatory action research.
- **Geographical context of primary research:** the country in which research was conducted. Research was also classified according to whether it was conducted in lower-income or higher-income contexts.⁴
- **Quality:** All primary intervention studies that were deemed relevant to the RQs were assessed for quality, as detailed below.

6. Appraising and quality assessing the literature. Given the wide scope of the RQs and relevant literature, a decision was made to prioritise depth and breadth of discussion over rigorous quality assessment of sources within the resources available for this review. This decision was guided by the realist principles underpinning the BCURE evaluation. Realist syntheses, unlike systematic reviews, do not aim to synthesise the *conclusions* of studies, in order to accumulate evidence about ‘what works’. Rather, they aim to draw on the *relevant aspects of studies* that can contribute to a better understanding of how and why interventions work or do not work – and this may include theories, snippets of primary data, or contextual information as well as overall conclusions (Pawson 2006b; Pawson 2005). There is therefore limited utility in systematically applying rigorous quality criteria to sources ‘as a whole’, in order to indicate how confident a reader can be in their conclusions. Instead, Pawson recommends that ‘judgement about rigour is made not on the basis of pre-formulated checklists, but in relation to the precise usage of each fragment of evidence within the review’ (Pawson 2006c).

Based on these considerations, six simple quality criteria were adopted for assessing primary intervention evidence. The intention was not to provide a comprehensive quality assessment; but rather to act as a rough

³ All studies incorporated in the literature review were fully classified. However, not all classification criteria were recorded for studies not included in the review, due to time constraints.

⁴ Countries were classified using World Bank 2015 data, into lower-income countries (LICs: including low-income and lower-middle income countries in the World Bank classification); upper-middle income countries (UMICs) and higher-income countries (HICs) (World Bank 2015a).

proxy of lower and higher quality studies using criteria that were relatively quick and easy to apply. The six criteria were derived from the DFID How To Note on Assessing the Strength of Evidence (DFID 2014a):

1. Transparency of study design.
2. Transparency of data sources and analysis methods.
3. Transparency about the context and location of the study.
4. Transparency of sampling approach and sampling frame.
5. Triangulation of sources and methods.
6. Discussion of limitations.

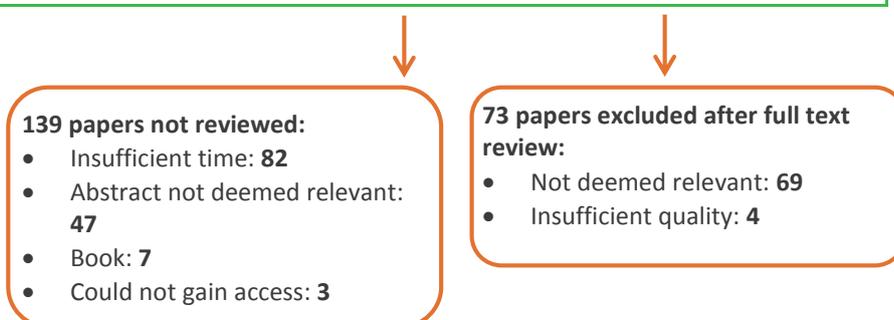
Studies were given scores for each criterion: ‘yes’, (2 points) ‘no’ (0 points) or ‘partly’ (1 point) (e.g. if a study was transparent about its data collection methods but not its analysis methods). Studies were deemed ‘low quality’ if they scored 4 points or fewer; ‘medium quality’ with 5–8 points, and ‘high’ quality with 9–12 points. Non-intervention primary studies were not quality assessed in this way, given time constraints.

In addition to these basic quality scores, the lead researcher conducted ad hoc **additional quality assessments** of a small number of intervention and non-intervention studies considered for Section 3 during the synthesis stage. This aimed to ensure confidence in the quality of the precise fragment of the study that was relevant to the discussion in Section 3 (Pawson 2006c). These secondary assessments drew on a wider range of quality criteria outlined in the DFID How-To Note than was possible to incorporate in the quantitative quality scores. Findings from studies which were deemed problematic on quality grounds were excluded (for example conclusions were not included in the synthesis if they did not clearly follow from the study’s findings).

In total, 344 studies were retrieved from searches and added to the literature review database, of which 270 were deemed relevant based on a preliminary abstract scan. The sources of data are summarised in Table 1 below.

Table 1. Summary of studies retrieved through searches

Source of data	Total papers retrieved	Full text reviewed	Cited in final paper
Database search	217	120	93
Snowball: bibliography search	41	19	9
Snowball: external or team recommendation	51	51	21
Snowball: provider proposal	35	15	9
Total	344	205	132



It was not possible to review the full texts of all relevant papers due to time constraints, so additional criteria were developed to prioritise sources. Papers meeting the following criteria were read in full, and relevant papers incorporated into the review:

- All primary studies (intervention **and** non-intervention studies) relating to low- and middle-income country contexts published since 2010.
- All primary intervention studies relating to high-income contexts published since 2010.
- All systematic reviews, and all other secondary reviews published since 2010.
- All studies recommended by experts through the snowball search.

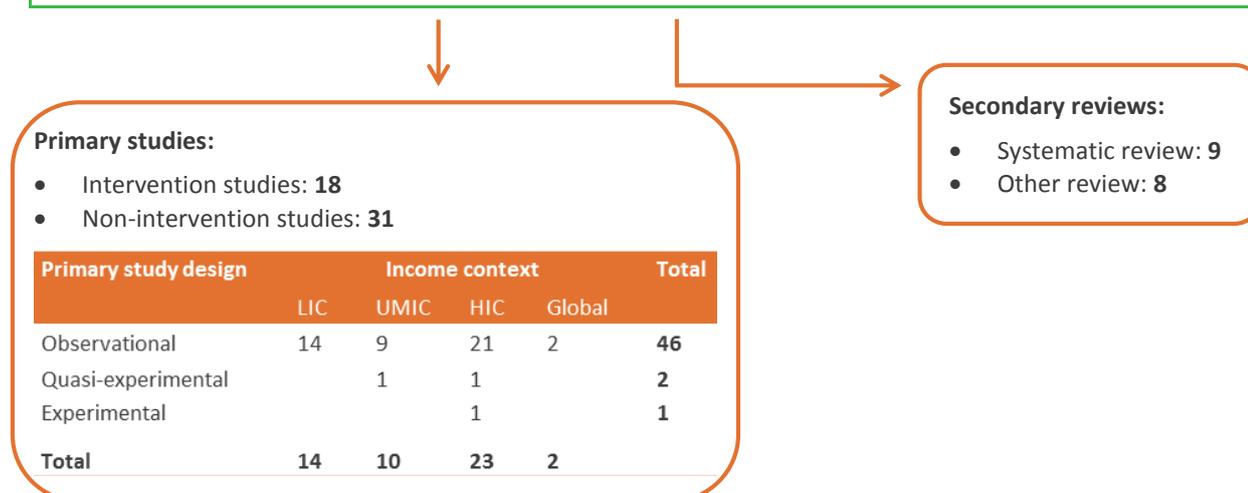
2010 was a relatively arbitrary cut-off point designed to narrow the number of papers in particular categories to a manageable level. Papers published earlier were considered if they were particularly relevant; but given the large amount of literature in this field we decided to prioritise more recent evidence which may not yet have been synthesised elsewhere. The evaluation team will revisit the literature to update this review at a later point in the evaluation, and at that point will aim to review some of the sources that were excluded due to time constraints at this stage.

7. The nature of the evidence base.

Table 2 provides a summary of the evidence discussed in this review

Table 2. Summary of literature included in this report

Field	Primary study	Secondary review	Theoretical/conceptual	Total
Health	26	8	7	41
Development studies	13	5	14	32
Adult education and training			23	23
Public administration	6		6	12
Political science		1	8	9
EIPM	3	1	4	8
Psychology			4	4
Sociology		1		1
Anthropology	1			1
Management		1		1
Total	49	17	66	132



8. Limitations: Due to the wide remit of this literature review and the inevitable constraints of time and resources, this paper does not provide a fully comprehensive overview of the evidence on capacity building for EIPM. A broad and diverse range of literature from a number of different fields is relevant to this topic, and decisions regarding which papers to include were made based on pragmatic reasons of time and

resources as well as the inclusion criteria discussed above. As a result, the evidence in this review represents a systematic but partial synthesis of the available literature; and it is likely that relevant papers have been omitted. We intend to update this review at a later stage of the evaluation, presenting an opportunity to include additional studies that are not incorporated in this version. Readers are encouraged to forward any additional relevant literature they are aware of to the evaluation team.⁵

Non-intervention primary studies were not formally quality assessed due to time constraints, which may mean that some low quality evidence has been incorporated in the review. However, these studies were informally assessed by the lead researcher during the synthesis stage as described above, somewhat mitigating this limitation.

⁵ See contact details at <http://itad.com/projects/evaluation-of-approaches-to-build-capacity-for-use-of-research-evidence-bcure/>

1. What is ‘building capacity for evidence-informed policy making’?

Overview

The literature on EIPM is growing and interdisciplinary. It contains a wide range of overlapping theories and models concerning the ways in which evidence is used in policy making. This theory is important to policy and practice, especially given that several writers criticise EIPM research and interventions for a failure to make use of theoretical insights or to acknowledge non-rational theories of policy processes.

The BCURE programme is underpinned by a number of assumptions about the nature of evidence, policy making and capacity development. These are examined through a study of the evidence in relation to three questions:

1. **What is ‘research evidence’, and what makes it ‘good quality’?** Several theoretical and empirical studies suggest that research evidence is just one type of evidence required in policy making, and cannot be easily isolated from other forms of knowledge in policy debates. There is growing agreement that *appropriateness* of evidence may be more important than its position on a generic evidence quality hierarchy, and several writers argue that contestation over evidence interpretation is inevitable given that evidence is never ‘neutral’.
2. **What is ‘policy’, and how can evidence benefit policy making?** Many frameworks for understanding the role of evidence in policy link to rational and linear models of policy processes such as the ‘policy cycle.’ These have been widely criticised in both theoretical and empirical studies for ignoring the messy realities of policy making. More recent models emphasise the non-linear nature of policy change, the importance of interactions between various networks of actors, and the role of power and politics in shaping evidence use. Psychological theories also stress the cognitive limits of rationality and the importance of mental models in shaping how we interpret evidence. However, definitions of policy quality considered in this review – such as those used by the UK Civil Service – retain close links to linear and rational models; or at least retain assumptions about the objectivity of knowledge and evidence interpretation which several theories discussed in this section challenge. The BCURE evaluation will need to navigate this tension, given its remit to measure improvements in policy quality as a result of BCURE interventions.
3. **What is ‘capacity to access, appraise and apply evidence’, and how do we ‘build’ it?** Recent empirically based definitions of capacity suggest that it is complex and multi-dimensional. Theories of complexity suggest the importance of considering whole systems and expecting non-linear change and feedback loops within EIPM capacity development interventions. Recent models of capacity suggest that building capacity for EIPM should involve much more than individual skill development, as it requires change at individual, interpersonal, organisational and institutional levels in relation to evidence access, appraisal, interpretation and use. Theories of adult learning provide insights into how individuals learn, which is important given the strong emphasis on training within the BCURE programme. For example, theories of andragogy and self-directed learning suggest several ‘key principles’ that may help inform EIPM training courses, and different schools of learning provide a diverse set of models for understanding the mechanisms that link training to individual behaviour change – including theories of self-efficacy and social learning.

This section examines the theoretical and conceptual literature around EIPM, drawing links between diverse ideas, models and frameworks in order to illuminate the underlying theory behind the BCURE programme.

Why consider theoretical and conceptual literature?

Readers wishing to dip straight into the primary evidence on EIPM should skip to [Section 2](#) or [Section 3](#). However, we believe that there is a strong argument for understanding and learning from the diverse theories around EIPM, in order to strengthen current practice.

First, **recent literature is increasingly critical of evidence on EIPM for its failure to take account of theory**. For example, the authors of a recent systematic review on enablers of and barriers to EIPM criticise researchers for failing to make use of rich theoretical insights from policy studies, or make explicit the models of research and policy change assumed in research (Oliver, Lorenc, et al. 2014). Similarly, EIPM has been criticised for viewing policy as purely rational and instrumental, failing to consider ‘the universe of policy discourse and practice’ or to acknowledge the role of normative beliefs about how evidence *should* be used in policy making (du Toit 2012; Wesselink et al. 2014). Failing to attend to the theoretical literature is likely to have an impact on programme effectiveness. For example, many EIPM interventions (including those discussed in [Section 3](#)) implicitly invoke linear models of policy change, which the evidence discussed below suggests do not always reflect the reality of policy processes. Building theoretical insights into interventions can help practitioners avoid common traps and design programmes that are more likely to lead to change.

“Failing to attend to the theoretical literature is likely to have an impact on programme effectiveness.”

Second, **recognising the theoretical and conceptual underpinnings to EIPM is particularly important for a realist evaluation**. The BCURE realist evaluation aims to open up the ‘black box’ between interventions and outcomes, in order to understand what it is about the intervention that leads to (or does not lead to) change in different contexts (Pawson & Tilley 1997). Theoretical models help to signpost and predict outcomes that may be expected from EIPM capacity development interventions, as well as the mechanisms through which they lead to change. Therefore, drawing on the rich conceptual literature around EIPM will allow the BCURE evaluation team to develop and test theories about how BCURE projects contribute to (or fail to result in) the outcomes in the Theory of Change.

Finally, EIPM is full of abstract theoretical concepts – including ‘evidence’, ‘policy’ and ‘capacity’. These terms can be, and are, interpreted in very different ways, which **hinders attempts to synthesise knowledge and distil evidence about what works** (McCormack et al. 2013). This section is used to help the BCURE evaluation team develop transparent definitions of these concepts, which are grounded in existing thinking and will help make sense of the primary data collected through the evaluation.

The theory behind the BCURE programme

The overarching theory of the BCURE programme is depicted in the programme Theory of Change described in the Background section above. It can be summarised as follows:

Developing the capacity of decision makers to use research evidence (through building knowledge, skills, commitment, relationships and systems at individual, interpersonal, organisational and institutional levels) will

allow them to access, appraise and apply good quality evidence more effectively when forming policy. This will improve the quality of policies, ultimately benefitting more poor people.

Many of the EIPM capacity development interventions considered in [Section 3](#) implicitly share this theory, or something similar. Underpinning it are a number of assumptions about the nature of evidence, policy making and capacity development, summarised in the following three questions:

1. What is 'research evidence', and what makes it 'good quality'?
2. What is 'policy', and how can evidence improve its 'quality'?
3. What is 'capacity to access, appraise and apply evidence', and how do we 'build' it?

This section attempts to shed light on these questions through drawing on a range of theories from a variety of thematic fields – including international development, health, political science, and psychology.

A brief background to 'evidence-informed policy' and the nature of the evidence base

Calls for 'evidence-based policy' go back at least 50 years (Wesselink et al. 2014). Demands for policy to be 'informed by evidence' are often driven by a growing focus on the need for robust decision making, accountability to funders, and pressures to ensure taxpayers' money is spent on policies that 'work'. The rise of EIPM in UK government discourse is associated by several writers with the modernising agenda of the New Labour government when it came to power in 1997 (Smith & Joyce 2012; du Toit 2012; Broadbent 2012). Some writers argue that this helped spread the concept of EIPM to the international development field and, consequently, the agendas of several low and middle-income countries through the influence of DFID (du Toit 2012; Broadbent 2012). There is also an established movement for evidence-based medicine in public health, including calls by the World Health Organization (WHO) for an 'evidence-based approach to health promotion and practice' (Smith & Joyce 2012).

These influences among others have inspired a growing and interdisciplinary literature on EIPM, spanning a number of fields including international development, health, public administration, education and management. A systematic review from the health field recently concluded that 'evidence-based policy and practice, knowledge translation, and related concepts have become touchstones across a vast range of disciplines – almost sub-disciplines in their own right, with canons and conceptual toolkits of their own' (Oliver, Lorenc, et al. 2014).

There are a number of variants of the term 'evidence-informed policy', in the literature, including 'evidence-based policy' (Oliver et al. 2014), 'evidence-based medicine' (Yost et al. 2014), and 'evidence-based decision making' (Tang et al. 2005). Although these terms are not entirely synonymous, for the sake of simplicity this section groups them under the common label 'EIPM'.

Limitations of this section

Given the large and interdisciplinary nature of the theoretical literature on EIPM, this section cannot claim to provide a full and systematic summary of all relevant evidence. Choices about literature to include were guided by the BCURE Theory of Change (see the [Methodology](#) section above). The Theory of Change was developed based on the experience and knowledge of the BCURE evaluation team and therefore (explicitly and implicitly) drew on a number of the EIPM frameworks and models discussed below. As such, this section does not claim to provide a neutral overview of the theoretical literature. Rather, it aims to further articulate the assumptions underpinning the programme Theory of Change, and highlight some of the theories that can potentially add value to the BCURE evaluation – as well as providing an accessible overview of some of the main ideas and debates in the field.

1.1. What is 'research evidence', and what makes it 'good quality'?

The BCURE programme understands research evidence in a broad sense, to include published academic research papers, statistical databases, 'established' (i.e. widely debated and accepted) policy papers and positions, and evaluation findings (of sufficient quality and rigour) (DFID 2013a). Implicit in this definition is the idea that research evidence is based on particular *methods*, which are 'scientific, independent, academic, rigorous, subject to validation and open to critique' (Broadbent 2012).

'Research evidence' is just one type of evidence required for policy making. There is widespread agreement in EIPM literature that there are many types of non-research evidence important to policy making processes (see e.g. Broadbent 2012; Jones 2009; Sutcliffe and Court 2005), including:

- Process and practice knowledge concerning how to implement programmes or policies, for example based on organisational and systems data.
- 'Tacit' knowledge – the unwritten, unspoken knowledge held by individuals based on their experiences.
- Critical and reflective knowledge, relating to values and ethical commitments within a society.
- Communal knowledge, for example about what counts as 'common sense' or 'tradition' in a community or culture.
- Public opinion and other types of citizen knowledge.

Several sources suggest that policy makers view 'evidence' for decision making as incorporating some or all of these categories, as well as research evidence. For example, the UK's Department for Environment and Rural Affairs (Defra) has adopted a wide definition of evidence, incorporating research, statistical data and evidence from citizen knowledge (Shaxson 2014). Similarly, a study of the use of research evidence in four African policy debates found that 'narrow "Western" understandings of research-based evidence fail to account for much of the evidence actually used in the policy debates studied, with practical and communal evidence often taking centre stage' (Broadbent 2012).

There is some agreement over what counts as 'good quality' evidence, but 'evidence hierarchies' are controversial. Evidence hierarchies explicitly rank different research approaches and methods according to their relative authority (Evans 2003). They often place randomised experiments (and systematic reviews of them) at the top, with observational studies accorded much lower credibility (Nutley et al. 2002). Evidence quality frameworks or criteria often do not explicitly rank research methods in this way, but instead provide criteria to assess the methodology and design of primary studies – through examining factors such as transparency, reliability, validity, appropriateness and cogency. Quality criteria also often refer to the 'size of the evidence base', underpinned by the assumption that studies can be 'added up' to generate more reliable findings. This implies the importance of systematic reviews and other types of evidence synthesis (Davies 2013).

Hierarchies and quality frameworks are particularly well developed and widely used in the health field; for example the GRADE approach used by the UK National Institute for Health and Care Excellence (NICE 2014). Several sets of evidence quality criteria also exist within the international development sector (e.g. DFID 2014a; IMF 2003; USAID 2012).

However, several commentators in the EIPM literature express concern that evidence hierarchies and quality criteria unfairly downgrade qualitative data, particularly data collected through methods such as ethnography. This tends to affect social science evidence, as well as privilege research evidence over the other types of knowledge discussed above (Sutcliffe & Court 2005; Nutley et al. 2002; Boswell 2014). The role of evidence hierarchies is also beginning to be questioned in the health field – the UK’s National Institute of Health and Care Excellence (NICE) holds a ‘sceptical view of the untargeted use of formal hierarchies’, arguing that ‘the appropriateness of the evidence to the question is more important, not its place in any such hierarchy’ (Ruiz & Breckon 2014).

Research evidence is not neutral. Several writers from the public administration and international development fields suggest that ‘evidence’ (including ‘research evidence’) is not a neutral category. First, Broadbent (2012) points out that research does not take place in a vacuum – it is commissioned, designed, framed, conducted and communicated by people with their own ideas about what is important and what is not, and their own beliefs and assumptions about the world and the topic they are researching. The evidence that is available on an issue will therefore always at least partly reflect the existing views and beliefs of researchers and research commissioners.

“Research does not take place in a vacuum...”

Second, several sources suggest that evidence rarely (if ever) points clearly to an optimal decision, implying that debate and contestation over what evidence means and how it should be used is inevitable. Evidence on a given topic often exists in huge quantities, spanning multiple academic fields, and providing a huge array of (often contradictory) insights (du Toit 2012). This is particularly true in many areas of international development, where issues are complex and contested and the evidence base is often very small – for example, evidence on conflict and fragile states (Waldman 2014). Even ‘gold standard’ randomised control trials only provide an insight into whether a particular intervention worked in a specific context, requiring careful assessment in order to decide whether findings can be applied elsewhere (Pritchett & Sandefur 2013). Systematic reviews synthesise findings from primary sources in a rigorous way, but often gloss over important features of context – a crucial consideration in international development decision making (Mallett et al. 2012). Evidence therefore cannot ‘speak for itself’ – all evidence requires interpretation in order to assess its relevance to a particular policy process or decision (Parkhurst 2014; Davies 2013; Wesselink et al. 2014).

Summary and implications: It is widely agreed that research evidence is **just one type of evidence** required for policy. ‘Evidence hierarchies’ can be helpful guides to commonly agreed standards of ‘evidence quality’ (such as validity and reliability); but they should be **used with caution**, as *appropriateness* of evidence may be more important than position on a generic evidence hierarchy. Finally, several sources suggest that **evidence is not neutral** – firstly because it reflects pre-existing views and beliefs of researchers and commissioners, and secondly because it rarely points to an obviously optimal solution, implying that contestation over its meaning is inevitable.

Based on this evidence, we recommend that: the BCURE evaluation should be conscious of the interplay between research evidence and other forms of knowledge, the appropriateness of evidence used by decision makers as well as its quality, the question of how far available evidence reflects the existing views and beliefs of researchers and commissioners, and finally the ways in which evidence is interpreted, debated and contested in decision making processes.

1.2. What is 'policy', and how can evidence benefit policy making?

This section examines a diverse range of theories and models within EIPM literature, which help to articulate the ways in which evidence is used in (and can benefit) policy making. These theories are largely not mutually exclusive – Jones et al. (2009) argue that 'the knowledge-policy interface is too complex to encapsulate in any single framework'. However, this section demonstrates that recent thinking on EIPM has moved away from some theories (such as rational and linear models of how evidence is used in policy) and towards others (such as theories acknowledging the central role of power and politics in policy making).

This review focusses on 'public policy,' understood as 'a deliberate plan of action to guide decisions and achieve desired outcomes...adopted and implemented by government actors, which affects or is visible to the public' (Jones 2009). The review adopts a broad definition of public policy:

- Incorporating a wide range of **activities**; including the *processes* of decision making, the *decisions and actions* (written, spoken and implied) taken during and as a result of these processes, and the *implementation* of decisions and what happens as a result (Hallsworth et al. 2011; Jones 2009; Cloete & De Coning 2011; Dunn 2012).
- Involving a broad range of **actors**, including local and national bodies (e.g. government ministries, local government departments); parastatal and semi-autonomous bodies; the legislature; and non-state actors including the media, civil society, the general public, the private sector and international donors (Newman et al. 2012).

1.2.1. Theories of policy processes and the role of evidence in decision making

Historically, EIPM has been associated with rational models of policy processes and knowledge transfer. There are many different ways of conceptualising the role of evidence in policy processes. Several writers within the development, public administration and health fields argue that EIPM has historically been associated with 'rational' models of policy change such as the **policy cycle** (Jones 2009; Hallsworth et al. 2011; du Toit 2012). The policy cycle model was first articulated by Lasswell (1977), and portrays a policy process as moving from defining a problem (agenda setting) through to policy formulation, selecting a preferred solution, designing the policy, implementing and monitoring it, and finally evaluating it, with the results fed back into the next round of the policy cycle.

Models of EIPM that are based on the policy cycle depict evidence as providing neutral inputs at each point in the cycle, which improve policy incrementally and according to logic and reason (Jones 2009). An example includes Greenhalgh's (2003) model of the six-stage evidence-based approach to healthcare. There are close links between these models and **instrumental frameworks** of evidence use in policy processes; which depict research findings as being consciously and directly applied by actors to shape policies, processes, or further research (Weiss 1982) (see Box 1).

Guidelines from the UK Civil Service on the role evidence should play in UK policy processes are clearly aligned with these rational and instrumental theories. Given the potential influence of these frameworks on DFID policy processes (and subsequently the thinking behind the BCURE programme), they are worth considering here. The Modernising Government White Paper of 1999 and the 2010 Policy Skills Framework articulate the ways in which evidence is expected to influence UK policy processes, resonating clearly with the policy cycle:

- Evidence helps **define and frame issues**, ensuring 'the problem' is accurately articulated.
- Evidence helps **articulate options and develop solutions to problems**, enabling questioning of established ways of doing things, and learning about what has worked and not worked elsewhere.

- Evidence allows **different policy options to be assessed** for issues such as cost-effectiveness, risk and benefits, and potential impacts – helping work out which option is the most appropriate in a particular situation.
- Evidence helps **demonstrate whether a policy has been effective or not**, and understand how a policy has affected different groups of people – helping to inform decisions about what to do differently in future. (Cabinet Office 1999; Hallsworth & Rutter 2011; UK Civil Service 2010).

Shaxson (2014) provides an example of how these guidelines play out in practice within the UK Civil Service. The UK's Department for Environment, Food and Rural Affairs used the policy cycle model to frame five 'big questions' for policy teams to consider as part of the department's Evidence Investment Strategy – including 'Where are we now?' (how evidence is used to understand the context); 'Where are we going?' and 'How do we get there?' (how evidence is used to understand drivers and trends, and identify solutions to problems), and 'How well did we do?' (how evidence is used to monitor and evaluate progress and impact).

However, the utility of rational and policy cycle models has been widely questioned.

The policy cycle is widely criticised in recent literature on EIPM for its assumptions regarding the rational and problem-solving nature of policy processes, and for ignoring the messy reality of policy making (Jones 2009; Morton 2012; Hallsworth et al. 2011). For example, Hallsworth et al. (2011) examined the perceptions of UK civil servants and ministers, finding that 'virtually every interviewee dismissed policy cycles...as being divorced from reality.' Evidence from lower-income contexts similarly questions the utility of the policy cycle; with several empirical studies (discussed further below and in [Section 2](#)) demonstrating that the role of evidence in policy processes bears limited resemblance to the stages in linear and rational models (e.g. Broadbent 2012; du Toit 2012; Hunsmann 2012). Weiss also presented empirical evidence to suggest that instrumental use of evidence (see Box 1) is 'rare, particularly when the issues are complex, the consequences are uncertain, and a multitude of actors are engaged in the decision-making process' (Weiss 1980).

The majority of theoretical papers on EIPM reviewed for this paper accept the premise that evidence is just one part of a patchwork of factors influencing policy decisions; alongside political and strategic considerations, expert opinion, stakeholder and public pressure, and resource constraints (e.g. Davies et al. 2012; Newman et al. 2012; Sutcliffe and Court 2005; Jones et al. 2013; Crewe & Young 2002). In recent years, the literature on EIPM has moved away from linear and rational models, and towards models which emphasise the role of politics and power (as opposed to deliberative reason and logic) in determining how evidence influences policy processes.

Box 1. Models depicting the role of evidence in policy processes (see Weiss 1979, 1982)

'Instrumental' model: specific research findings are consciously applied to influence something concrete, such as a policy, programme, or other piece of research.

'Enlightenment' model: concepts and theories from research gradually 'percolate' through society, 'coming to shape the way in which people think about social issues'.

'Interactive' model: policy processes involve 'a disorderly set of interconnections and back-and-forthness' between different groups.

'Political' model: research is used to lobby for particular interests.

'Tactical' model: research is used to delay decisions, deflect criticism, or enhance prestige.

“Evidence is just one part of a patchwork of factors influencing policy decisions...”

The **'pluralism and opportunism' model of evidence-use challenges the rationality of the policy making process**, emphasising that policy making is often messy and opportunistic and requires pragmatic decisions by a range of actors in the face of uncertainty (Jones 2009). The pluralism and opportunism model relates to a number of political science theories that emphasise the non-linear nature of policy processes. For example, **incrementalism** – or the 'science of muddling through' – suggests that policy making evolves over time, through small, incremental steps in which values and empirical analysis are closely intertwined. Analysis of evidence is 'drastically limited' by time, resources and the limits of human rationality, meaning that possible outcomes and alternatives to decisions are inevitably neglected (Lindblom 1959). **'Streams'** frameworks focus on the policy windows of opportunity that can open up around major events, providing opportunities for evidence to feed into the 'problem stream' (which specifies which issues are significant) or the 'policy stream' (the ideas on the table that are being considered to solve identified problems). **'Spaces'** models emphasise particular places or moments where policies can be influenced – including 'closed spaces' (where policy is made by a small set of actors behind closed doors), 'invited spaces' (where civil society or other actors are given a platform to introduce new ideas) or 'claimed spaces' (where less powerful groups create spaces, or claim them for themselves) (Jones 2009).

More radical models suggest that power is infused throughout the process of evidence production and use.

Jones argues that the pluralism and opportunism model of EIPM has recently begun to give way to a **'politics and legitimisation'** model, in which power and politics are held to be 'infused through the knowledge process, from generation to uptake.' In this model, evidence is understood to 'reflect and sustain existing power structures', actively used by policy actors 'in processes of contest, negotiation, legitimisation and marginalisation' (Jones 2009). Theories on the role of power in evidence use can be summarised in terms of three 'interlocking types of relations' (Jones 2009; Sumner et al. 2011):

1. Power can be understood in terms of **actors and networks** – competing interest groups working together or against one another to advance their interests. Knowledge and evidence is used consciously by these groups to win political battles; as ammunition, or tactically to support decisions or stall action. This links to Weiss's **political model** of evidence use (see Box 1 above), in which research is used to lobby for particular interests; while in a **tactical model** research is used to delay decisions, deflect criticism, or enhance prestige (Weiss 1979). Both of these fall under the umbrella of **'symbolic' use of evidence**, in which evidence is used to legitimise a decision that has already been made; for example a politician using research to justify a policy they would have created anyway (Weiss 1982).
2. Power can also be understood in terms of formal and informal **'institutions'** – which include organisations, socioeconomic environments, and patterns of behaviour, which shape the 'rules of the game'. They define who is able to participate in decision making, and they shape the strategies, beliefs and actions of individuals within it. Issues such as the extent of democracy and media freedom and the level of government centralisation all generate opportunities and constraints, and affect future decisions. Knowledge is 'translated' in ways that fit with prevailing institutions, which may keep particular ideas off the agenda or embed others in law.
3. Finally, theories of **discourse** hold that power and knowledge are inextricably intertwined. 'Knowledge' in the form of concepts, metaphors, rules of logic and ideas which may be taken for granted or seen as 'common sense' in a particular society determine what policy makers can understand and articulate, and therefore the policy ideas they are likely to adopt. Theories of discourse can be linked to Weiss's **enlightenment model** of research use (see Box 1 above): in which concepts and theories from research gradually 'percolate' through society, 'coming to shape the way

in which people think about social issues'. Policy makers may not be able to point to a specific study that influenced a decision, but research can sensitise them on new issues, turn non-problems into problems (and vice-versa), and redefine the policy agenda (Weiss 1979).

Although the theoretical and conceptual literature on EIPM considered for this review generally discounts rational models of policy processes in favour of theories recognising the centrality of power and politics, this is not always reflected in EIPM programmes and practice. As discussed above, UK Civil Service guidelines and frameworks of evidence use still link strongly to the policy cycle model. Authors of one recent systematic view similarly found that policy cycle models are still 'common currency' within health policy and other fields (Oliver, Lorenc, et al. 2014). The primary empirical evidence base discussed in [Section 3](#) also makes limited reference to the political models and theories discussed above, and much of it appears implicitly based on the assumption that evidence use is to some extent rational and linear.

Some authors see the policy cycle as a useful starting point or heuristic device, while acknowledging that it does not reflect the realities of policy making (Sabatier & Jenkins-Smith 1993). Others point out that there are specific situations in which research *can* contribute to change in rational and linear ways. For example, Nutley et al. (2007) conceptualise research impact on a spectrum, ranging from more instrumental applications (in which research is used directly to inform practice and policy change) to more conceptual uses (in which research shifts knowledge, understanding and awareness of an issue). However, Hallsworth et al. (2011) question whether it is really acceptable to continue using the policy cycle as a model for understanding political processes, claiming it represents an 'unrealistic ideal' and a 'policy myth'. Overall, the literature discussed in this section suggests the need for the BCURE evaluation to look beyond rational and linear models of policy processes and evidence use, while recognising their continued application within EIPM practices and processes.

Summary: Many frameworks for understanding the role of evidence in policy and in improving policy quality link to the 'policy cycle' model. This portrays policy making as a rational and linear process, in which knowledge provides instrumental and neutral inputs at defined stages. The utility of this model has been **widely criticised for ignoring the messy realities of policy making**, but is still an important influence on EIPM thinking.

More recent models relating to evidence use in policy processes place **a greater emphasis on the role of power and politics in shaping the ways in which evidence is used in policy making**; for example the theories of incrementalism, policy 'spaces' and policy 'streams'. More radical models suggest that **power is infused throughout the process of evidence production and use**. In these theories, power – in terms of actors and networks, institutions, and discourse – is understood to not only influence how evidence is used but how it is understood and articulated in different contexts.

Based on this evidence, we recommend that: the BCURE evaluation team make limited use of rational and linear models of policy change and knowledge translation, and look beyond instrumental theories of evidence use. The evaluation should explicitly consider the role of power and politics (in terms of actors and networks, institutions and discourse) when studying how evidence is used in BCURE contexts.

1.2.2. Theories relating to researcher-policy relationships and networks

Linked to but distinct from the models discussed above are a further set of theories regarding the relationships between researchers and policy makers, and the impact of these relationships on evidence use in policy processes.

In the **'two communities'** model, policy actors are viewed as having different priorities, languages and practices from those of researchers (Brown 2012). This assumes that there is a 'gap' between researchers and policy makers that needs to be 'bridged' in order to get policy makers to use evidence in decision making (Innvaer et al. 2002). The authors of a recent systematic review argue that this assumption underpins a large amount of literature, particularly from international development and health, on research dissemination, uptake and knowledge 'translation' (Oliver, Lorenc, et al. 2014).

The **'supply-demand'** paradigm similarly emphasises the factors that should be considered by those 'supplying' research, in order to get it used by decision makers on the 'demand side' – for example, the role of research dissemination and communication strategies. This model underpins the BCURE programme, which is designed to address 'demand-side' constraints in the form of capacity gaps among decision makers to use evidence effectively (Newman et al. 2012). Similarly, models of **'push and pull'** emphasise the links and exchanges between research producers and research users, and suggest that researchers need to make active efforts to 'push' their findings into the policy maker sphere (Brown 2012).

These models all implicitly or explicitly conceptualise research producers and research users as two separate groups. In contrast, other models view the boundaries between these groups as blurred and indistinct. A secondary review found that the 'two communities' model is being replaced in the EIPM literature by a more 'dynamic and complex' view of the links between research and policy (de Vibe et al. 2002). Smith and Joyce argue that the 'two communities' paradigm is wrong to imply that research and policy communities are either distinct from one another or relatively homogeneous – as 'a variety of boundaries (epistemological, disciplinary and political) cut across professional differences' and affect how knowledge is understood and used (Smith & Joyce 2012).

In opposition to the **'two communities'** framework, a number of models portray evidence production and use as an interactive process. These are categorised by Best & Holmes (2010) as 'second generation' frameworks. Theories of **'policy networks'** emphasise that researchers, policy makers and other groups (such as members of civil society and the media) often work together across professional divides, bound by shared value systems, political interests or specific problems – and drawing on evidence in various ways to do so (Smith & Joyce 2012; Morton 2012). These emphasise that – rather than existing in separate communities or on opposite sides of a supply-demand divide – civil society, the media, researchers and decision makers may all play a role in commissioning, producing and using research to influence policy (Best & Holmes 2010). These network models relate to Weiss's **interactive model of research use** (see Box 1 above), which emphasises that policy development processes involve 'a disorderly set of interconnections and back-and-forthness' between different groups (Weiss 1979).

'Issue networks' are one type of policy network, in which different actors with diverse interests and values come together around particular problems. For example, an issue network consisting of civil society, the media, the general public and government actors formed around the issue of sex-offender policy in the UK in 2000 - suggesting that key actors in the government, civil society and the media were all both generators and users of various forms of evidence in a national debate about sex-offender community notification in 2000. The authors argue that this contradicts the 'two communities' theory, as actors formed a 'kaleidoscopic picture ... [which] defies description as two separate groups' (Jung & Nutley 2008). **'Policy communities'** represent another type of policy network, consisting of groups of specialists both inside and outside government who play a role in developing, testing and refining policy ideas. For example, Gabbay et al. (2003) present a case study of 'communities of practice' (CoPs) in the UK National Health Service, designed to bring together different people from various walks of life and professional backgrounds to achieve a policy task.

Policy network models are reflected in a range of ideas within recent EIPM theoretical literature – including ideas of **knowledge ‘co-production’** and collaboration, which depict actors from the policy and research worlds as working together to interpret and ‘construct’ evidence to inform decision making (see e.g. Jones 2009; Oliver 2012). Empirical evidence of these processes is discussed in a systematic review by Orton et al. (2011) examining the use of evidence in public health decision making. This review found evidence from several studies that ‘rather than being a neutral tool with which to inform decision making, evidence was in fact *constructed* through professional practice, and contributed to the construction of professional identity’. Gabbay et al. (2003) also find empirical evidence of knowledge co-construction within policy networks, discussed further in [Section 3.2](#).

Summary: The ‘two communities’ model views policy actors and researchers as two distinct groups, with different priorities, language and practices. However, ‘second generation’ models of knowledge transfer depict **evidence production and use as an interactive process**. Rather than viewing researchers and policy makers as existing across a distinct supply-demand divide, theories of ‘policy networks’ suggest that government and non-government actors often work together and draw on evidence to shape policy in a variety of ways. Some empirical evidence also suggests that policy networks play a role in ‘co-producing’ and ‘constructing’ knowledge to inform decision making. This has clear links to the evidence presented in [Section 1.1](#) suggesting that research evidence is not neutral, but inevitably involves debate and contestation over what findings mean and how they should be used.

Based on this evidence, we recommend that: the BCURE evaluation draw on interactive and network theories to consider how different actors across and beyond traditional research/policy boundaries affect the access, appraisal and use of evidence. It would also be interesting to consider whether and how networks within the BCURE programme interpret and *construct* knowledge, and the impacts this has on decision making.

1.2.3. Theories relating to cognitive processes

This section presents a final set of theories from the psychological literature, where evidence relating to cognitive processes and mental models provide insights into the interpretation and use of evidence in policy processes. A detailed summary of this large evidence base is beyond the scope of this review, but this section provides a very brief introduction to some of the evidence particularly relevant to EIPM thinking.

Cognitive theories and models from psychological research emphasise the importance of mental models, contextual cues and social norms, which affect how people interpret evidence. Psychological theories are not widely referenced in the literature on EIPM; although they have long been acknowledged in business and management literature (for example see the website changingminds.org). However, theories from the psychology field are highly relevant to understanding how policy makers use and understand evidence in decision making. The 2015 World Development Report (WDR) synthesised some of this evidence, challenging the assumption inherent in classical economics (and in the EIPM literature based on the rational model discussed in [Section 1.2.1](#) above) that people are ‘rational actors’ who weigh up costs and benefits and use this to take a reasoned view about what to do. Instead, ‘people are malleable and emotional actors whose decision making is influenced by contextual cues, local social networks and social norms, and shared mental models’ (World Bank 2015b). The WDR points out several principles of human cognition that are relevant to EIPM, including:

- **People ‘think automatically’.** They process the huge amounts of information they have to assimilate by simplifying problems, filling in missing information based on assumptions about the world, and assessing situations ‘based on associations that automatically come to mind and belief systems that

we take for granted'. Thinking automatically contrasts with the assumption implicit in rational models of EIPM, that people make policy decisions 'deliberatively' by carefully weighing up alternative options and making a balanced, reasoned choice.

- **People 'think with mental models'** which help them make sense of the world around them. Mental models include social meanings, norms, concepts, categories, identities, stereotypes and worldviews drawn from individuals' cultures and communities. A survey of World Bank officials conducted for the 2015 WDR provides a clear example of how thinking with mental models can affect the appraisal of evidence. World Bank staff were presented with identical data in two different contexts and asked to identify the conclusions that best explained the data. The first context related to the effectiveness of skin cream, and the second to the question of whether minimum wage laws reduce poverty. Officials were *less* likely to get the answer right in the second context, in spite of their presumably greater knowledge of labour laws than of skin cream. The authors conclude that 'faced with a demanding calculation, they interpreted new data in a manner consistent with their prior views, about which they felt confident' (World Bank 2015b).

The World Bank case can also be understood as an example of '**confirmation bias**', the well-observed psychological tendency for people to disregard or disbelieve evidence that does not correspond with existing beliefs (Nickerson 1998). Another cognitive bias observed in the UK Civil Service is that of '**anchoring effects**', in which 'the first piece of information we receive irrationally governs our subsequent decisions' (Hallsworth et al. 2011). Finally, the UK Cabinet Office has official guidance on how to avoid '**over-optimism**' bias – the 'demonstrated, systematic, tendency for project appraisers to be overly optimistic' in their estimations of costs, benefits, values and time profiles (Cabinet Office 2002). These biases are all well-established in the psychological literature, and are likely to affect the ways individuals understand, interpret and appraise evidence in policy processes.

Summary: Cognitive theories and models from psychological research are highly relevant to EIPM debates, as they emphasise the importance of mental models, contextual cues and cognitive biases on shaping the ways people think. These reinforce theories and empirical evidence from political science, suggesting **the powerful influence of non-rational cognitive processes and pre-existing beliefs on shaping individuals' understanding and interpretation of evidence.**

Based on this evidence, we recommend that: The BCURE evaluation should explicitly recognise the role of cognitive processes and mental models in shaping individuals' understanding and interpretation of evidence – for example in relation to training and individual behaviour change.

1.2.4. How does evidence use contribute to policy quality?

Central to the overarching BCURE theory is the assumption that research evidence makes policy 'better quality' than it would have been otherwise. Broadbent argues that 'evidence-based policy has become a byword for policies considered scientifically sound, objective, long term in focus and – implicitly – "better" than policies not based on research-based evidence' (Broadbent 2012). Wesselink et al. (2014) similarly argue that EIPM 'as prescription' has filtered into policy making in certain high-income countries including the UK; where 'using evidence' is now one of the core principles in the UK Civil Service model of 'professional policy making' (Hallsworth et al. 2011). However, as discussed in [Section 1.2.1](#), the standards and guidelines to evidence use adopted by the UK Civil Service (which imply that good quality policy uses evidence to frame issues; articulate and develop solutions; weigh up policy options; and demonstrate policy effectiveness) are largely based on rational and linear conceptions of policy processes, which the majority of EIPM sources

examined for this review reject. How can the idea of policy quality be reconciled with the theories discussed above, which suggest the fundamental importance of power, politics, networks and cognitive influences on evidence use?

Newman et al. (2012) offer a more nuanced understanding of the role of evidence in promoting policy quality; implying that good quality policy is that which draws on *'a broad range of research evidence; evidence from citizens and other stakeholders; and evidence from practice and policy implementation as part of a process that considers other factors such as political realities and current public debates.'* The authors explicitly align this definition with the 'pluralism and opportunism' model outlined in [Section 1.2.1](#); which challenges the rationality of the policy making process and emphasises that policy making is often messy and opportunistic, but still 'retains assumptions about the potential for research to contribute to better policy formulation.' This definition also retains an assumption that evidence is – at least to some extent – an expression of objective fact, which policy actors can consider alongside other factors in order to make optimum decisions.

Several of the theories discussed in this section pose a challenge to this latter assumption. [Section 1.1](#) articulated arguments that evidence does not 'speak for itself' – frequently large in its scope and contradictory in its findings, all evidence requires interpretation. For evidence to express (even to some extent) objective fact, different actors must therefore be expected to come to the same conclusions when they interpret the same evidence; but the 'politics and legitimisation' model discussed in [Section 1.2.1](#) holds that power influences not only how evidence is used but also how different actors are able to understand it. Psychological theories similarly suggest that the people naturally interpret evidence in line with existing beliefs and values, rather than through logical processes of deliberative decision making. Finally, theories of policy networks suggest that networks of different actors play the role of *co-constructing* knowledge as well as analysing and utilising it.

This review does not aim to demonstrate the 'truth' of these theories. However, they provide useful insights and lenses to help the evaluation examine the role of evidence in policy processes, and there is some empirical evidence to support them. As part of the remit of the BCURE evaluation is to examine and measure the impact of BCURE interventions on policy quality, this suggests that the evaluation must navigate a tension between the theoretical literature on EIPM, and existing understandings of policy quality. This may require the evaluation to adopt an iterative approach to the measurement of 'policy quality;' beginning with existing standards based on the policy cycle model and Newman et al's (2012) 'pluralism and opportunism' definition above; but looking to further develop these standards in light of the primary evidence collected, and taking the conceptual literature discussed in this section into account.

Summary: Existing definitions of policy quality often link to rational and linear conceptions of policy processes, which the majority of EIPM sources examined for this review reject. Newman et al (2012) present a less rational and linear interpretation of (quality) evidence-informed policy; understood as that which considers 'a broad range of research evidence; evidence from citizens and other stakeholders; and evidence from practice and policy implementation as part of a process that considers other factors such as political realities and current public debates.' However, this definition retains implicit assumptions about the objectivity of evidence, which several theories discussed in this section challenge. There is therefore a tension between more recent thinking within the EIPM theoretical literature, and existing definitions of policy quality. The BCURE evaluation will need to navigate this, given its remit to measure improvements in policy quality as a result of BCURE interventions.

Based on this evidence, we recommend that: The BCURE evaluation should adopt an iterative approach to measuring policy quality; beginning with existing standards discussed in this section but aiming to further develop these standards in light of emerging primary evidence and the conceptual literature.

1.3. What is ‘capacity’ for EIPM and how do we ‘build’ it?

The OECD-DAC define capacity as ‘the ability of people, organisations and society as a whole to manage their affairs successfully’ (OECD-DAC 2006). This and other similar definitions understand **capacity as a multi-layered set of processes, incorporating the idea of resilience or sustainability** – the ability of a society or sector to *continue* to develop important skills, behaviours, networks and institutions into the future (Kaplan 1999; Ubels et al. 2010).

1.3.1. Theories of capacity development

Support for capacity ‘building’ or ‘capacity development’ can be viewed as ‘what outside partners – domestic or foreign – can do to support, facilitate or catalyse capacity development and related change processes’ (OECD-DAC 2006). A recent review conducted by Itad for the Global Environment Facility distinguished between ‘traditional’ approaches to capacity development, which tended to focus rather narrowly on building the skills needed to conduct a specific task, and more recent interventions that hold the more nebulous aim of improving the ability of a society or sector to continue to develop necessary skills, behaviours, networks and institutions that enable communities to adapt and self-renew into the future.⁶

Capacity development is about more than ‘skills’. Several leading behaviour change researchers argue that behaviour change requires a combination of positive intention, skills and absence of environmental constraints (Fishbein & Middlestadt 1994). The Kirkpatrick training evaluation model considers all these elements in its ‘four levels of training evaluation’ (Kirkpatrick Partners n.d.).

- *Level 1 – Reaction:* the satisfaction of participants with a training activity; their degree of active involvement in and contribution to the training process; the relevance of the learning to participants’ day-to-day jobs.
- *Level 2 – Learning:* participants’ knowledge, skills, attitude, confidence and commitment – before and after the training.
- *Level 3 – Behaviour:* participants’ application of the training when back on the job: the extent to which learning has been applied in the policy makers’ native environment where factors beyond their control may constrain or support implementation.
- *Level 4 – Results:* the effect of the training within the participants’ organisation or wider environment.

Capacity development can be understood as ‘complex.’ Recent definitions of capacity also increasingly incorporate the concept of *complexity* (e.g. Baser & Morgan 2008). Complexity theories hold that that change in ‘complex’ settings does not happen in a rational, linear way that can be predicted in advance. Instead, individual behaviours and interactions between people combine and amplify one another in diverse and sometimes surprising ways, with consequences that no one could have predicted (Smith & Joyce 2012; Ramalingam 2013). Various elements of the complexity literature have implications for studying capacity development in the context of EIPM (Smith & Joyce 2012; Morton 2012; Ramalingam 2013):

⁶ The review is unpublished, but findings are discussed in a series of blog posts here: <http://www.itad.com/knowledge-and-resources/capacity-development-2/>

- **Complex systems consist of many components which interact in dynamic ways.** The behaviour of a complex system (e.g. a government ministry or executive) results from interaction between its ‘parts’ (the individuals working for that organisation or institution). These interactions give rise to *emergent* properties of the system, which are more than the sum of the individual behaviours.
- **This emphasises the need to analyse whole systems, rather than breaking them into constituent parts.** In the context of studying capacity for EIPM, a system cannot be understood by reducing it to the individuals within it and examining their individual decisions and behaviours around accessing, appraising and applying evidence. Instead, complexity theories suggest that EIPM can only be understood by studying whole systems, consisting of multiple, interacting relationships and the variety of actors involved in policy processes. This suggests the need for ‘holistic approaches to understanding change, such as case study approaches, action research or embedded researcher models’ (Morton 2012). Complexity approaches also link to the ‘policy network’ models discussed in [Section 1.2.2](#) above. For example, Morton (2012) argues that complexity theories encourage ‘a focus on networks of researchers and research-users utilising, reinterpreting and integrating knowledge with other knowledge within systems.’
- **Context is crucially important.** Complex systems are sensitive to initial conditions, which have long-term consequences. This suggests the importance of *context* and historic factors that enable and block change (Morton 2012). ‘Path dependency’ is therefore a feature of complex systems, in which historical decisions shape subsequent choices and present barriers to change (Abeyasinghe 2012).
- **Non-linearity and feedback loops in complex systems make it difficult to predict behaviour, and small actions can have big effects.** The non-linear nature of complex systems and the importance of ‘feedback loops’ (in which a specific change feeds back to either amplify or dampen further change) is likely to result in periods of significant, sudden change and periods of inertia (‘punctuated equilibriums’). Rather than policy change always happening ‘incrementally’ (Lindblom 1959), we therefore shouldn’t be surprised when research influences policy in ‘often unpredictable ways over various timeframes’ (Morton 2012) – for example where vast bodies of research have little impact, or when minor events suddenly lead to much higher research use.

“Complexity theories suggest that EIPM can only be understood by studying whole systems, consisting of multiple, interacting relationships and the variety of actors involved in policy processes.”

Thinking of capacity development for EIPM as a complex issue suggests the need to focus on the many influences on individual behaviour, the need to expect capacity change to be unpredictable and incorporate feedback loops, and the need to understand how networks and relationships affect capacity change.⁷

Capacity development for EIPM can be understood as ‘multi-dimensional,’ requiring change on four ‘levels’. The above insights from behavioural change research and complexity theories imply that multiple initiatives are needed to work together holistically over time to support and catalyse capacity development (FAO 2010; Capacity.org n.d.). The BCURE Theory of Change categorises capacity development interventions for EIPM into four ‘levels’ (drawing on Ubels et al. 2010; Baser & Morgan 2008):

⁷ Ibid.

1. **Individual change** includes individuals' development of skills and knowledge, but also includes the motivation, attitudes, commitment, values and personal incentives that affect individual behaviour. 'Skills' for EIPM as understood in the BCURE programme include the ability to search for and appraise evidence, as well as the ability to weigh evidence with other factors and use it to inform decision making. Individual change also includes the motivation, commitment, values and incentives that affect individual behaviour.
2. **Interpersonal and network change** refers to the relationships between individuals and groups, and how these influence evidence interpretation and use. For example, 'evidence champions' within an organisation might encourage colleagues to change their attitudes or behaviours around evidence use. This also incorporates change within formal and informal communities (or networks) of individuals or organisations – such as professional communities providing access to or syntheses of evidence, and informal groups within organisations united by particular knowledge interests or personal relationships.
3. **Organisational change** refers to change in the systems, policies and procedures, practices, culture or norms within an organisation, which support (or inhibit) evidence access, appraisal and application in decision making.
4. **Institutional change** refers to change in the wider operating environment of individuals or organisations. This includes change within civil society and the media, as well as broader social change (e.g. in culture, norms, collective beliefs, attitudes, values) and change in external influencing factors (e.g. global events, political and economic factors, donor influence), which affect the use of evidence.

1.3.2. *Theories on the characteristics of adult learners, and principles of adult learning*

The final set of theories considered below relate to *individual capacity change*, examining theories of individual learning. This level of change is singled out for consideration given its strong emphasis within the BCURE programme – all BCURE projects involve some type of teaching or training. Training activities are always, implicitly or explicitly, underpinned by theories and ideas about how people learn and put their learning into use, and will be important to help the evaluation team understand how training activities lead to (or do not lead to) change in different BCURE contexts. Some of the main concepts and ideas within this literature are explored below.

Unsurprisingly, **there is no single accepted model of adult learning**. Instead there are a 'mosaic of theories, models, sets of principles, and explanations' which attempt to explain how people learn. Two of the 'pillars' of adult learning theory are andragogy and self-directed learning (Merriam 2001), which both examine the characteristics of adult learners.

Andragogy is one of the most widely-known frameworks, contrasting adult learning (andragogy) with educating children (pedagogy). Andragogy holds that **adults are active and reflective learners, who learn best when engaged in the learning process and when they can put their learning into action**. They need to know why they are learning, what the goal is and whether they can achieve it, and they expect immediate relevance to what they can learn. Adults also bring their previous experiences and competencies with them when they are learning. When this is dismissed, the likelihood of learning decreases (Knowles et al. 2005).

Self-directed learning focuses on **the role of learning as part of adults' everyday life** – 'a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing

appropriate learning strategies, and evaluating learning outcomes' (Knowles 1975). Self-directed learning is held to be widespread; occurring as an ordinary part of adults' everyday lives; and systematic – not dependent on an instructor or a classroom (Tough 1967; 1971).

Key principles of adult learning based on these two theories: Some authors have drawn on ideas from andragogy and self-directed learning to distil 'key principles' of adult learning for those designing training courses (Bryan et al. 2009; Lyon et al. 2011):

1. Adults need to know why they are learning.
2. Adults are motivated to learn by the need to solve problems.
3. Adults' previous experience must be respected and built upon.
4. Adults need learning approaches that match their background and diversity.
5. Adults need to be actively involved in the learning process.
6. Adults need extended contact (rather than one-off training sessions) in order to assimilate learning.

Issues of power and autonomy: The theories of andragogy and self-directed learning have been criticised from some angles for being overly technical, context-free, and focusing largely on the *characteristics* of adult learners, ignoring issues of power and the possibility that self-directed learning may steer people towards simply conforming to predominant interests (Collins 1988). Freire's concept of 'conscientisation' is relevant here – emphasising the role of learning in developing the ability to *transform* the learner's reality (Freire 1972). Similarly, Brookfield emphasises the role of adult learning in helping adults understand the world and their own experiences *in their own terms*, as opposed to imposing ideas from the outside (Brookfield 1985).

Theories about how and why people learn

Smith (2003) categorises learning theories into four groups:

1. Behaviourist theories: the learning process is about changes in behaviour, stimulated by the external environment.

Behaviourist theories suggest that the purpose of education is to produce a desired behavioural change, and can be achieved through arranging the environment in such a way as to elicit the desired response. Learning is therefore something that can be measured and seen – the end-product of a process. The theory of **reinforcement** falls into this school, suggesting that a learner will repeat a desired behaviour if positive reinforcement is given in the form of material or non-material rewards (Dunn 2002). Many approaches to increasing EIPM through capacity development appear to be implicitly or explicitly based on behaviourist approaches, attempting to measure learning through observed behavioural change (see [Section 3](#)).

However, behaviourist approaches have been criticised as a 'blunt instrument'. For example they imply that learning must be observed through *change*. However, learning can also include less visible processes such as abstracting meaning and relating new knowledge to one's own experience or the wider world, or interpreting and understanding reality in a different way (Dunn 2002).

2. Cognitivist theories: whereas behaviourists focus on the environment, cognitivist theorists focus on learning as *internal mental processes* – such as insight, information processing, memory and perception.

Cognitive theorists emphasise the role of education in developing individual capacity and skills to *learn better*, for example by structuring the content of learning activities in particular ways.

Self-efficacy is an example of a cognitive theory that has implications for adult learning. Self-efficacy concerns people's beliefs about their capability to perform a particular task or handle a particular situation. This theory is based on the principle that individuals are more likely to behave in a particular way if they possess high self-efficacy; that is, performance and motivation are partly determined by how effective people believe they can be (Bandura 1977). This can result in 'self-fulfilling prophecies' – if a person is confident they will do well in something, they are more likely to try harder at it and therefore gain good results. Bandura argued that the most important source of self-efficacy is a person's *performance outcomes* – judgements of how they have performed at a given task previously. Self-efficacy can also be developed vicariously – if someone similar to a person succeeds, this can increase a person's self-efficacy (and vice-versa). Verbal persuasion, in the form of encouragement or discouragement, can also influence a person's self-efficacy. Empirical evidence suggests a link between self-efficacy, motivation and outcomes such as work attendance, productivity and future employment (Bandura 1988; Eden & Avirma 1993).

3. Humanist theories: the learning process is a 'personal act to fulfil potential', stimulated by a person's affective and cognitive needs.

Humanist theories hold that the purpose of education is to help people become self-actualised and autonomous. Andragogy and self-directed learning (discussed above) fall into this group, along with **facilitation theory**. This holds that learning occurs when the educator acts as a 'facilitator', establishing an atmosphere in which learners feel comfortable with new ideas and are encouraged to take responsibility for their own learning (Dunn 2002).

4. Social and situational theories: the learning process is one of interaction and observation in social contexts and relationships between people.

These theories hold that education is about promoting participation in communities of practice, in which conversation can occur.

Social learning theories are a sub-set of social and situational theories. There are many definitions, one emphasising that social learning works through 'people learning from observing other people', through *attending* to a behaviour, *remembering* it as a possibility, and then *rehearsing it* in practice (Smith 1999). Another definition suggests that social learning is a change of 'understanding' which *goes beyond* individuals, resulting in collective change at a network or societal level. This occurs 'through social interactions and processes between actors within a social network' (Reed et al. 2010). A more radical model is that of '**situated learning**' – in which learning is not seen in terms of the acquisition of knowledge by individuals but rather as a *process of social participation*. People join communities at the periphery, but as they become more competent they move to the centre of the community (Lave & Wenger 1991). This portrays learning as something that exists in the relationships between people, rather than as a 'possession of individuals that can be found inside their heads' (Murphy 1999).

Summary and implications: Recent theories and definitions of capacity emphasise that it consists of a multi-layered set of processes, which are about more than 'skills'. Capacity development can be understood as **complex** (requiring an understanding of whole systems, and interventions at different levels of these systems), and **multi-dimensional**, involving change at **individual, interpersonal, organisational and institutional levels**.

Theories of adult learning provide insights into **how individual-level capacity is developed**, which is important given the strong emphasis on training within the BCURE programme. There is no single accepted model of adult learning, but theories of andragogy and self-directed learning suggest several '**key principles**' that may

help inform EIPM training courses – for example, adults need to know why they are learning, and be actively involved in the learning process. Other learning theories emphasise issues of power and the role of learning in transforming the learners’ reality. Finally, behaviourist, cognitivist, humanist and social theories of learning provide a **diverse set of models for understanding the mechanisms that link training to learning** – including theories of self-efficacy and social learning which are further explored in [Section 3](#).

Based on this evidence, we recommend that: the BCURE evaluation should examine and measure capacity change at multiple different levels; viewing capacity for EIPM as a complex issue and recognising the importance of studying whole systems, considering context, and expecting capacity development and evidence used to be potentially unpredictable and involve feedback loops. It should also draw on the rich literature on learning theories to help understand what is happening within BCURE training activities to result in individual behaviour change.

1.4. Conclusions and implications for the BCURE evaluation

This section has provided an overview of some of the main theories and concepts within the EIPM and capacity development literature. The discussion was structured around three questions, which help to unpack the assumptions underlying the BCURE programme theory.

1. **What is ‘research evidence’, and what makes it ‘good quality’?** The literature emphasises the importance of other types of knowledge as well as research evidence, cautions against over-reliance on generic evidence hierarchies, and stresses that evidence is never neutral.
2. **What is ‘policy’ and how can evidence benefit policy making?** This review understands policy as a *deliberate plan of action to guide decisions and achieve desired outcomes*, encompassing policy processes, policy decisions and actions, and policy implementation. The rational ‘policy cycle’ model has largely been superseded in the theoretical literature by models emphasising the non-linear nature of policy change, the importance of interactions between various networks of actors, and the role of power and politics in shaping evidence use. Insights from psychological literature also emphasise the importance of mental models, contextual cues and social norms, which affect how people understand and interpret evidence. However, definitions of policy quality considered in this review – such as those used by the UK Civil Service – retain close links to linear and rational models; or at least assumptions about the objectivity of knowledge and evidence interpretation, which several theories discussed in this section challenge. There is therefore a tension between several significant EIPM concepts, and existing definitions of policy quality. The BCURE evaluation will need to navigate this, given its remit to measure improvements in policy quality as a result of BCURE interventions.
3. **What is ‘capacity to access, appraise and apply evidence’, and how do we ‘develop’ it?** Recent empirically based definitions of capacity development suggest that it is complex and multi-dimensional, incorporating change at individual, interpersonal, organisational and institutional levels. Theories of adult learning provide insights into how learning takes place at an individual level, which is important given the strong emphasis on training within the BCURE programme – for example, several ‘key principles’ are suggested that may help inform and assess EIPM training courses and provide insights into the mechanisms that link training to individual behaviour change.

Implications for the BCURE evaluation

The theories discussed in [Section 1.1](#) imply that the BCURE evaluation should consider the interplay between research evidence and other forms of knowledge in the context of the BCURE programmes, as well as the *appropriateness* of evidence used by decision makers (as well as its quality). The evaluation should also consider how far available evidence in BCURE programme contexts reflects the existing views and beliefs of researchers, and how debates on evidence play out within particular policy processes.

The findings from [Section 1.2](#) suggest the limitations of rational and linear models of policy change and evidence use in policy processes, and suggest that the BCURE evaluation should look beyond these to explicitly consider power and politics (in terms of actors and networks, institutions and discourse) when studying how evidence is used. There may also be value in drawing on theories of policy networks, to consider how different actors across and beyond traditional research/policy boundaries affect the access, appraisal and use of evidence. Theories and empirical evidence from the psychological literature suggest the importance of the evaluation explicitly recognising the role of cognitive processes and mental models in shaping individuals' understanding and interpretation of evidence – for example, in relation to training and individual behaviour change. In addition, the tensions between the EIPM conceptual literature and existing understandings of 'policy quality' suggest the value of the evaluation adopting an iterative approach to the study of 'policy quality,' beginning with existing standards (while recognising the tension between these and more recent theories of EIPM), but looking to further develop the concept of 'policy quality' in light of the primary evidence collected and the theories of power, politics, networks and complexity discussed in this section.

Finally, the findings from [Section 1.3](#) suggest that the evaluation should examine and measure capacity change at multiple different levels (individual, interpersonal, organisational and institutional). The evaluation can also potentially benefit from applying core concepts of complex systems thinking to the study of capacity change (such as expecting it to be unpredictable and to incorporate feedback loops, and focusing explicitly on the role of relationships and networks). The evaluation should also draw on the rich literature on learning theories to help understand how BCURE training activities help lead to individual behavioural change.

2. What factors promote and constrain evidence-informed policy making?

Overview

The BCURE programme responds to evidence that decision makers in low and middle-income countries often do not access, appraise or apply research evidence effectively in decision making. This section asks *why* this is the case.

There is a large amount of evidence on the barriers to and facilitators of EIPM, synthesised in a number of secondary reviews. However, this evidence has been criticised for focusing on single elements of the policy-making process and relying on the perceptions of research producers and users; rather than considering how evidence is actually used within policy processes as a whole. These criticisms resonate with the discussion in [Section 1](#), which emphasises the importance of recognising the messy and political nature of evidence use in policy making. This section therefore focusses on synthesising some of the growing primary evidence on political, psychological, cultural and institutional factors promoting or constraining EIPM in different contexts; areas where evidence has been less frequently synthesised and which take into account theories of power, politics, networks, cognitive processes and complexity discussed in [Section 1.2](#).

The key findings can be structured according to the BCURE Theory of Change as follows:

- 1. Individual-level factors:** Nine primary studies provide evidence to suggest that individual beliefs, attitudes and motivations to use evidence are connected to pre-existing beliefs, and to the norms and values that prevail within organisations or societies. For example, several studies suggest that evidence may be ignored or side-lined if it counters past experience – particularly if an issue is hotly debated.
- 2. Interpersonal (relationship and network) factors:** The large literature on ‘supply-side’ factors affecting EIPM suggests that evidence use is influenced by the type and nature of relationships between researchers and policy makers – although this literature falls outside the scope of this review. In addition, two primary studies indicated the importance of relationships and power within government organisations in affecting what kinds of evidence are seen as acceptable.
- 3. Organisational factors:** Eight primary studies suggest that organisational factors can affect individual motivation to use evidence, or present barriers to changes in individual behaviour. For example, if evidence is promoted or valued within an organisation, this can increase individual motivation for EIPM, and lack of time to access and appraise research partly reflects an organisation’s ‘culture’ of evidence use.
- 4. Institutional factors:** Seven primary studies provide evidence of non-governmental actors both promoting and hindering evidence use in policy processes. International donors can both encourage and constrain the effective use of evidence in decision making; private sector actors can exert pressure which ‘blocks’ evidence-informed decisions, and the media (and the general public) may present a barrier to EIPM. This paper did not delve into the broad literature on civil society and its role in influencing policy, but did consider secondary evidence suggesting that civil society can exert pressure on government to use evidence, build momentum behind ideas, and bring together different forms of knowledge. Finally, five primary studies suggest that institutional factors such as sudden change (e.g. crises or regime changes), levels of decentralisation and levels of democracy can all generate opportunities for or barriers to EIPM.

The BCURE programme was designed based on evidence that decision makers in low and middle-income countries often do not access, appraise or apply research evidence effectively in decision making (DFID 2012). This section asks *why* this is the case. What factors prevent decision makers from using evidence, and conversely what factors facilitate evidence use?

Summary of the evidence base on barriers to and facilitators of EIPM

Our search found a large amount of evidence on factors promoting and constraining EIPM, including six secondary reviews published since 2010. These secondary studies are summarised in Table 3 below.

Table 3. Recent secondary reviews synthesising barriers to and facilitators of EIPM

Source	Field	Geographical context	Objective	No. of studies included (systematic reviews only)
Clar, Campbell, Davidson, & Graham, 2011	Health	Low and middle-income countries	To assess the effects of interventions to improve the uptake of research into health policies in low and middle-income countries and identify the barriers and facilitators to the uptake of research evidence	25 intervention and 29 non-intervention studies
Liverani, Hawkins, & Parkhurst, 2013	Health	Global	To examine the influence of key features of political systems and institutional mechanisms on evidence use	56 studies
Newman, 2014	Development Studies	Particular focus on low and middle-income countries	To examine the evidence relating to whether research has positive impacts on socioeconomic development	N/A
Oliver, Innvar, Lorenc, Woodman, & Thomas, 2014	EIPM (multi-disciplinary)	23% of studies from low and middle-income countries	Update of existing systematic review, to identify new barriers of and facilitators to the use of evidence by policymakers	145 studies
Orton, Lloyd-Williams, Taylor-Robinson, O'Flaherty, & Capewell, 2011	Health	High-income countries	To synthesise empirical evidence on the use of research evidence by public health decision makers in settings with universal health care systems	18 studies
Wallace et al., 2012	EIPM (multi-disciplinary)	Mainly high-income countries	To review facilitators of evidence uptake by decision makers from systematic reviews and meta-analyses	15 studies

The factors most strongly supported in this secondary evidence are presented in Table 4 below. This is not intended as a meta-synthesis of this evidence, but simply a summary and signpost to the most frequently mentioned barriers and enabling factors referenced in the literature. For comprehensive and systematic summaries of this evidence, readers are encouraged to refer to the papers in Table 3 directly.

Table 4. Commonly cited barriers to and enablers of evidence use in policy making

Barriers	Enablers
Limited channels exist for policy makers and researchers to interact; there is a 'gulf' between researchers and decision makers (Orton et al. 2011); there are problems with engagement, collaboration or communication between stakeholders or there is inadequate dissemination (Clar et al. 2011)	Trust, interaction and collaboration between researchers and policy makers. (Clar et al. 2011; Oliver et al. 2014; Orton et al. 2011). Research is presented clearly and presented through tailored dissemination efforts (Newman 2014). Interactive approaches and partnerships, knowledge brokering and exchange (Liverani et al. 2013)
Research is not relevant for decision making, clear, presented in an appropriate format, or reliable. (Oliver, Innvar, et al. 2014; Orton et al. 2011)	Research is clear, relevant for decision making and reliable. (Oliver, Innvar, et al. 2014; Wallace et al. 2012)

Research is not available or accessible to decision makers. (Oliver, Innvar, et al. 2014)	Research is available and accessible to decision makers. (Oliver, Innvar, et al. 2014)
Organisational systems and support structures do not encourage use of research evidence in decision making (Newman 2014; Oliver, Innvar, et al. 2014)	Organisational processes and systems encourage or enforce decision makers to consider and apply evidence. (Newman 2014; Orton et al. 2011)
Lack of time and opportunity to use research (this is also an organisational factor). (Oliver, Innvar, et al. 2014; Newman 2014)	Charismatic leadership, high-level or local champions, commitment and support (Clar et al. 2011)
Low capacity to understand and use research evidence. Evidence suggests that although capacity gaps may be more extreme in low-income contexts they exist in high-income contexts too. (Newman 2014; Orton et al. 2011; Oliver, Innvar, et al. 2014)	
Lack of resources, funding and investment in EIPM processes (Clar et al. 2011)	
High staff turnover undermines systematic use of evidence (Clar et al. 2011; Liverani et al. 2013)	
Institutional barriers to use of research evidence, e.g. relating to the nature of political systems and the political nature of specific issues (Newman 2014; Liverani et al. 2013)	

In summary, the most frequently cited barriers are: poor engagement between researchers and policy makers and poor communication of research; an absence of supportive organisational systems and incentives for decision makers to use evidence (including a lack of time to read and use research); and a lack of capacity among decision makers to access, apply and appraise research. Less frequently referenced barriers include: insufficient funding and investment in EIPM, high staff turnover undermining systematic use of evidence, and institutional barriers such as the nature of political systems and priorities.

The synthesis papers find that evidence use is facilitated by: positive and collaborative links between researchers and policy makers; ensuring relevant research is produced and made accessible to decision makers; and supportive organisational systems. One review also suggests the importance of local ‘champions’ of evidence use.

Limitations of the evidence base on barriers and facilitators, and implications for this review

Although only half of the studies in Table 3 explicitly focused on health, in practice the majority of the evidence discussed in the reviews derives from the health field; which implies the need for caution when thinking about how these barriers and enabling factors may apply to other policy areas.

A more serious limitation was flagged by the authors of one of systematic reviews cited above (Oliver, Innvar, et al. 2014); who found that most studies examining barriers to and facilitators of evidence use focused on single elements of the policy making process, **rarely considering the realities of the policy process as a whole or paying attention to policy makers’ priorities** (Oliver, Lorenc, et al. 2014). Similarly, another systematic review examining the political and institutional influences on the use of evidence in public health policy emphasised the dearth of research in this area, finding only six studies that explicitly engaged with political theories or concepts (Liverani et al. 2013). Oliver et al. felt that, because most research in this area is ultimately conducted in order to find ways to increase research uptake, this ‘skews the debate by focusing on exceptional cases of research use in policy making, rather than the normal discharging of statutory business’.

In addition, **most of the evidence summarised in Table 4 is based on the perceptions of stakeholders** (usually researchers and/or policy makers), gathered through surveys or interviews (Clar et al. 2011; Oliver, Innvar, et al. 2014; Newman 2014). Oliver et al. stress the limitations of this perception data – arguing that without observation of how evidence is actually used in practice, lists of barriers and enabling factors ‘cannot on their own lead us to an improved understanding of the role of evidence in the jigsaw of the policy process’ (Oliver, Lorenc, et al. 2014).

These criticisms resonate with the discussion in [Section 1.2](#) of this study, which outlined a range of theories suggesting the importance of politics and power in EIPM, and the need to acknowledge the complexity and range of actors involved in policy processes, as well as the mental models and cognitive biases that influence evidence interpretation. We therefore decided to focus this section on synthesising some of the growing primary evidence examining **political, psychological, cultural and institutional factors promoting or constraining EIPM in different contexts**; an area where evidence has been less frequently synthesised. This moves beyond the barriers and enablers in Table 4 above to the types of factors the theoretical evidence discussed in [Section 1](#) suggests may be crucially important – taking into account theories of **power, politics, networks, cognitive processes and complexity**.

Nature and limitations of the evidence discussed in this section

This section synthesises evidence from 22 primary non-intervention studies, five theoretical or conceptual papers and a number of secondary reviews (on top of the reviews discussed above), detailed in Table 5 and Table 6 below. It also draws in a more limited way on four primary intervention studies, which are presented in more detail in [Section 3](#) (Dobbins, Robeson, et al. 2009; Nutley et al. 2013; Peirson et al. 2012; Yost et al. 2014).

It is outside the scope of this review to provide a full or systematic synthesis of the broad evidence base relating to the political, psychological, cultural and institutional factors influencing evidence use in policy processes. Rather, this section presents some of the main themes from the literature located through our search strategy, in relation to the BCURE Theory of Change. The BCURE evaluation team will interrogate these factors further through primary research, to examine whether and how far they influence the success of BCURE interventions in different contexts.

Table 5. Summary of primary non-intervention studies discussed in Section 2

Source	Field	Geographical context	Research methods
Abeyasinghe, 2012	Development Studies	Global (World Health Organisation)	Case study: document review
Armstrong et al. 2013	Public Administration	Canada	Case study of design process for EIPM intervention
Broadbent, 2012	Development Studies	Ghana, Uganda, Zambia, Sierra Leone	Case study: media review, literature review, semi-structured interviews with around 100 participants
DFID, 2013	Development studies	UK	Survey with 552 DFID staff members and focus group discussions
El-Jardali et al. 2014	Development studies	Lebanon	Case study: media review, key informant interviews and document review
Flitcroft et al. 2011	Health	Australia	Case study: document analysis and key informant interviews
Hallsworth & Rutter, 2011 and Hallsworth et al. 2011	Public Administration	UK	70 interviews, survey, and analysis of 60 policy evaluations

Haynes et al., 2011	Health	Australia	Interviews with 32 civil servants, ministers and advisers
Hufen & Koppenjan, 2014	Public Administration	Netherlands	Three case studies: literature review and 51 interviews
Hunsmann, 2012	Health	Tanzania	92 interviews with AIDS policymakers and observations of national policy meetings
ICAI 2014	Development studies	UK (DFID)	Document review; analysis of DFID staff surveys; semi-structured interviews and FGDs with 92 individuals
Jones & Pellini, 2009	Development Studies	Nepal, Peru, Serbia	Synthesis of three case studies: literature review and key informant interviews
Jung & Nutley, 2008	EIPM	UK	Case study: documentary analysis and seven stakeholder interviews
N. Jones, 2011	Development studies	Seven countries in East Africa and Southeast Asia	Surveys, in-depth interviews and focus group discussions
Pellini et al., 2013	Development Studies	Philippines	Case studies - Policy review, focus group discussion, semi-structured interviews
Porter & Feinstein, 2013	Development studies	Ethiopia, Rwanda, Malawi, Zambia, Ghana	Case studies: desk review, semi-structured interviews with 77 agencies
Ritter, 2009	Health	Australia	31 key informant interviews
Smith & Joyce, 2012	EIPM	UK	Two case studies: semi-structured interviews with 84 informants
Sumner & Harpham, 2008	Development Studies	India, Vietnam	Comparative case studies
Trostle et al. 1999	Health	Mexico	Interviews with 67 researchers and policy makers
Waldman, 2014	Development Studies	Afghanistan, Nepal, Sierra Leone	52 in-depth interviews and field visits

Table 6. Summary of secondary and theoretical literature discussed in Section 2

Source	Field	Geographical context	Type of evidence
Perkin & Court, 2005	Development Studies	Global, particularly lower-income contexts	Other secondary review
Pollard & Court, 2005	Development Studies	Global, including lower-income contexts	Other secondary review
World Bank, 2015	Development Studies	Global, including lower-income contexts	Other secondary review
Walter et al. 2005	EIPM	Global, including lower-income contexts	Systematic Review
Beck et al. 2005	Public Administration	UK	Theoretical/ conceptual
Du Toit, 2012	Public Administration	South Africa	Theoretical/ conceptual
H. Jones, 2009	Development Studies	Global	Theoretical/ conceptual
N. Jones et al. 2009	Development Studies	Global	Theoretical/ conceptual

The evidence in this section is analysed according to the four levels of capacity change in the BCURE Theory of Change and discussed in [Section 1.3.1](#): individual, interpersonal, organisational and institutional.

2.1. Individual-level factors affecting EIPM

Individual-level factors refer to individuals' skills, knowledge, motivation, attitudes, commitment, values and personal incentives that affect how they use evidence in decision making. [Section 1.2.1](#) discussed political theories relating to 'discourse', which emphasise that knowledge in the form of 'rules of thumb', logic or common sense in a society can shape what decision makers can understand or articulate, and therefore the decisions they make. It also introduced ideas from psychological literature, including confirmation bias and mental models, which affect how people understand and interpret evidence. In line with these theories, this review found several studies from lower- and higher-income contexts suggesting that individual beliefs,

attitudes and motivations to use evidence are connected to pre-existing beliefs, and to the norms and values that prevail within organisations or societies.

Evidence may be ignored or side-lined if it counters past experience – particularly if an issue is hotly debated.

Several studies examined for this review found that policy makers were more likely to trust research that confirmed a policy maker’s pre-existing opinions or experiences, including among DFID advisers in Afghanistan (Waldman 2014). This is sometimes known as ‘path dependency’, as described in an observational study of the management of the 2009 H1N1 pandemic by the WHO. The WHO emphasised vaccines as a protective measure based on its historical achievements with vaccines, which had given rise to a particular ‘discourse’ within the organisation in which ‘it was taken for granted that vaccines would provide the most effective control measure’. This belief did not take into account contemporary research suggesting that other health measures were likely to have greater efficacy. The study suggested that this outcome was partly a result of the inherent scientific uncertainty surrounding the case of H1N1, meaning that the situation was open to multiple interpretations (Abeysinghe 2012).

As well as past experience affecting the cognitive processing of evidence, deeply held values and beliefs may affect the extent to which evidence is considered in a rational, deliberative way. Ten studies considered in a systematic review suggested that entrenched values and beliefs about emotive topics (including breastfeeding in the US, male circumcision in Ghana and the rejection of a link between HIV and AIDS in South Africa) biased the selection and interpretation of evidence in these contexts (Liverani et al. 2013). These findings echo the results of the World Bank survey conducted as part of the 2015 World Development Review discussed in [Section 1.2.3](#) above, in which officials were more likely to misinterpret data when it related to an issue they held a strong opinion about (minimum wage legislation), than when it related to a less emotive issue (skin cream) (World Bank 2015b).

“Deeply held values and beliefs may affect the extent to which evidence is considered in a rational, deliberative way.”

Finally, one observational study of policy makers in Australia found that ‘issue polarisation’ dictates the extent to which research or researchers are used technically or politically. Where policy was strongly opposed or debated, researchers with ‘impressive rhetorical skills’ and a good overview of their field were used to ‘persuade ministers, stakeholders and the public during policy agenda setting and formation’. However, once overall policy directions had been agreed, researchers were used in a more technical sense to advise on intervention design and evaluation (Haynes et al. 2011).

This evidence links clearly to the psychological theories discussed in [Section 1.2.3](#). These suggest that people make sense of the world around them based on their pre-existing *mental models*, and so are highly subject to *confirmation bias* – the tendency to disregard or disbelieve evidence that does not correspond with existing beliefs.

Beliefs about what counts as ‘good’ evidence can mean that useful knowledge is ignored or discounted. An observational study of UK health inequalities policy in the 2000s found that implicit faith in quantitative over qualitative data among health policy makers resulted in qualitative work on the social determinants of poor health being ignored or discounted in decision making (Smith & Joyce 2012). This corresponded with a greater value being attributed to medical expertise than social science expertise – meaning that academics with a health background had higher credibility than social scientists. Similarly, a study of the use of knowledge in

urban resilience policy making in the Philippines found that local knowledge was often discounted in situations where it could add value, for example knowledge about when the colour of the river might indicate flooding upstream. The authors concluded that ‘while there is potential for community knowledge to become inputs to policy, it does not happen due to the perception that these forms of knowledge are not scientific enough’. However, a lack of funds and capacity meant that more rigorous localised data needed for disaster preparedness was not being collected (Pellini et al. 2013). This finding suggests that promoting narrow definitions of evidence or research quality (discussed in [Section 1.1](#)) could actually hinder the effective and appropriate use of evidence in decision making.

Where evidence is valued, this can encourage its use as a ‘weapon’ to confer legitimacy on a decision.

Conversely, where evidence is less valued, this can encourage deliberate attacks of EIPM concepts. Three observational studies relating to the UK’s DFID found evidence of ‘tactical’ uses of evidence (discussed in [Section 1.2.1](#)). An evaluation examining how DFID learns found that staff occasionally faced pressure to provide selective evidence to justify decisions: ‘Interviewees (including heads of professional cadres) told us that it is common to find evidence to justify a decision, rather than use evidence to arrive at a decision.’ This finding is echoed in an internal DFID staff survey, in which around 7.5% of respondents made the same point (ICAI 2014; DFID 2013b). Finally, an observational study of DFID advisers in fragile states also found evidence that research was required for ‘ammunition’ – a ‘useful weapon’ that could ‘add weight, credibility and persuasiveness to support a line on a specific issue, especially when deployed during 11th-hour negotiations’ (Waldman 2014). All three studies also emphasise the high value placed on evidence within DFID, suggesting a risk that organisational incentives to use evidence in decision making may actually promote its ‘symbolic’ use to support pre-existing positions (discussed in [Section 1.2.1](#)).

Another primary study suggests that in some contexts it is not just evidence that can provide legitimacy but the *idea* of evidence. This paper synthesises four observational case studies examining the use of research evidence in African policy debates, finding that some actors in Uganda and Ghana used the terminology of EIPM to confer legitimacy on their actions. The author finds that ‘although it might not be referenced well, be read or indeed even exist, the idea of research and evidence is important, and establishing its role – even if this is nominal – does function to pepper the policy debate with a concern for research and evidence’ (Broadbent 2012).

Conversely, Broadbent’s study also found evidence of policy makers in Sierra Leone *attacking* EIPM language and concepts, to ‘win points’ in a debate. This is because in this context evidence and written research were negatively associated with foreign actors and ‘Western’ ideas, while orally communicated evidence and ‘local knowledge’ were positively associated with concepts of tradition and culture. Non-use of research evidence was therefore painted as a defence of national identity. The author argues that this suggests the limitations of explaining away non-use of evidence in terms of a ‘lack of capacity’ which can be ‘filled’ – although this is certainly part of the problem. Rather, it suggests that there may be strong political incentives to reject EIPM ideas (Broadbent 2012).

Certain evidence findings may be viewed as ‘unacceptable’ in particular contexts and so ignored. Two studies provide examples of evidence being viewed as unacceptable for political or financial reasons. For example, one observational study of urban resilience policies in the Philippines found that it was not always politically possible to act on evidence suggesting which locations were at risk of flooding, implying the need to relocate people. ‘Any mayor attempting such would run headlong into a wall of protests and claims of human rights violations, or intense lobbying from wealthy landowners and their politicians’ (Pellini et al. 2013). In a similar vein, interview respondents in Waldman’s observational study of DFID use of evidence in fragile contexts felt there was an ‘overall conservative tendency’ in DFID causing officials to ignore overtly critical research. If

findings suggested that ‘everything you’re doing is wrong’ or recommended an ‘overhaul’ of existing programmes they were likely to be resisted. This was linked to the observation that ‘existing commitments are hard to abandon and projects are often implemented in partnership with other donor partners’ (Waldman 2014). Both studies align with the ‘pluralism and opportunism’ paradigm of EIPM discussed in [Section 1.2.1](#) – suggesting the messy and opportunistic nature of policy making, and the need to balance the competing interests of various groups. They also highlight some of the potential conflicts between different forms of evidence relevant to policy decision making discussed in [Section 1.1](#). Research evidence may actively conflict with citizen views, or with process knowledge regarding the best way to implement activities.

A theoretical study from South Africa suggests that the unacceptability of evidence may be manifested in deeper and more subtle ways, reflecting the history and culture of a society. The author argues that the articulation of the ‘two economies’ paradigm by President Mbeki (which suggested that a section of society had been ‘left behind’ economically, despite South Africa’s rapid economic growth) suddenly made certain types of evidence acceptable when previously it was not (du Toit 2012). This made it politically acceptable for researchers and decision makers to explicitly link poverty to structural aspects of the economy, whereas before this was rejected based on the emotive and accepted view that poverty was a legacy of apartheid. This new paradigm therefore allowed the reframing and re-evaluation of existing evidence on poverty and inequality, informing new poverty interventions including a Community Works Programme. This resonates with theories about power and discourse discussed in [Section 1.2.1](#) – which suggest that ideas and concepts viewed as ‘common sense’ in a particular society determine what policy makers can understand and articulate, and therefore the policy ideas they are likely to adopt.

Summary of individual-level factors: This review found nine primary observational studies from lower- and higher-income contexts which provide evidence that **individual beliefs, attitudes and motivations to use evidence (and how to use it) are connected to pre-existing beliefs, and to the norms and values that prevail within organisations or societies**. For example, several studies suggest that evidence may be ignored or sidelined if it counters past experience – particularly if an issue is hotly debated. Two studies suggest that beliefs about what counts as ‘good’ evidence may result in useful knowledge being discounted; and two further studies found that certain evidence findings may be viewed as ‘unacceptable’ in particular contexts and so ignored. The status of evidence itself also appears important: three studies suggest that where evidence is valued, this can encourage its use as a ‘weapon’ to confer legitimacy on a decision; while another study found that where evidence is less valued this can lead to deliberate attacks of EIPM concepts for political gain.

2.2. Interpersonal factors affecting EIPM

Interpersonal factors are about the relationships between individuals and groups (for example in an organisation or a network), and how these influence evidence use. Much of the literature on interpersonal factors derives from literature on research uptake and knowledge transfer. This relates to relationships between researchers and policy makers, and the ‘supply side’ factors which make specific research findings more or less likely to be acted on by decision makers. This falls outside the scope of this review, which focusses instead on the ‘demand side’ factors which help or hinder decision makers from accessing and using evidence in policy making processes. However, it is worth considering briefly some of the evidence suggesting the importance of promoting researcher-policy maker partnerships.

Evidence use is influenced by the type and nature of relationships between researchers and policy makers. This was one of the main factors highlighted in secondary reviews of the enablers to and barriers of evidence use, discussed above and outlined in Table 4. For example, one systematic review of strategies to promote evidence-based practice found that formal and informal linkage mechanisms allow partnerships between

researchers and policy makers to adapt and renegotiate research findings within their own contexts, ‘tinker’ with research, and engage in collaborative reflection. The possibility of these partnerships are constrained by limited time and energy to establish effective working relationships, and differences in culture, goals, information needs, power, reward systems, and language between researchers and policy makers (Walter et al. 2005). Similarly, an observational study examining how Australian drug policy makers access evidence also stressed the importance of personal relationships and trust. Bureaucrats were found to consult small groups of trusted experts by phone to provide research information and opinion, in order to get a quick synthesis of evidence. In this case, trust was found to be more important than expert knowledge (Ritter 2009).

Two observational studies from the UK also suggest that **evidence use can be influenced by the nature of relationships within government organisations**. An observational study of UK civil servants and ministers found that civil servants were often reluctant to use evidence to challenge ministers, ‘conscious of the need to create and maintain a “good relationship”’. The study suggests that this reluctance is partly a result of limitations in support structures (systems and processes to enable civil servants to challenge their ministers without compromising relationships), without which the easiest way to keep everyone happy is to ‘give the minister what they want’ (Hallsworth et al. 2011). This finding was echoed in a recent observational study of how DFID learns, in which some interview respondents said they have been told they ‘can’t say that’ about particular pieces of fact-based advice because it would be unacceptable higher up the organisation (ICAI 2014). This resonates with the ‘politics and legitimisation’ model of policy processes discussed in [Section 1.2.1](#) above, suggesting that institutional-level power affects who is able to participate in decision making, and shapes the strategies, beliefs and actions of individuals within it.

2.3. Organisational factors affecting EIPM

Organisational factors relate to the systems, policies and procedures, practices, culture and norms within an organisation that promote or inhibit evidence use in policy making. Eight primary studies – mainly from high-income settings – suggest that organisational factors can affect individual motivation to use evidence and present barriers to changes in individual behaviour.

If evidence is promoted or valued within an organisation, this can increase individual motivation for EIPM. One observational study found evidence of a ‘distinct culture in DFID that places a premium on keeping up with the latest research, in part to maintain credibility amongst colleagues.’ This was found to influence the personal interest and motivation of DFID advisers in Afghanistan, Nepal and Sierra Leone to keep up to date with academic debates on state-building (Waldman 2014). Four intervention studies, discussed further in [Section 3.3](#) below, also found that organisational tools and systems designed to promote EIPM (such as guidelines, templates and procedures for incorporating evidence into programme design) can motivate individuals to use evidence more in their day-to-day work (Yost et al. 2014; Nutley et al. 2013; Peirson et al. 2012; Dobbins, Robeson, et al. 2009). More limited intervention evidence suggests that tools may also increase the *value* individuals place on evidence (Yost et al. 2014; Nutley et al. 2013). These findings link to the theories discussed in [Section 1.3](#) above which emphasise the multi-dimensional nature of capacity; in particular emphasising the interaction between individual skills and motivation to use evidence and organisational-level capacity.

Lack of time to access and appraise research partly reflects an organisation’s ‘culture’ of evidence use. Time was one of the main obstacles to evidence use mentioned in the literature, as outlined in Table 4 above. In one systematic review, 42 studies from both low- and high-income contexts referenced this barrier (Oliver, Innvar, et al. 2014). Some papers suggest that lack of time may link to organisational values and norms around evidence use – for example whether individuals are given the permission and space in their working days to

spend time finding and reading research papers. For example, a systematic review found two studies (both from the health field) reporting that collection and appraisal of research was seen to be ‘non-work’ among those who needed to take action – implying that lacking time to appraise research may be linked to an organisational culture that does not prioritise EIPM (Orton et al. 2011). A survey of local government policy makers in Australia which also stressed time as a barrier similarly found that searching for and reviewing evidence was not considered to be a necessary function in organisational cultures (Armstrong et al. 2013).

“Lacking time to appraise research may be linked to an organisational culture that does not prioritise EIPM.”

Hierarchical management of information, organisational silos and poor organisational memory can limit access to research and evidence use. A case study from Mexico found that the hierarchical management of information within centralised government organisations prevented research from arriving at relevant organisational levels, meaning that policy makers found it difficult to access evidence (Trostle et al. 1999). Three studies from the UK, Canada and New Zealand discussed in a systematic review found that divisions of responsibilities and ‘institutional silos’ can also limit consideration of evidence. For example, job boundaries can make it very difficult to engage with ideas beyond a person’s immediate area of responsibility, or consider multi-disciplinary evidence and engage in horizontal thinking across different sectors (Liverani et al. 2013). Finally, Waldman’s (2014) study of DFID advisers found that high staff turnover and trends of decreasing staff-to-funding ratios were believed to result in poor institutional memory within DFID, which was believed to reduce effective use of evidence.

Summary of interpersonal and organisational factors: Much of the literature on interpersonal factors falls within the ‘supply side’ of EIPM and is not considered in depth in this review. This includes a large amount of evidence, summarised in secondary synthesis papers and outlined in Table 4, suggesting that evidence use is influenced by **the type and nature of relationships** between researchers and policy makers. This review also found two observational studies from the UK emphasising the importance of **relationships and power within government organisations** in affecting what kinds of evidence are acceptable.

Eight primary studies and three systematic reviews – mainly from high-income contexts – provide evidence suggesting that **organisational factors can affect individual motivation** to use evidence, or **present barriers to changes in individual behaviour**. For example, if evidence is promoted or valued within an organisation, this can increase individual motivation for EIPM, and lack of time to access and appraise research partly reflects an organisation’s ‘culture’ of evidence use. **Hierarchical management of information, organisational silos and poor organisational memory** can also limit access to research and evidence use.

2.4. Institutional factors affecting EIPM

Institutional factors relate to the wider environment in which individuals and organisations operate, and how this affects the use of evidence in decision making. This includes the role of external actors (such as international donors and civil society), and the influence of external factors such as crises, global events, political and economic change, and donor influence. This study found a large number of studies suggesting that institutional factors play an important role in both enabling and constraining evidence use within a wide variety of contexts. This evidence has been categorised below in terms of factors relating to non-governmental actors (including donors, the media and civil society), and the political environment and external events.

Non-governmental actors

Seven primary studies provide evidence suggesting that international donors can both promote and constrain the effective use of evidence in decision making; private sector actors can exert pressure which ‘blocks’ evidence-informed decisions, and the media (and the general public) may present a barrier to EIPM. This evidence highlights the messy and opportunistic nature of policy processes, and also provides insights into the power wielded by various groups working together or against one another to advance their interests through the political and tactical use of evidence. This resonates with both the ‘pluralism and opportunism’ and ‘politics and legitimisation’ models of EIPM discussed in [Section 1.2.1](#).

International donors may both promote and constrain the effective use of evidence in decision making.

Some writers argue that the concept of EIPM has been promoted or ‘exported’ by the international development community into low and middle-income country contexts – such that EIPM has become a ‘by-word’ for more scientifically sound and ‘better’ policies than those not centred around research evidence (Broadbent 2012; du Toit 2012). Donor commitment to EIPM may result in more evidence-informed policies being adopted in recipient countries; for example, one systematic review highlighted that donor priorities may result in the promotion of interventions with strong evidence bases. However, the study also suggests that this may result in the neglect of local context, needs and capabilities (Liverani et al. 2013). In addition, Broadbent’s observational study of four African countries argues that the promotion of EIPM by the international development community has led to the terms ‘research’ and ‘evidence’ being ‘brandished with satisfaction, in the near-certainty that an argument will be applauded as long as it uses the well-established concepts’, even if in fact evidence has not been used or understood at all. Still, although this situation is far from ideal, Broadbent argues that ‘a stated concern for research-based evidence and evidence-based policy is better than none at all’ (Broadbent 2012).

“Donor commitment to EIPM may result in more evidence-informed policies being adopted in recipient countries...but donor priorities may also act *against* EIPM, for example as a result of funding pressures.”

Donor priorities may also act *against* EIPM, for example as a result of funding pressures. One observational study examining HIV policy making in Tanzania describes how, despite interviewees unanimously agreeing on the importance of empirical cost-effectiveness data, it played very little role in decisions about HIV policy in the late 2000s. One interviewee described how, following the creation of PEPFAR and the Global Fund, ‘money was literally poured into this country like anything’. As a result, there were no incentives to use cost-efficiency data, and in some cases low-cost programmes were actually not implemented because organisations faced pressures to spend their rapidly increasing budgets quickly. In the absence of an environment in which costs mattered, cost-effectiveness data was no longer politically relevant (Hunsmann 2012).

Private sector actors can exert pressure which ‘blocks’ evidence-informed decisions. A systematic review discussed evidence of financial and corporate interest groups exerting pressure to either take up or ignore research findings based on commercial interests, and another study arguing that ‘the lack of pressure from organised lobbies in Laos facilitated the use of evidence for health policy on essential medicines’ (Liverani et al. 2013). One theoretical paper argues that private sector influence results from a combination of strong economic interests among private sector actors and secretive policy making processes (Jones et al. 2009).

Another primary observational study found that private sector interests can pose a particular risk in post-conflict countries. For example, in Serbia ‘private sector actors have played a major role in financing political parties to support their own interests, and in part account for the very high level of party fragmentation in the country’. In Nepal a new range of laws were passed promoting greater transparency and accountability immediately after the end of the conflict, but ‘implementation of these laws and awareness thereof remains weak – suggesting that economic interests are still retarding governance reforms’ (Jones & Pellini 2009).

The media (and the general public) may act against EIPM. There is sometimes an assumption in EIPM literature that a free media is an important promoter of EIPM, for example through ‘offering platforms for critical review of scientific results’ (Hufen & Koppenjan 2014). However, one example from the UK illustrates that the media may also act as a barrier to EIPM. This observational study of debates on sex offenders examined the influence of a national newspaper (the *News of the World*) over a policy process. The campaign promoted demand from the general public (gathered through opinion polls) for greater openness about the identities of sex offenders released from prison and now living in communities. The government responded to media pressure to review the policy, drawing on various evidence sources (including research conducted by civil society groups which shared a sense of alarm about the idea of community notification). The government explored the feasibility of sharing some information on sex offenders with members of the public – ultimately drawing on research evidence to support their decision not to adopt the scheme. This is therefore an example of the media and the general public calling for a policy that was *not* evidence-informed (in the sense that research did not suggest a positive impact on reoffending rates) (Jung & Nutley 2008). Broadbent’s study of African policy debates also illustrated that citizen views in Uganda and Ghana were laden with stereotypes and discriminatory attitudes towards sex workers and street hawkers, therefore acting as a barrier to more inclusive policies informed by research evidence (Broadbent 2012). This suggests a potential tension between high quality research evidence and the role of citizen voice and participation in development processes.

Civil society may play a number of different roles in relation to EIPM, including putting pressure on government to use evidence, building momentum behind ideas, and bringing together different forms of knowledge. This paper did not delve into the broad literature on civil society and its role in influencing policy, which is likely to have significant insights relevant to EIPM. However, it did consider four primary observational studies and four secondary and theoretical papers referring to links between civil society and evidence use.

There are a number of different ways to conceptualise the relationship civil society organisations (CSOs) might have with policy making and EIPM. Coston describes eight kinds of CSO-policy relationships – from that of ‘repression’, through to relationships of ‘rivalry and competition’, to ‘contracting and cooperation’ and finally ‘complementarity and collaboration’. These range ‘from NGOs being wholly alienated from formal policy processes and concentrating on what they can achieve on their own terms, to NGOs whose arguments are so closely aligned with those of government that they are simply pushing at an open door’ (Coston 1998, in Pollard & Court 2005). In relation to EIPM, this suggests that civil society may *produce* evidence for their own purposes (conducting research, collecting citizen voices, synthesising findings), *campaign* for policies based on evidence, and/or *co-produce* policies in collaboration with government actors, utilising evidence to a greater or lesser degree – the latter role echoing the theories of policy networks discussed in [Section 1.2.2](#).

- **CSOs can put pressure on government actors to acknowledge or release evidence.** Broadbent found evidence from Zambia in which the government’s refusal to comment on a biotechnology policy, including on the subject of research, ‘in effect halted the policy debate’ – presumably a good thing for the government, which was facing tensions over the issue. The government was able to do this in part due to a *lack of demand* for evidence on the part of civil society and other actors (Broadbent 2012). Jung &

Nutley's (2008) observational study from the UK emphasises how a civil society organisation played an important role in UK debates on sex-offender policy, by conducting academic research into the policy option promoted by the media. This was fed into policy debates and ultimately shaped the government's decision not to adopt the media's preferred policy of community notification.

- **CSOs can help build momentum behind ideas.** A literature review examining how CSOs use evidence to influence policy processes found evidence that CSOs can influence policy through generating a 'tipping point' – using evidence to build momentum behind an idea, and crystallising evidence as a policy narrative to create a window for change. The review emphasises that this requires effective communication of evidence, and the use of relevant, appropriate and timely evidence by CSOs (Pollard & Court 2005). Two further papers discussed the potential role of CSOs in seeking alliances with international actors around particular issues, which can put additional pressure on national governments (Jones 2009; Perkin & Court 2005).
- **CSOs can play a role in bringing together the different forms of knowledge discussed in [Section 1.1](#), including citizen views.** A literature review found that, through fusing research evidence with 'political and cultural' knowledge, CSOs can gain legitimacy among both policy makers and local people at the same time. For example, 'an Indonesian CSO, lobbying to reformulate the government's birth control programme into a family welfare programme, deliberately integrated its findings on the effectiveness of this approach with passages from the Qu'ran and Hadith. This inflected the proposal with a call to respect the interests of the Muslim majority, who had recently been under pressure from Christian, Confucian, Hindu and Buddhist groups. Drawing out the political aspect of this evidence made it more attractive for the government, because they could act upon it as a statement of support for Muslims.' This review also stresses the potential of CSOs to help policy makers access evidence from the grassroots – citing one example from Bolivia when a CSO was able to use the Catholic Church and its widespread grassroots presence to conduct dialogue on the Bolivian Poverty Reduction Strategy Paper (PRSP) process (Pollard & Court 2005).
- **Trust appears to be an important consideration for CSO influence on EIPM.** A theoretical paper cites evidence suggesting that CSO influence is limited by a low level of policy maker trust in civil society (Jones et al. 2009). A secondary review also cites evidence from Indonesia and Cambodia, suggesting that CSOs can influence policy makers with evidence-based recommendations in situations where the involvement of CSOs in policy making improves the legitimacy of policy (and therefore the legitimacy of MPs). However, this is often hampered by mistrust: policy makers concerned that CSOs may be influenced by international donors, and CSOs concerned that policy making may be working behind closed doors. The review cites evidence from Cambodia, where only 20% of CSOs reported any link with MPs, and MPs see CSOs as 'pessimistic', 'donor-driven', 'manipulative' and 'biased towards the opposition' (Jones 2011).
- **The influence of CSOs in EIPM depends on their position and role in society.** A secondary review found that the credibility of the evidence used by CSOs is an important predictor of policy influence. 'CSOs need to be adept at adapting the way they use evidence to maintain credibility with local communities and with policy makers, combining their tacit and explicit knowledge of a policy context'. However, this review also found that 'overall, the important factor in whether CSOs can use evidence to influence policy is how well they are integrated within a policy process' (Pollard & Court 2005). A theoretical paper points out that contracting political space for CSOs in some contexts will have a knock-on effect on CSO influence on EIPM – for example, in Zambia, Uganda, Ethiopia and Nicaragua, laws curb the scope of advocacy work (Jones et al. 2009).

Two examples from primary studies illustrate this point. A study in the Philippines found limited scope for civil society to get involved in the crafting of urban resilience policy. Civil society involvement was largely limited to disaster response, a historical role that was ‘institutionalised as a formal routine’, despite civil society potential to add value to policy making processes (Pellini et al. 2013). In contrast, another study discusses the Energy Bill in the Kenyan Parliament, for which evidence generated by CSOs was fed in to workshops with parliamentarians, and legislators were brought together in a CSO-led forum to discuss energy issues before the Bill was passed. Jones claimed this resulted in a ‘more comprehensive bill, which took into account the interests of local communities’. The role of CSOs here was partly a collaborative one, as evidence fed in by CSOs gave parliamentarians a ‘stronger voice to push for legislative reforms’ as well as knowledge to critique government policy (Jones 2011). This role clearly depended on a policy environment where CSOs were able to produce evidence and access policy makers to communicate it. This study also found that links between the media and CSOs was important in facilitating exchange between CSOs and legislators.

The literature on civil society considered for this review did not reference any **negative** effects of civil society influence on the use of evidence in policy processes. However, it seems plausible that civil society is not always a force for good in EIPM, given the discussion above on the potentially negative role of international donors, the private sector and the media on evidence use in decision making. Given the small number of papers it was possible to consider on civil society in the time available for this review, it is unclear whether this represents an evidence gap; but this may be an interesting area for further research.

The political environment and external events

Five primary observational studies and a number of secondary and theoretical papers – from high- and low-income contexts – suggest that institutional factors such as sudden change (e.g. crises or regime changes), levels of decentralisation and levels of democracy can create opportunities for or barriers to EIPM.

Change in the institutional environment – such as crises, regime changes, democratisation and external events – can create new opportunities for or new barriers to EIPM. One study argues that crises can create windows of opportunity, engendering a new willingness among policy makers to break stalemates or take painful but necessary steps. The bigger the crisis, the stronger the opportunity for research to shape underlying discourses and values. For example, during regime change in Singapore, ideas associated with the old regime were discredited and disorganised, opening space for new attitudes towards knowledge and creating a more conducive environment for research use (Jones et al. 2009). Similarly, three studies discussed in a systematic review (relating to South Africa and Uruguay) found that the process of democratisation created a new model more open to the uptake of research findings, including new appointments of researchers and establishments of research institutes (Liverani et al. 2013).

Opportunities to consider different types of evidence can be opened up by smaller-scale events too. One observational study discussed cases from the UK, in which celebrity chef Jamie Oliver’s campaign to improve school meals and Ireland’s decision to implement a ban on smoking in public places created opportunities for research to influence debates on nutrition in schools and public smoking (Smith & Joyce 2012).

Pellini’s study of the use of evidence in urban resilience interventions in the Philippines found that the *actual experience of disaster* was a necessary condition for policy action; the mere ‘presence of these threats to citizens and their economic interests does not result in concrete policy actions’. The authors suggested that there must be opportunities for political gain in order for better, evidence-informed resilience policies to be

created in advance of a crisis; for example, one prominent political figure had managed to create a political constituency around disaster preparedness (Pellini et al. 2013).

These findings link to theories of ‘policy spaces’ and ‘policy streams’ discussed in [Section 1.2.1](#) above, which emphasise the importance of ‘windows of opportunity’ in policy making processes which can create moments and spaces for evidence to be used. However, crises can also hinder the consideration of evidence. One case study examined the implementation of a voluntary health insurance health policy in Lebanon, triggered by the sudden abolition of post-retirement medical plans by a major national company, and which left many citizens without medical coverage. Despite interview respondents stating they valued evidence, the implementation of the resulting policy was ultimately a ‘quick political decision’ that did not take account of available evidence. Interview respondents stressed that the extreme pressure to tackle the crisis resulted in a policy that was publicly popular despite evidence suggesting it was unworkable. This was enabled by a political system that, although democratic, lacked participatory and transparent policy making processes, and allowed the government to issue a decree despite the reservations of the Ministry of Finance. An absence of systems and procedures for the consideration of evidence in policy processes may have also been a contributory factor (El-Jardali et al. 2014). This demonstrates how a lack of institutional capacity can hinder EIPM even where individuals have the capacity and motivation to use evidence, adding empirical weight to the multi-dimensional model of capacity development described in [Section 1.3](#).

Finally, a study of evidence use in post-conflict environments found that a knowledge gap opened up upon regime change, as the technical reputation of intellectuals could not be ‘disentangled from their role in previous authoritarian regimes’. Intellectuals associated with governments who presided over the conflict (and which were ousted from power) were discredited following the end of conflict in Nepal, Peru and Serbia. In Nepal particularly this may have been compounded by an absence of a civil society voice (Jones & Pellini 2009).

Levels of organisational and political decentralisation can affect use of evidence in decision making.

A systematic review found evidence that a concentration of power in centralised systems (e.g. the UK National Health Service prior to 1990 reforms) can prevent pluralistic debate, and therefore the need for evidence to support competing views. Conversely, in decentralised political systems, there may be more need for research as legitimisation or ammunition to justify political decisions (Liverani et al. 2013). One observational study of the BSE public health crisis in the UK found that, in a centralised system in which government agencies controlled expert advice with little public oversight, pressure and expert interest groups were able to shape policy decisions and undermine the credible assessment of public health risks (Beck et al. 2005).

However, an observational study of evidence use in the Philippines described how a culture of evidence use did *not* emerge upon decentralisation, despite legislation being in place to strengthen local government capacity as part of the decentralisation process. This was in part due to limited budgets for Local Government Units to conduct research, few links between academic institutions and local decision making bodies, and the persistence of nationally provided policies – reflecting a history of reliance among local government actors on central government data (Pellini et al. 2013).

Levels of democracy and the role and power of national actors outside central government can affect the use of evidence. The studies reviewed for this section do not suggest a clear and obvious link between democracy and use of evidence in decision making. For example, one comparative observational study examines evidence use in India and Vietnam, finding that the levels of democracy or autocracy were not necessarily a key factor in influencing the use of evidence in policy making (Sumner & Harpham 2008). Another study examining demand for and supply of evaluation in five sub-Saharan African countries drew a distinction

between *development patrimonial* states and *neopatrimonial* states. Development patrimonial states (Ethiopia and Rwanda) were characterised by strong centralised leadership with limited scope for the influence of external actors. The authors found relatively high demand for evidence, based on incentives to achieve developmental outcomes in order to maintain the legitimacy of government. In addition, ministries were generally technocratic in nature, with some (albeit limited) capacity to appraise and use evidence. Neopatrimonial states (Malawi, Zambia and Ghana) were characterised by patronage-based decision making, multiple interest groups competing for influence and power, and more disordered policy processes. This provided more diverse entry points for evidence to be used to influence policy processes. However, capacity was still weak to manage and understand evaluations (Porter & Feinstein 2013).

Four studies discussed in a systematic review also pointed to the potential biases that may result from ‘processes of democratic deliberation’ – including ‘opportunistic use of evidence to delay decision making, to legitimate particular policy positions or to discredit opponents in political debates’ (Liverani et al. 2013). For example, a qualitative study from Australia found that evidence became more contested around an election campaign, amplifying tensions between stakeholders who controlled selection of evidence for policy (experts, bureaucrats and advisers). The Health Minister’s advisers developed plans to roll out a national bowel cancer screening programme, which ignored much of the evidence gathered in early stages of policy making and later proved wholly unrealistic. The authors concluded that, in the search for alternative ideas in the heat of an election campaign, adherence to evidence may play a secondary role (Flitcroft et al. 2011).

Summary of institutional factors: The review discussed 12 primary observational studies and several secondary and theoretical studies relating to institutional factors affecting evidence use. Seven primary observational studies suggest that **non-governmental actors often play an important role in relation to EIPM**. International donors may both promote and constrain the effective use of evidence in decision making, private sector actors can exert pressure which ‘blocks’ evidence-informed decisions, and the media (and the general public) may present a barrier to EIPM. **Civil society may play a number of different roles in relation to EIPM**, including putting pressure on government to use evidence, building momentum behind ideas, and bringing together different forms of knowledge. Finally, five primary observational studies suggest that **institutional factors such as sudden change (e.g. crises or regime changes), levels of decentralisation and levels of democracy** can all create opportunities for or barriers to EIPM.

2.5. Conclusions and implications for the BCURE evaluation

This section has examined the factors that prevent decision makers from using evidence, and the factors that facilitate evidence use. It began by summarising some of the evidence already synthesised in secondary reviews, providing a signpost to the most frequently mentioned barriers and enabling factors referenced in the EIPM literature. It then moved on to examine some of the primary evidence specifically relating to political, psychological, cultural and institutional factors promoting or constraining EIPM in different contexts; an area where evidence has been less frequently synthesised and which takes into account theories of power, politics, networks, cognitive processes and complexity discussed in [Section 1.2](#). The main findings are as follows:

- **Individual** beliefs, attitudes and motivations to use evidence (and *how* to use it) can be connected to pre-existing beliefs, and to the norms and values that prevail within organisations or societies. Evidence may be ignored or side-lined if it counters past experience, and beliefs about what counts as ‘good’ evidence may result in useful knowledge being discounted – echoing cognitive theories discussed in [Section 1.2.3](#) which suggest that people make sense of the world using pre-existing mental models, and so are highly subject to confirmation bias. Some studies also found that evidence findings may be viewed as

‘unacceptable’ in particular policy contexts and so ignored. This links to the ‘pluralism and opportunism’ paradigm of EIPM discussed in [Section 1.2.1](#) – suggesting the messy and opportunistic nature of policy making and the role of evidence within it.

- **Interpersonal** relationships and power within government organisations can affect how (and what types of) evidence is acknowledged and communicated. This resonates with the ‘politics and legitimisation’ model of policy processes discussed in [Section 1.2.1](#), suggesting that institutional-level power affects who is able to participate in decision making, and shapes the strategies, beliefs and actions of individuals within it. Two studies also suggest that evidence use may also be influenced by the type and nature of relationships between researchers and policy makers.
- **Organisational** factors can affect individual motivation or ability to use evidence in their work. Individual motivation for EIPM may be increased if evidence is promoted or valued within an organisation – although conversely, some studies also suggested that organisational incentives to use evidence in decision making may actually promote its ‘symbolic’ use to support pre-existing positions (discussed in [Section 1.2.1](#)). Lack of time to access and appraise research may reflect an organisation’s ‘culture’ of evidence use; and hierarchical management of information, organisational silos and poor organisational memory can limit access to research and evidence use. The importance of organisational factors on individual decisions to use evidence resonate with the theories discussed in [Section 1.3](#) on the multi-dimensional nature of capacity; in particular emphasising the interaction between individual skills and motivation to use evidence and organisational-level capacity.
- A wide range of **institutional** factors also prevent or facilitate EIPM. The literature provides insights into the power wielded by various groups working together or against one another to advance their interests through the political and tactical use of evidence, resonating with both the ‘pluralism and opportunism’ and ‘politics and legitimisation’ models of EIPM discussed in [Section 1.2.1](#). International donors may both promote and constrain the effective use of evidence in decision making depending on their own priorities, private sector actors can exert pressure which ‘blocks’ evidence-informed decisions, and the media (and the general public) may present a barrier to as well as promotor of EIPM. Civil society can put pressure on government actors to use evidence, build momentum behind ideas, and bring together the different forms of knowledge relevant to policy decision making discussed in [Section 1.1](#). The influence of CSOs on EIPM depends on their position and role in society. Institutional factors such as sudden change (e.g. crises or regime changes), levels of decentralisation and levels of democracy can also generate opportunities for or barriers to EIPM.

Implications for the BCURE evaluation

These findings underscore the importance of examining the specific context within which each BCURE intervention works. In order to understand the factors that might enable or prevent change as a result of BCURE activities, the evaluation team will need to investigate these contextual factors – for example looking at how individual beliefs, attitudes and motivations link to organisational features and social norms; and thinking about the wider institutional context, including the role of international donors, private sector actors, the media and civil society, and the influence of historical events and levels of decentralisation and democracy on the ways in which evidence is used and understood. The influence of these factors on the success of BCURE programme interventions will be explicitly considered as part of the evaluation.

The findings in this section also highlight the interrelationships between individual, organisational and institutional factors – for example the influence of organisational systems on individual values, or the ways in which ideas about evidence in wider society shape how it is talked about and the types of knowledge considered important. Echoing findings in [Section 1.3.1](#), this suggests the value of examining capacity for EIPM as a *system*. The empirical evidence discussed in this section also reiterates the overall implications of [Section 1](#), suggesting the value of incorporating theoretical insights on power, politics, networks and complexity into the study of BCURE interventions, and considering capacity change as a multi-dimensional issue.

3. What is the evidence on how to build capacity for evidence-informed policy making?

Overview

This section examines the evidence on how to build capacity among decision makers for EIPM – looking at *what works, for whom, in what circumstances, and why*. Following the principles of realist synthesis, it discusses the **mechanisms** through which EIPM interventions lead to particular **outcomes** in different **contexts**, along with the **features of interventions** that either enable or hinder change.

This section discusses 15 primary intervention studies, all of which describe interventions aiming to develop **capacity for evidence use or public sector decision making in health contexts**. Around half of the studies relate to lower and middle-income countries. The majority have observational designs, and a rapid quality assessment deemed them all medium-high quality. Most primary intervention studies did not contain explicit information on mechanisms – and so identifying these involved reading between the lines, looking for common themes and making links to the literature discussed in Sections 1 and 2. This section also draws on relevant evidence from a number of non-intervention primary studies and secondary reviews.

Despite this small evidence base, useful lessons can be distilled from these studies on *how* and *why* different interventions may have resulted in (or not resulted in) change; and the contextual and intervention factors that helped or hinder programme success. The evidence (and its gaps) also has implications for the BCURE evaluation, and more broadly for the study of capacity development for EIPM. The findings are summarised in boxes throughout this section, and in a simplified form in the conclusion. Three of the main insights are as follows:

1. A number of capacity development interventions at individual, interpersonal and organisational levels may work through promoting **self-efficacy**: improving participants' beliefs (or confidence) in their capability to perform a certain task or handle a particular situation. Training, knowledge brokers, and tools and systems may all improve self-efficacy in different ways. However, the concept of self-efficacy is just one way of understanding how learning happens, suggesting the potential merit of bringing learning theory (discussed in [Section 1.3.2](#)) more explicitly into capacity development interventions.
2. Although only a small number of studies discussed interpersonal-level interventions, these pointed towards a number of different mechanisms. Knowledge brokers and champions may promote EIPM through '**cheerleading**', through being '**transformational leaders**', or '**network facilitators**', or through exhibiting role-modelling behaviours and thus promoting '**social learning**'. One study suggests that networks may enable '**social processing**' – in which beliefs within a group shift towards a consensus – and this may lead away from EIPM as well as towards it. These different mechanisms may respond in different ways to particular intervention strategies and contextual conditions; suggesting the importance of unpicking what exactly it is a knowledge broker, champion or network is expected to do.
3. A small number of studies suggest that organisational tools and systems may work through **facilitating** behaviour change (making a person's job easier), or **reinforcing** it (through for example rewards, audit or feedback). One study suggests that EIPM tools may also lead to change by **increasing the value staff place on evidence**, through convincing them of the benefits that data can bring to decision making. A virtuous circle may emerge, in which increased use of evidence leads to greater demand based on an appreciation of its value.

This section adopts a realist approach to examine the evidence on how to build capacity among decision makers for EIPM – looking at *what works, for whom, in what circumstances, and why* (Pawson & Tilley 1997). It synthesises evidence from **primary intervention studies aiming to improve capacity for evidence use or decision making**.

Purpose and structure of this section

This section describes the **outcomes** of capacity-building interventions, the varied **mechanisms** through which interventions appeared to lead to these outcomes in different **contexts**, and the **features of the interventions** that either enable or hinder change. This evidence will be used by the evaluation team to develop ‘context-mechanism-outcome configurations’ – *theories* to help explain *how and why* specific BCURE interventions (such as training, mentoring and organisational systems development) might lead to change in different contexts. These configurations will be empirically tested through the realist evaluation of the programme, in order to draw conclusions on works to build capacity for EIPM, for whom, in what circumstances and why.

The evidence in this section is categorised in line with the BCURE Theory of Change; examining in turn capacity development interventions targeting individual-level, interpersonal-level, organisational-level and institutional-level change (as described in [Section 1.3](#)). Several interventions were multifaceted, aiming at more than one of these levels, and so are discussed across several sections.

Nature and limitations of the evidence discussed in this section

This section draws on 15 primary intervention studies as well as relevant evidence from non-intervention primary studies and secondary reviews. The evidence base discussed in each sub-section is summarised in Tables 7-10.

The discussion in this section has a number of limitations:

1. The findings are based on a **limited number of primary intervention studies**, most of which relate to training interventions. Some of the studies found were not included, either because they did not provide information about how and why interventions led to change or because they were deemed insufficient quality. The review originally intended to look beyond the literature specific to EIPM, to examine evidence from wider capacity development interventions that could provide relevant insights. However, in practice this was limited by time. This section therefore provides a detailed but partial overview of the primary intervention evidence base.
2. Most of the intervention studies discussed in this section relate to training interventions. The **evidence on other forms of capacity building is limited** – including evidence on networks, organisational systems, knowledge brokers and champions. The findings relating to these interventions are therefore based on a very small number of studies.
3. All of the primary intervention studies incorporated in this section relate to **interventions in the health field**. This raises a risk that the findings may not be generalisable to other fields, which may have smaller, more diverse and more contested evidence bases; although the inclusion of non-intervention evidence and secondary literature from other fields mitigates this risk somewhat. In addition, although around half of the studies relate to lower and middle-income contexts, many of the studies with the richest information on mechanisms and contextual/intervention features derive from higher-income countries. This suggests the need for caution in applying the findings to lower-income contexts.

4. Most studies provided significant detail on the outcomes of interventions, and discussed (in greater or lesser detail) the features of the interventions that appeared to influence results. However, **very few of the studies explicitly discussed the mechanisms** through which interventions resulted in change, or considered the contexts of the intervention in any great detail. Identifying mechanisms and relevant contextual factors therefore involved reading between the lines, looking for common themes and making links to the theoretical literature discussed in [Section 1](#), to tease out *how and why* interventions seemed to work (or not work) (Pawson 2006b). As the studies analysed below were not written for this purpose, there is some risk that certain mechanisms will have been misinterpreted, or certain contextual or intervention factors overplayed or overlooked. In addition, few studies provide enough detail to derive any insights about *who* benefits or fails to benefit from specific capacity development interventions.

5. The intervention studies considered below often draw (implicitly or explicitly) on rational and linear models of policy change. **Few studies made reference to more recent theories of EIPM discussed in Section 1.2**, which emphasise the messy, contested and political nature of evidence use in policy making, and which have broadly superseded rational and linear conceptions of evidence use in policy within the theoretical literature. This results in some disconnect between the conceptual discussion in Section 1 and the synthesis of primary studies provided below.

3.1. Individual change

Individual-level change includes individuals' development of skills and knowledge, as well as improvements in motivation, attitudes, commitment, values and personal incentives that affect individual behaviour. This section considers evidence from 11 primary intervention studies and one secondary review, summarised in Table 7 below.

Table 7. Summary of evidence relating to individual-level interventions

Source	Field	Geographical context	Type of evidence	Research approach and methods		Quality (/12) ⁸
Jacobs et al. 2014	Health	United States	Primary intervention study	Quasi-experimental	Survey: pre- and post- workshop assessments with control group	11
Matovu et al. 2013	Health	Uganda	Primary intervention study	Observational	Quarterly self-assessment and evaluation forms completed by participants; mentors' assessments	6
Pappaioanu et al. 2003	Development Studies	Bolivia, Cameroon, Mexico, Philippines	Primary intervention study	Observational	Case study of DDM project implementation	6
Peirson, Ciliska, Dobbins, & Mowat, 2012	Health	Canada	Primary intervention study	Observational	Case study: 27 semi-structured interviews and FGDs with 70 staff members; and document review	12
Pettman et al. 2013	Health	Australia	Primary intervention study	Observational	Pre- and post- training surveys plus six month follow-up	8
Rolle et al. 2011	Health	Ethiopia	Primary intervention study	Observational	Post-module surveys and end-of-course survey plus 1 FGD with 10 trainees	12

⁸ See [Methodology](#) for details on the quality assessments of primary intervention studies.

Rowe et al. 2010	Health	Liberia	Primary intervention study	Observational	Post-course survey	10
Tomatis et al. 2011	Health	Peru	Primary intervention study	Quasi-experimental	Pre- and post-course surveys with 220 course participants	10
Uneke et al. 2012b	Health	Nigeria	Primary intervention study	Observational	Pre- and post-workshop survey and focus group discussion	10
Waqa et al. 2013	Health	Fiji	Primary intervention study	Observational	Process evaluation involving pre-training semi-structured interviews and survey to assess baseline capacity. Records of training outcomes (e.g. production of policy briefs, use of templates)	9
C. J. J. Uneke et al., 2011	Health	Nigeria	Primary non-intervention study	Observational	Survey of self-reported EIPM capacities	
Walter, Nutley, & Davies, 2005	EIPM	Global (mainly developed countries)	Secondary review	Systematic Review		

Most of the studies discussed in this section report on the outcomes of training interventions, aiming to improve the capacity of public sector workers to use evidence in developing and implementing policy. The majority of studies derive from lower-income contexts.

Training was generally formal, longer term, and targeted at government officials to increase knowledge and technical or soft skills.

Nature of training: Interventions mainly consisted of standalone training courses, mostly in low-income contexts. Some interventions combined training with other support, such as mentoring (Waqa et al. 2013) or the employment of a ‘knowledge broker’ (Peirson et al. 2012).

Purpose of training: Some courses specifically aimed to **increase EIPM** (e.g. Pettman et al. 2013; Tomatis et al. 2011). For example, one course involved training in how to ask ‘answerable questions’, find evidence to answer these questions, assess the trustworthiness of evidence, integrate evidence with expertise and other factors, and evaluate activities to generate evidence to feed back into the process (Pettman et al. 2013). Other courses aimed to **build wider skills of relevance to EIPM**, including management and problem-solving skills (Rowe et al. 2010), analytical skills for health sector management (Rolle et al. 2011) and ICT skills (C. J. Uneke et al. 2011).

Length of training: Most training courses were longer term. Three were short, lasting between 1 and 5 days, and delivered in either a single burst or in a modular format over time (Jacobs et al. 2014; Tomatis et al. 2011; Pettman et al. 2013). The remaining courses were either integrated into longer-term multifaceted capacity development interventions (Peirson et al. 2012; Waqa et al. 2013), or conducted in intensive bursts of 1–2 weeks over several months (Rolle et al. 2011; Pappaioanou et al. 2003; Matovu et al. 2013).

Target groups: Participants in the training courses were mainly government officials, usually health officials, working at a national or sub-national level. Some interventions also targeted in-service health professionals and NGO workers (e.g. Matovu et al. 2013). There was very little discussion within the studies on whether some participants benefitted more than others from the training, and if so why.

Most studies provided evidence from self-assessments to suggest EIPM-related skills had improved, which can be understood through the mechanism of ‘self-efficacy’.

The majority of the studies provided evidence (mainly from pre- and post-course surveys, and in some cases only post-course surveys) that participants felt their EIPM-related **skills had improved** (Pettman et al. 2013; Rowe et al. 2010; Rolle et al. 2011; Tomatis et al. 2011; C. J. Uneke et al. 2011). Surveys mainly measured improvements in skills or knowledge; although a small number assessed broader capacity change (as discussed in [Section 1.3.1](#)) such as attitudes (Pettman et al. 2013) or ‘competencies’ (C. J. J. Uneke et al. 2011; Jacobs et al. 2014). However, self-assessments are not necessarily the most reliable measure, as individuals may over-estimate improvements in capacity (known as ‘self-esteem bias’) (Deans & Ademokun 2011) and most studies did not triangulate self-assessments with other forms of skills assessments. One study from the US reported **perceived increases in EIPM** within participants’ wider organisations, which may be subject to the same bias (Jacobs et al. 2014). Only a minority of studies provided more objective measures of skill increase or behaviour change – such as the **production of policy briefs** (Waqqa et al. 2013); **improvements in test scores** and **observed data-based recommendations/conclusions** (Pappaioanou et al. 2003), or **enhanced organisational use of evidence** as demonstrated through the development of EIPM processes and procedures (Peirson et al. 2012).

None of the studies considered in this section explicitly link training approaches to any formal models of learning and individual skills development, such as those discussed in [Section 1.3.2](#). It was therefore not clear *how* (through which mechanisms) the courses expected to result in individual learning, and which (if any) theories of adult learning they were based on. However, several studies imply that training increases participants’ confidence in their ability to apply EIPM-related skills, which can be understood in terms of the concept of **self-efficacy** discussed in [Section 1.3.2](#) (e.g. Jacobs et al. 2014; Pappaioanou et al. 2003; Rolle et al. 2011). Self-efficacy relates to a person’s beliefs about their capability to perform a particular task or handle a particular situation. For example, one training course implemented in Bolivia, Cameroon, Mexico and the Philippines resulted in teams reporting a ‘feeling of empowerment’ from the training, in that it enabled them to use data to identify and solve important health problems in their communities (Pappaioanou et al. 2003). As discussed in [Section 1](#) above, self-efficacy is one concept within a wide range of adult learning theories, and is therefore certainly not the only way to conceptualise the how training leads to behaviour change. However, there is little explicit detail in the primary studies examined here to provide an insight into what other mechanisms might be at work.

“Self-efficacy relates to a person’s beliefs about their capability to perform a particular task or handle a particular situation.”

Some studies suggest that training may also contribute to interpersonal and organisational change.

One study suggested that the course played a role in ‘paving the way’ to ‘discuss, promote and facilitate integration’ of EIPM concepts in participants’ day-to-day work – not only through developing skills, but **‘raising awareness among agency leadership’** which meant **leaders become more supportive of new efforts to integrate EIPM** into programme activities (Jacobs et al. 2014). Similarly, a study from Canada found that training (combined with mentoring and knowledge brokering interventions) resulted in **staff becoming more comfortable and familiar with EIPM**, as the ‘language’ of EIPM permeated throughout the organisation (Peirson et al. 2012). The latter study also found that training helped to **strengthen internal relationships** between staff, which links to findings in [Section 3.2](#) around interpersonal mechanisms promoting EIPM. These

interlinkages between individual-level training and change at interpersonal and organisational levels suggest the relevance of considering capacity development as multi-dimensional, as discussed in [Section 1.3.1](#).

Self-efficacy may be enabled in some contexts through use of practical and work-based projects, and linking content directly to participants' professional roles.

The studies contain limited evidence on how the style of teaching influenced course outcomes. However, several studies used some **combination of classroom-based training and on-site projects** which were linked to self-reported skill increases, such as incorporating projects in which participants were required to use their new skills to implement a work-based project or develop action plans and budgets (Rowe et al. 2010; Pappaioanou et al. 2003; Rolle et al. 2011; Matovu et al. 2013). For example, participants in a leadership course in Ethiopia consistently reported that the course was increasing their skills and confidence because the content was directly applicable to their work (Rolle et al. 2011). Another in Uganda was structured so managers could return to their institutions between modules to apply learning, which was viewed as an important feature of the approach (Matovu et al. 2013).

This provides some evidence to suggest that this style of training, along with the **direct applicability of training content to participants' roles**, helped enable the mechanism of **self-efficacy**. This approach may also be associated with **longer-term** training, although there is insufficient evidence to judge how the length of a training course affects outcomes. Although an applied model of classroom-based training plus work-based projects may not be possible for shorter courses, one study of a short course on EIPM in Australia similarly emphasised the importance of **tailoring the course to policy decision making contexts**, which was associated with increased post-course ratings of self-reported practice, knowledge, confidence and attitudes as the course content shifted over time (Pettman et al. 2013). Similarly, evidence from Fiji suggests the importance of ensuring course participants will have the **opportunity to apply EIPM skills** as part of their roles – in this case it was found that more senior participants were more likely to have the ability to use their skills in an organisational setting (Waqqa et al. 2013). Another study suggested that training was successful due in part to a **locally recognised institutional need for capacity development**; the decentralisation of health systems had opened up an 'immediate need to strengthen capacity' at sub-national levels, which was met by the very hands-on training programme (Pappaioanou et al. 2003). These findings all resonate with the learning theory of andragogy discussed in [Section 1.3.2](#), which suggests that adults learn best when they can put their learning into practice.

A cross-sector review of interventions aiming to promote evidence-based practice also found that passive approaches and interventions of **one day or less** were unlikely to result in improved skills and knowledge for EIPM. These findings link to one of the core principles of adult learning identified in [Section 1.3.2](#) – that adults need extended contact in order to assimilate learning. Courses that involved individual instruction, supportive materials and opportunities to test practice were more likely to result in increases in skills (Walter et al. 2005).

Several studies emphasise the importance of supportive organisations, and follow-up support to promote sustained behaviour change.

A number of contextual factors identified in the primary intervention studies related to the nature of training participants' organisations and work commitments. Several studies stressed the importance of participants having **supportive organisations** – particularly in terms of managers being aware of and supportive of participation, or being willing to adjust workloads to enable participants to fully engage with course activities (Waqqa et al. 2013; Jacobs et al. 2014; Tomatis et al. 2011). In a study from Fiji, this was seen as one of the factors enabling participants to achieve a course outcome (producing a policy brief), as **other work**

commitments proved a major obstacle to the ‘larger than expected’ proportion of participants who did not complete the policy brief (Waqa et al. 2013). Participants in the Ethiopia Leadership course had to balance the course with routine work assignments, partly due to a **shortage of public health professionals** in regional offices. Future courses were **shorter in length**, resulting in higher retention rates (Rolle et al. 2011).

Time and other commitments were common obstacles noted in several studies. Two studies from HICs found that **lack of time** was a major reason cited by training participants for not implementing their new knowledge (Jacobs et al. 2014; Peirson et al. 2012). In one case, a ‘**culture of doing**’ in the organisation resulted in staff feeling overwhelmed with the day-to-day demands of their jobs and unable to make space to consider evidence (Peirson et al. 2012). These findings link to evidence discussed in [Section 2.3](#), which suggested that individual lack of time to use evidence can reflect an organisational culture that does not sufficiently value or encourage evidence use.

A study from Uganda also found that work commitments presented a major risk to longer-term, modular courses, as trainees would often get absorbed back into routine workplace tasks. The intervention feature of **post-training support visits** were considered essential to mitigate this, through assisting participants in conducting successful work-based projects using their new skills (Matovu et al. 2013). Another study also emphasised the importance of post-workshop assistance in the form of ongoing mentoring support, finding that without ‘supportive follow-up and supervised application of skills, participants frequently continued to use the same work practices that they had used before’. The authors discuss an example from Cameroon where, just after a workshop on epidemics, decision makers were notified that an actual epidemic of bacterial meningitis might be occurring. Participants were ready to leave for the weekend and start the response on Monday, but the visiting trainers worked with the Cameroonian colleagues over the weekend to initiate an immediate response. The positive effects of this ‘emphasised for the trainees the importance and effectiveness of timely action’ (Pappaioanou et al. 2003).

A study from Uganda and one from Liberia found that the interventions **actively engaging participants’ organisations** to secure support and permission for trainees proved an important predictor of success in the completion of course projects (Matovu et al. 2013; Rowe et al. 2010). One study emphasised that gaining this buy-in took time; and later interventions reduced drop-out rates by **limiting admittance to trainees whose institutions made active commitments to support trainees** (Matovu et al. 2013).

Sustainable or longer-term change may be promoted by secure funding for ongoing training, a clear institutional ‘home’ for new training courses, and/or a ‘training of trainers’ approach.

In one US study, one of the two most significant reasons cited by participants for not utilising knowledge gained from training was **lack of funding for ongoing training** (Jacobs et al. 2014). These findings are supported by a study of a multifaceted EIPM capacity development programme in Canada, which found that a **decision to commit long-term core funding** to training was critical to the strategy’s success (Peirson et al. 2012). Another study emphasised the importance of **existing institutionalised training programmes** which could provide a ‘home’ and continued funding for the training in future. For example, in Mexico and the Philippines a ‘capable core group of applied epidemiologists’ already existed who could assimilate the new training into their health systems. However, in Bolivia there were no similar applied training programmes, and as a result it proved difficult to sustain capacity development efforts (Pappaioanou et al. 2003). Another study emphasised that **course participants later became trainers**, as part of the transition from external intervention to full ownership of the course by a Peruvian faculty (Tomatis et al. 2011).

Other contextual and intervention factors that may affect training include the initial skill levels of participants, the provision of practical tools, the inclusion of co-workers, and pre-existing beliefs about the importance of EIPM.

The **initial skills-base of participants** seemed to be an important contextual factor affecting intervention success in some studies. A study from Fiji found that one factor constraining the achievement of EIPM skills was the low level of initial technical capacity and awareness of course participants – which was not anticipated by course managers (Waqa et al. 2013). Similar, a training course implemented in four lower-income contexts discovered the need to build participants’ proficiency in basic quantitative skills in order for them to grasp the core course content. This proved time consuming and required longer-term concerted efforts (Pappaioanou et al. 2003).

Some studies emphasised the importance of **providing tools to support EIPM** as a feature of training interventions, in order to help participants put knowledge into practice (Pappaioanou et al. 2003; Rowe et al. 2010). For example, one study provided clear technical guidelines and training materials on how to ‘collect, calculate, interpret and use a threshold rate’ required to initiate a response to an epidemic (Pappaioanou et al. 2003). Tools for EIPM are further discussed in [Section 3.3](#).

Another US study found that one of the largest contextual barriers to implementing new skills was the fact that participants’ **co-workers were not trained**, suggesting that having a number of individuals from the same organisation attending a course created a ‘critical mass’ necessary for behaviour change (Jacobs et al. 2014). This suggests that courses aiming to promote change at an organisational level may need to consider the networks of participants as well as their roles within the organisation, in line with the theories of complex systems and multi-dimensional capacity development discussed in [Section 1.3.1](#).

Finally, a potentially interesting contextual factor highlighted in one study was that participants **already placed a high importance on EIPM**. Although not explicitly discussed by the authors, this may have contributed to course success (Jacobs et al. 2014). The same study also notes **an increase in focus on EIPM by other actors**, such as funding and accreditation agencies – possibly providing external incentives to change behaviour. This may explain why the control group in this study also saw mean increases in perceived importance of evidence use, and evidence availability (Jacobs et al. 2014).

There was limited acknowledgement of the role of politics and power in evidence use in the studies examined.

Rational and linear models of evidence use discussed in [Section 1.2.1](#) appeared to explicitly or implicitly underpin the content of several training courses – one contained content on ‘what constitutes a policy and the policy cycle’ (Waqa et al. 2013) and another provided guidance on the use of evidence at different stages which clearly align with the policy cycle (e.g. asking an answerable question; finding the evidence to answer it; assessing its trustworthiness and evaluating to feed back to the process) (Pettman et al. 2013). Other courses were focused more on technical aspects of evidence interpretation than on the political question of how to use evidence in policy processes (Tomatis et al. 2011; Rolle et al. 2011). The ‘**pluralism and opportunism**’ model of EIPM was also implicitly reflected in some studies – for example Pettman et al. (2013) acknowledge the ‘wide range of competing information inputs required for decision making’, and describe how the course they report on spent ‘proportionally more time...addressing issues in *applying* evidence’ such as ‘working in the gaps where evidence is insufficient’ and ‘strategies to support individuals to work in an ‘evidence-informed way’ in their organisations.’ However, there was little or no reference to the ‘**politics and legitimisation**’ model and associated theories, which suggest the centrality of power and politics to the processes of evidence use.

Linked to this is the observation that **studies contained limited reference to the political, cognitive, cultural and institutional factors promoting and constraining evidence use** discussed in [Section 2](#) – for example the influence of different actors and the political environment on the application of new skills in the workplace. This suggests some disconnect between the theories and empirical evidence discussed in Sections 1 and 2, and the primary intervention evidence summarised above.

Summary: in what ways does training support EIPM, how, in what circumstances and why?

This review examined ten primary intervention studies presenting evidence that professional training can lead to the outcomes of **improved individual capacity** for EIPM – understood as improvements in skills, knowledge and attitudes relating to the access, appraisal and use of evidence. Although the overall quality of studies is medium-high, the majority of studies are based on self-assessments of EIPM skills through pre- and post-course surveys, and involve limited triangulation with other sources of evidence. This raises some doubts about the reliability of the findings given the risk of self-esteem bias. Only two studies provided more objective evidence of individual and organisational **increase in the access, appraisal and use of evidence**.

Several studies suggest that training may lead to improvements in capacity through the mechanism of **self-efficacy** – by improving participants’ confidence in their capability to perform a certain task or handle a particular situation. However, none of the primary studies link training approaches to any formal models of learning and individual skills development, which may provide other ways to conceptualise the mechanisms through which training leads to behaviour change.

The studies discussed several features of training interventions and the wider context thought to contribute to the outcome of improved individual capacity:

- One of the most significant intervention features suggested as important in the literature was **combining classroom training with on-site projects**, or at least **ensuring the applicability of course content to participants’ roles**, perhaps through **providing tools to support EIPM**.
- The importance of **supportive organisations** was widely mentioned, suggesting the need to **actively engage and ensure support** when designing training courses, and to consider whether there is a **locally recognised need for capacity development**.
- Organisational support may also help mitigate the risk of **other work commitments or lack of time**, preventing individuals from putting their new EIPM knowledge and skills into practice. Some interventions also successfully addressed this risk through **post-training visits or mentoring**.
- Finally, some studies discussed the sustainability of capacity development interventions, emphasising the role of **longer-term core funding** or a **training of trainers approach** in promoting sustainability, or linking courses to **existing institutional training programmes** that can provide a long-term home for capacity development efforts.

However, these contextual factors largely reflect features of *organisational* but not *institutional* contexts. Studies contained **limited reference to political, cognitive, cultural and institutional factors** promoting and constraining evidence use, such as those discussed in [Section 2](#).

3.2. Interpersonal change

‘Interpersonal change’ refers to relationships and networks between individuals and groups, and how these influence EIPM. The studies discussed in this section are summarised in Table 8 below.

Table 8. Summary of evidence relating to interpersonal-level interventions

Source	Field	Geographical context	Type of evidence	Research approach and methods		Quality (/12)
Dobbins, Hanna, et al. 2009	Health	Canada	Primary intervention study	Experimental	Randomised controlled trial of knowledge-broker intervention	11
Dobbins, Robeson, et al. 2009	Health	Canada	Primary intervention study	Observational	Observational findings relating to above experimental study, including reflective journals	8
Gabbay et al. 2003	Health	UK	Primary intervention study	Observational	Case study drawing on observation and interviews	11
Pappaioanou et al. 2003	Development Studies	Bolivia, Cameroon, Mexico, Philippines	Primary intervention study	Observational	Case study of project implementation	6
Peirson et al. 2012	Health	Canada	Primary intervention study	Observational	Case study: 27 semi-structured interviews and FGDs with 70 staff members; and document review	12
Traynor et al. 2014	Development Studies		Primary intervention study	Experimental and observational	2 interventions discussed: a randomised controlled trial and a separate qualitative case study	10
Armstrong et al. 2013	Public Administration	Canada	Primary non-intervention study	Observational	Case study of design process for EIPM intervention	
ICAI 2014	Development studies	UK	Primary non-intervention study	Observational	Document review; analysis of DFID staff surveys; semi-structured interviews and FGDs with 92 individuals	
Nisbett et al. 2014	Health	Kenya, Ethiopia, India, Bangladesh	Primary non-intervention study	Observational	Interviews with 89 individuals	
Walter et al. 2005	Health	Global (mainly developed countries)	Secondary review	Systematic review		
Gagliardi et al 2014	Health	Mainly high-income countries	Secondary review	Systematic review		
Greenhalgh et al. 2004	Health	Global	Secondary review	Systematic review		
Liverani et al. 2013	Health	Global	Secondary review	Systematic review		
McCormack et al. 2013	Health	Mainly high-income countries	Secondary review	Other review (realist review)		
Pawson 2004	Sociology	Global, including lower-income contexts	Secondary review	Other review (realist review)		
World Bank 2015	Development studies	Global, including lower-income contexts	Secondary review	Other review		

The studies discussed in this section cover three main categories of interpersonal-level interventions: networks, knowledge brokers, and champions. These are discussed in turn below.

Networks

Networks are ‘formal or informal structures that link actors (individuals or organisations) who share a common interest on a specific issue or a general set of values’. A network might be virtual (e.g. a web-based portal) or physical (a group that meets in person), or a combination of the two (Perkin & Court 2005). This section considers four primary intervention studies containing evidence relating to networks for public sector decision making and/or practice (Pappaioanou et al. 2003; Dobbins, Robeson, et al. 2009; Gabbay et al. 2003; Peirson et al. 2012). It also draws on insights from two secondary reviews (Walter et al. 2005; Perkin & Court 2005) and two non-intervention primary studies (ICAI 2014; Armstrong et al. 2013). There is considerable wider literature relating to how networks between researchers and policy makers can result in EIPM; but this relates largely to evidence on ‘supply side’ factors promoting EIPM, which is outside the scope of this review.

“Networks are ‘formal or informal structures that link actors (individuals or organisations) who share a common interest on a specific issue or a general set of values’.”

In three of the four intervention studies, networks were created as part of a multifaceted capacity development intervention for EIPM (Peirson et al. 2012; Dobbins, Robeson, et al. 2009; Pappaioanou et al. 2003). Networks consisted of: formal clubs for staff with common interests to meet regularly (Peirson et al. 2012); settings such as workshops where decision makers and technical experts could interact (Pappaioanou et al. 2003); and a facilitated forum to connect public health decision makers across Canada (Dobbins, Robeson, et al. 2009). In all three cases, the networking aspect of the intervention was a relatively minor component. The fourth study focuses directly on how health ‘CoPs’ in the UK used evidence to formulate ideas for health and social policy change (Gabbay et al. 2003). This study is interesting, as it is one of the only empirical studies in this review that considered in detail how interactions between people shaped the interpretation of knowledge, in line with more recent theories regarding the role of relationships and networks in shaping evidence use discussed in [Section 1.2.2](#).

There is limited evidence on the behaviour-change outcomes of networks, but studies imply that networks can facilitate behaviour change through the mechanisms of ‘social learning’ or ‘social processing’.

Three of the four primary intervention studies emphasise the role of networks in promoting the outcome of **knowledge sharing or exchange** within or between organisations (Peirson et al. 2012; Pappaioanou et al. 2003; Dobbins, Robeson, et al. 2009). This outcome is also highlighted in some non-intervention primary studies (Armstrong et al. 2013; ICAI 2014). All three primary studies imply that networks play a role in facilitating the mechanism of **‘social learning’**. ‘Social learning’ is a theory discussed in [Section 1.3.1](#) – suggesting that learning happens through opportunities to discuss ideas with and observe the behaviour of others, resulting in increases in individual or collective knowledge and understanding. For example, informants in one study emphasised that formal workplace ‘clubs’ provided ‘occasions to think, exchange, train and work with colleagues’. In another intervention, regional webinars were used to connect participants from different public health organisations around the country, providing opportunities for participants to discuss EIPM

issues, identify implications of evidence for policy and practice, and develop innovative ideas to promote EIPM in their organisations (Dobbins, Robeson, et al. 2009).

One study of an intervention in four lower and middle-income contexts aiming to improve health leadership found that **bringing together researchers and policy makers** – through creating settings (e.g. workshops) where decision makers and technical experts could interact – led to the outcome of **improved understanding and communication** between decision makers and technical experts (Pappaioanou et al. 2003). The mechanism here seems to be **‘social processing,’** in which opportunities to interact led to participants’ beliefs and understanding shifting towards a consensus. The authors report that the approach ‘contributed toward decision makers understanding epidemiologic questions that were relevant to their policies or programs, and epidemiologists understanding the importance of framing an issue for a local policy or program in a social and political context’. This resonates somewhat with ideas of ‘policy networks’ and knowledge ‘co-production’ in the theoretical EIPM literature discussed in [Section 1.2.2](#), which depict actors from the policy and research worlds as working together to interpret and ‘construct’ evidence to inform decision making.

A literature review also emphasised the potential of networks to lead to the slightly separate outcome of **improved trust** between researchers and policy makers – for example the AFREPERN network, which has enabled researchers to secure confidential documents not available in the public domain (Perkin & Court 2005).

Studies suggest a number of contextual and intervention features that may increase use of networks – including external input, the support of senior management, and formal opportunities for meetings.

Although the studies discussed in this section provide limited evidence on the mechanisms through which networks can result in behaviour change, there is some evidence on intervention features and contextual factors that make networks more or less likely to be used. For example, local government staff interviewed in a qualitative non-intervention study from Australia felt that knowledge sharing was enabled by **networks with external input**, e.g. from other government agencies and academics. They also emphasised the importance of networking opportunities being attended by **senior individuals**, and felt the **support of senior management** was necessary to ensure that networking drives action (Armstrong et al. 2013). Supportive management was also emphasised by participants in DFID’s informal Urban Virtual Network, which was set up proactively by a number of DFID staff in different offices and roles who were working on common issues in urban development. This was described as providing a ‘safe space’ to discuss a topic of mutual interest (although it is not clear whether or how exactly it contributed to changes in practice). Staff commented that the network was inhibited by an absence of senior management support, meaning that it relied on the volunteered time of staff members (ICAI 2014). One study from Canada emphasised the importance of **providing formal opportunities to meet regularly** for staff with common interests (Peirson et al. 2012). Another study emphasised **strategies to enable remote participation** such as teleconferences and webinars, along with a **knowledge broker to facilitate the network** (Dobbins, Robeson, et al. 2009).

Networks can lead to evidence being interpreted by participants in ways that result in evidence non-use.

One qualitative study from the UK demonstrates the role of networks in *interpreting* the meaning of evidence, in ways that may not always result in positive outcomes (Gabbay et al. 2003). The study examined how two multi-agency Communities of Practice (CoPs) in the UK’s National Health Service processed and applied knowledge in formulating their views. The two CoPs involved health staff, members of the public and individuals from the private sector coming together to work on ‘improving specific aspects of health and social services for older people’. This study found that the groups went beyond sharing and pooling knowledge;

together they collectively ‘transformed’ the meaning of evidence, often gradually and imperceptibly over time. This appears to be an example of the mechanism of **social processing**, and again resonates strongly with theories of knowledge ‘co-production’ in policy networks discussed in [Section 1.2.2](#). In one example, a group of participants extracted portions of text from evidence sources based on cursory appraisal, and then shared what they took to be the important features with the other members – in effect transforming the evidence ‘to convey their own experience and knowledge’. These claims, which were not representative of the evidence base as a whole, then became accepted wisdom within the group. This ultimately led to the outcome of the group delivering **non-evidence-based recommendations about interventions**. The authors caution against drawing overly strong conclusions from these two small-scale case studies, which are focused more on examining the relationships and processes of knowledge translation than on the outcome. However, the findings do imply the need to consider the potentially powerful role of personal experience and group dynamics in affecting the interpretation and use of evidence within networks.

Gabbay et al. (2003) also describe several contextual factors which appeared to result in social processing leading to non-use of evidence. They found that sources of evidence – such as systematic reviews and statistical data – were more likely to be accepted and used by the group when **evidence chimed with existing experiences**, or was **communicated by a person considered an ‘expert’** or who possessed **good interpersonal and communication skills**. The former factor resonates with the theories discussed in [Section 1.2.3](#), which emphasise the role of mental models and cognitive biases in shaping how individuals understand and interpret evidence.

The study also found one contextual factor *promoting* the discussion and use of evidence by the group – **the organisational business case that required a discussion of evidence**. The study authors feel this may have resulted in the groups using more evidence than they would have done otherwise. This echoes evidence discussed in [Section 2.3](#), suggesting that individual motivation for EIPM can be promoted by evidence being clearly valued within an organisation.

Summary: in what ways do networks support EIPM, how, in what circumstances and why?

This review discussed four medium-high quality intervention studies referring to networks established to promote EIPM, alongside a number of secondary reviews and non-intervention studies. These largely suggest that networks can help promote the outcome of **knowledge sharing or exchange**, but do not specifically measure this outcome or provide evidence on *how* knowledge sharing may result in behaviour change. Networks may also **help improve understanding and communication** between different groups.

Some evidence suggests that networks may lead to change through the mechanism of **social learning**: discussing ideas with colleagues through a network provides the opportunity for people to be influenced by others. However, there is little detail on how exactly social learning might influence behaviour change through networks. Two studies also suggest that the mechanism of **social processing** contributed to change – opportunities to interact led to participants’ beliefs and understanding shifting towards a consensus. In one case, this mechanism seems to have helped **build trust** between researchers and policy makers. However, another study emphasises that social processing does not necessarily lead to improved use of evidence; it may in fact result in evidence being collectively ‘misinterpreted’ by networks, resulting in the negative outcome of **evidence non-use**.

The evidence provides limited insights into the contextual or intervention features that may make networks more likely to change behaviour. However, as with training, **supportive management** was seen to be important

to the success of networks in two studies. One study suggested that the **input of external experts and senior individuals** may also encourage participation.

One study discusses the contextual factors that influence social processing – suggesting that evidence was more likely to be accepted within a network if it **chimed with existing experience**, was **relayed by an expert** or was **communicated by someone with good interpersonal skills**. In this study, an **external incentive** in the form of an organisational business case process helped steer the group towards considering more objective evidence. These findings resonate with theories on cognitive processes and evidence co-construction in policy networks, discussed in [Section 1](#); and also with evidence from [Section 2](#) on the importance of organisational incentives in promoting evidence use.

Knowledge brokers

Knowledge brokers (KBs) are defined in this report as individuals who play a *formal* (usually paid) role in *connecting* decision makers with research and research producers. KBs are increasingly employed in health organisations to ‘link researchers and decision makers, facilitating their interaction so that they are better able to understand each other’s goals and professional culture, influence each other’s work, forge new partnerships and use research-based evidence’ (Traynor et al. 2014). KBs may work inside a policy making organisation or external to it.

“Knowledge brokers are defined as individuals who play a formal (usually paid) role in connecting decision makers with research and research producers.”

There is considerable overlap between the terms ‘knowledge broker’ and ‘champion’ in the literature, and both are variously referred to as ‘change agents’, ‘opinion leaders’, ‘facilitators’ and ‘linking agents’ (McCormack et al. 2013). There is also some overlap with **work-based mentoring**, which can be understood as an ‘interactive, facilitative process meant to promote learning and development’ (Gagliardi et al. 2014), usually involving a formal or informal relationship between staff members in an organisation and a ‘knowledgeable guide’ (Pawson 2004). Several reviews discuss the broad and diffuse nature of the evidence base on these types of interventions, which often vary drastically in context, design and their use of terminology – making it difficult to meaningfully synthesise evidence on outcomes (McCormack et al. 2013; Gagliardi et al. 2014; Walter et al. 2005).

This section discusses two primary intervention studies examining the role of KBs in promoting EIPM (Traynor et al. 2014; Dobbins, Robeson, et al. 2009). Several secondary reviews (Walter et al. 2005; World Bank 2015b; Greenhalgh et al. 2004; Gagliardi et al. 2014; Liverani et al. 2013; McCormack et al. 2013) also provide insights into the mechanisms that enable knowledge brokering to lead to EIPM-related behaviour change.

Knowledge brokers can contribute to the outcome of increased use of research evidence within organisations.

Two interventions are discussed in the two primary intervention studies considered in this section:

1. Both studies consider a randomised control trial (RCT) of a KB intervention in Canadian public health agencies (Traynor et al. 2014; Dobbins, Robeson, et al. 2009). The RCT results are reported in full in Dobbins, Hanna, et al. (2009).
2. Traynor et al. (2014) also consider a case study of a separate Canadian KB intervention – the Partnerships for Health System Improvements (PHSI) programme.

In both interventions, the KBs were external experts working within Canadian health departments to provide tailored support to health department staff, including group training, one-on-one consultation, and virtual support. The RCT found a statistically significant **increase in evidence-informed decision making** at follow-up – but only among organisations that had a low initial ‘culture of evidence use’ (measured through a staff questionnaire) at baseline. The case study also found a statistically significant increase in **individual and organisational EIPM skills and capacities** and a large and statistically significant **increase in EIPM behaviours**, although at the time of writing these results were not yet published in detail (Traynor et al. 2014).

Knowledge brokers may contribute to change through the mechanisms of self-efficacy and ‘cheerleading’ for EIPM.

In both interventions, KBs appeared to help promote behaviour change through the mechanism of **self-efficacy**. This seems to have occurred through the **direct transfer of expertise** as the KB delivered coaching and training activities which resulted in increases in knowledge and skills (Dobbins, Robeson, et al. 2009). It also appears to have occurred *indirectly*, as the KB helped to informally **build the confidence in staff** in their ability to apply EIPM skills, mitigating ‘the anxiety inherent with the uncertainty of learning something new’ (Traynor et al. 2014). This mechanism seems to have been assisted by the intervention feature of **personalised and in-person guidance and support to staff members**.

A systematic review of mentorship as a knowledge translation strategy also found evidence of the ‘transfer of expertise’ mechanism in 12 studies, in which mentors providing coaching and other professional support resulted in the outcome of **improved knowledge, skills and performance of mentees** (mainly self-reported, although three studies measured objective increases in professional skills). This study could not isolate factors of the mentoring programmes that resulted in success, but did emphasise the need for **resources to support mentoring activities**, as well as **clarity in mentoring goals** (Gagliardi et al. 2014).

KBs also appeared to play a role in *contextualising* evidence to the specific practice issues participants were facing, suggesting that KBs may build **self-efficacy** through **direct provision of relevant contextualised evidence demanded by decision makers** (relating to the ‘demand-pull’ model discussed in [Section 1.2.2](#) above) (Traynor et al. 2014). Implicit in this mechanism is the need for a context in which **decision makers actively demand evidence** which the KB can supply.

Finally, the KBs in both interventions appeared to also act as **cheerleaders** – a mechanism involving KBs **stimulating and maintaining staff enthusiasm for EIPM** (Traynor et al. 2014). Through recommending tools and resources and providing personal guidance on how to search for, identify and appraise research evidence, KBs helped to ‘maintain momentum’ among staff for skills development. Implicit in the study is that this mechanism operates in an intervention context involving **multifaceted capacity development interventions**, which incorporate other support (such as training) alongside a KB.

The personal characteristics, strategies and experience of knowledge brokers are important in enabling them to lead to change – along with their position and level of support within an organisation.

A realist review of EIPM strategies found limited evidence on how personal characteristics of ‘change agents’ (including KBs and champions) affect outcomes (McCormack et al. 2013). However, a number of other studies offer insights. Traynor et al. discussed contextual and intervention features that appear to have contributed to the increase in EIPM capacities among staff in two KB interventions – including the KB possessing **strong teaching and interpersonal skills**, which enabled the development of trusting and collaborative relationships, and **expertise in both EIPM-related skills and the health field**, which conferred credibility. The study also suggests that self-efficacy of staff members was promoted by KB’s **ability to pick up knowledge quickly**, and to

provide objective direction (Traynor et al. 2014). A systematic review of political influences on the use of evidence in health policy found that policy makers were more likely to adopt solutions proposed by research intermediaries if the **proposed solutions were compatible with the wider policy agenda** of central government, suggesting the importance of a KB with **sufficient understanding of political agendas and priorities** (Liverani et al. 2013).

Another study found that **early one-to-one contact** correlated with greater utilisation of KB services by staff members over the course of the intervention (Dobbins, Robeson, et al. 2009). A realist review of EIPM strategies in healthcare suggested the importance of KBs being **accessible and organised** and being **culturally compatible with the target group** – in terms of having a perceived connection, for example in age (McCormack et al. 2013). A systematic review also found evidence that **the reputation and professional legitimacy of the institution supplying the KB** may contribute to a KB's success (Liverani et al. 2013).

Both KB interventions discussed in Traynor et al. (2014) and Dobbins, Robeson, et al. (2009) – the RCT and the PHSI programme outlined above – seemed to benefit from the KBs being viewed as **'objective outsiders'** separate from organisational politics. However, this may raise issues of sustainability (if KBs take the knowledge with them when they leave); and the KB in the PHSI programme felt that trusting relationships with staff had been developed in part because she had **worked with them before** (Traynor et al. 2014). The main difference between the RCT and PHSI interventions was **time** – in the latter programme, the KB spent 22 months rather than 1 year in the organisation. This seems to have allowed sufficient time to build trusting and collaborative relationships, and also to conduct capacity development activities with staff (Traynor et al. 2014). In addition, a realist review of EIPM interventions found that one of the most important predictors of success was for the KB to be **embedded in the context** – which could be achieved by individuals either inside or outside an organisation (McCormack et al. 2013).

Finally, **organisational support for a KB** was seen as a crucial enabling contextual factor in both Canadian KB interventions. Occasionally EIPM work 'was not deemed a priority', and staff members were not given enough time or space in their workloads to spend time with the KB. However, the KB in the PHSI intervention helped *create* organisational support, by liaising with management to ensure staff had sufficient time to engage (Traynor et al. 2014). This suggests that a successful KB with the requisite skills can help **influence managers towards recognising the value of EIPM** in an organisation. This finding is supported by a realist review of EIPM strategies, which emphasised that KBs with good **interpersonal skills, respect, positivity and responsibility** are more likely to be able to influence managers, although this study also highlights the risks posed by KBs facing **unrealistic expectations from managers** (McCormack et al. 2013). There are also echoes of this finding in a primary study of nutrition champions, which found that although a champion's ability to influence change is shaped by the wider environment, at the same time part of what makes a champion effective is his or her ability to influence this environment (Nisbett et al. 2014).

Summary: in what ways do knowledge brokers support EIPM, how, in what circumstances and why?

KBs are defined in this report as individuals who play a *formal* (usually paid) role in *connecting* decision makers with research and research producers. This section discussed findings from two medium-high quality intervention studies (both from Canadian knowledge-broker interventions), and several secondary reviews. This evidence suggests that KBs can lead to the outcomes of **increased individual and organisational EIPM capacities**, as well as an **increased number of programmes and policies supported by research evidence** in certain types of organisations.

Both studies suggest that KBs help achieve these outcomes through the mechanism of **cheerleading** – in that they help stimulate and maintain staff enthusiasm for EIPM, including among managers. One study suggested that KBs can promote the mechanism of staff **self-efficacy**, through either formal training or coaching, or more informal support and encouragement which build staff confidence. This may involve directly supplying evidence demanded by decision makers – in line with the ‘demand-push’ model discussed in [Section 1.2.2](#).

Evidence from both primary studies as well as several secondary reviews suggests a number of features and qualities of KBs that may influence their effectiveness at achieving EIPM outcomes:

- The ability of a KB to **quickly pick up evidence** and **provide objective guidance** that takes into account wider policy agendas, implying the need for **sufficient political understanding**.
- Skills in **teaching and EIPM** (such as accessing, appraising and interpreting evidence), as well as some **background in the technical field** in question (e.g. health).
- **Interpersonal skills and qualities** such as respect, leadership, positivity and responsibility.
- **Cultural compatibility** of KBs with the target group.

Both primary studies emphasised the importance of KBs having sufficient **organisational support**. Although successful KBs are able to build this support, a basic level of managerial buy-in appears important. Finally, one study suggests that **early contact** with staff members may promote staff use of knowledge brokering services, and also that KBs benefit from **more time** in general in order to build up trust.

Champions

In contrast to KBs (who play a formal role in translating knowledge for policy makers, and are often external to an organisation) **champions** are defined in this review as people *embedded within* an organisation or institutional context, who (formally or informally) promote EIPM practices. Two primary intervention studies found through the evidence search relate to the role of champions in promoting EIPM (Pappaioanou et al. 2003; Peirson et al. 2012). Two non-intervention studies (ICAI 2014; Nisbett et al. 2014) and four secondary reviews (Greenhalgh et al. 2004; McCormack et al. 2013; World Bank 2015b; Walter et al. 2005) also provide insights into the role of champions in promoting EIPM.

The intervention studies find evidence that champions can contribute to the outcome of increased use of research evidence within organisations.

Both the intervention studies discussing champions related to multifaceted EIPM interventions, in which ‘champions’ emerged informally.

1. The first study examines the first two years of a ten-year EIPM strategy within a Canadian public health organisation. In this case, certain senior staff members (both with and without formal EIPM responsibilities) played a role in ‘championing’ EIPM within the organisation, and were considered essential to achieving the outcome of **higher visible use of research evidence and EIPM processes** (Peirson et al. 2012).
2. Another study discusses the Data for Decision Making (DDM) programme in Bolivia, Cameroon, Mexico and the Philippines; an intervention based on training and mentoring and discussed in more detail in [Section 3.1](#) above. Again, champions were not a formal part of the intervention, but ‘talented, visionary and strongly motivated senior health officials who championed DDM concepts’ were found to play an essential role in achieving the outcome of **country ownership of EIPM goals, objectives and activities** and in ensuring **improved use of evidence in health policy making** (Pappaioanou et al. 2003).

Champions (and also knowledge brokers and mentors) may influence behaviours through the mechanisms of social learning, ‘transformational leadership’ and ‘network facilitation’.

A systematic review examining the ‘diffusion of innovations’ through service organisations found that organisational innovations can be promoted by champions acting as **‘transformational leaders’, who influence, persuade and build support for change** among other members of the organisation (Greenhalgh et al. 2004). One study of a Canadian health EIPM intervention appears to demonstrate this mechanism – emphasising the role of a senior individual in catalysing, ‘steering and staying the course for change’ throughout the organisation. This individual also promoted change through **securing resources**, in the form of significant and stable funding and time for staff to dedicate to EIPM (Peirson et al. 2012). Another intervention study also emphasised the role of ‘a talented, visionary, and strongly motivated senior health official who championed [EIPM] concepts’ and who was ‘essential for country ownership of goals, objectives, activities, and project success’ (Pappaioanou et al. 2003). KBs may also act as transformational leaders – one study emphasised the role of knowledge brokers in ‘championing’ EIPM by liaising with managers and persuading them to ensure staff had enough time to meet with and learn from the KB (Traynor et al. 2014).

There is also some evidence that champions may promote change through the mechanism of **‘social learning,’** a theory of learning discussed in [Section 1.3](#) and in relation to networks above, which holds that people are more likely to change their behaviours when practices are adopted by those close to them (World Bank 2015b). For example, a systematic review of EIPM interventions emphasised the role of champions as ‘opinion leaders’ who can exert influence on the beliefs and actions of their colleagues, which in one study was found to be a key success factor in achieving the outcome of **improved learning and clinical change**. However, overall the systematic review found mixed results on the role of opinion leaders in promoting EIPM in healthcare settings (Walter et al. 2005). A realist review of strategies to promote evidence-informed healthcare also emphasised the role of knowledge brokers in modelling EIPM behaviours that others in the organisation copy, which is more likely to lead to change in contexts where the KB has **gained the respect of staff members by demonstrating leadership** (McCormack et al. 2013).

A secondary review also suggested that change can be promoted through the mechanism of **‘network facilitation’**, in which champions **develop cross-functional coalitions among different groups** within the organisation (Greenhalgh et al. 2004). A non-intervention study of nutrition champions in Bangladesh, Ethiopia, India and Kenya demonstrates this mechanism – finding that the most effective champions actively sought to bring different groups of stakeholders together (in different ways depending on the country context, discussed further below) (Nisbett et al. 2014).

The personal characteristics, strategies and experience of champions are important contextual factors enabling them to lead to change – along with their position within an organisation or society.

Two intervention studies emphasise the importance of the **seniority** of champions; particularly in relation to the **transformational leaders** mechanism (Pappaioanou et al. 2003; Peirson et al. 2012). The individuals described as ‘champions’ in non-intervention studies are frequently senior members of organisations or institutional environments – for example DFID’s Chief Scientist **established new EIPM practices** within the Research and Evidence Division by **bringing in external experiences** from the health field (ICAI 2014; see also Nisbett et al. 2014). However, one systematic review found evidence that opinion leaders do not always need to have leadership roles to promote **social learning** – rather, it seemed important that they came from **the appropriate level of an organisation** at different stages (e.g. experts at early stages of an intervention, and peers during implementation) (Walter et al. 2005).

Another non-intervention study of nutrition champions in Bangladesh, Ethiopia, India and Kenya found that champions were viewed as particularly effective in mobilising and influencing others (acting as **network facilitators**) to act on nutrition when they demonstrated '**post-conventional**' stages of personal development; for example they were able to recognise assumptions and the presence of dynamic systems, and were able to deal with complexity and a lack of certainty (Nisbett et al. 2014). Similarly, a study of a Canadian health intervention emphasised the importance of champions' '**vision and commitment**' and **unwavering support for EIPM**, which also seemed linked to their role as **transformational leaders** (Peirson et al. 2012).

The study of nutritional champions also highlighted the importance of the **institutional location of champions**, closely linked to the **political and policy environment**, in enabling champions to act as **network facilitators**. For example, it was only in India that members of civil society were clearly viewed as influencing change; in Kenya key individuals within government were seen as the most important; and in Ethiopia very few individuals were considered influential, potentially reflecting a more authoritarian political structure (Nisbett et al. 2014). This study also suggested that champions used and moulded networks in different ways to build coalitions around issues, depending on the context. For example, the nutrition network in Bangladesh was relatively fragmented, and individuals cited as being the most effective in terms of contributing to positive changes in nutrition policy were able to span separate domains. In Kenya, leaders contributed to 'building a more mature network', facilitating participation in it, and then leveraging it to bring about change. In India, leaders demonstrated an ability to cross boundaries between civil society, academia and the state (Nisbett et al. 2014). These findings relate strongly to EIPM theories of 'policy networks' discussed in [Section 1.2.2](#), which suggest that researchers, policy makers and other groups (such as members of civil society and the media) often work together across professional divides, bound by shared value systems, political interests or specific problems.

Finally, interview respondents in one Canadian study raised concerns relating to the **stability and continuity of champions**, which was seen as necessary to give time for EIPM to become embedded throughout the organisation. One respondent said 'If a new Medical Officer of Health ... came in and said "we're not going to do this," people wouldn't rally up and say "you can't take that from us, that's ours and we own that." It's not there yet' (Peirson et al. 2012).

“Champions are defined as people embedded within an organisation or institutional context, who (formally or informally) promote EIPM practices.”

Summary: in what ways do champions support EIPM, how, in what circumstances and why?

Champions are defined in this review as people *embedded within* an organisation or institutional context, who (formally or informally) promote EIPM practices. This section discusses evidence on the role of champions in promoting EIPM from two medium-high quality intervention studies, two primary non-intervention studies and four secondary reviews. In both intervention studies, 'champions' emerged informally (rather than as an official part of the intervention). These studies considered champions to be essential in achieving the outcome of **improved use of evidence within organisations or institutional environments**.

The literature suggested three main mechanisms that enabled champions to promote increased use of evidence, and provided insights into the contextual factors which enabled these mechanisms.

First, some studies suggest that champions can bring about change through the mechanism of **transformational leadership** – building support for change within an organisation, or securing new resources.

The personal characteristics, strategies and experience of champions appear to be important contextual factors in enabling them to lead to change – with various studies emphasising the importance of **vision, commitment and dedication** to EIPM, champions’ **seniority**, their **stability and continuity** within an organisation, and their ability to **apply external learning** from a different job or field within a new context.

Two secondary reviews shed light on a second mechanism that may enable champions to lead to change; that of **social learning**, in which people modify their behaviours when they are adopted by those close to them. This mechanism was also found in relation to networks, and links to the ‘role modelling’ or ‘opinion leading’ role of champions. One study suggests that seniority is not necessarily the most important factor – instead it may be more important for **champions to exist within ‘appropriate levels’ of an organisation** at different stages of an intervention, with peers potentially more influential when change is underway.

Finally, one study suggests that champions may act as **network facilitators**, developing coalitions between different groups or individuals. This study found that network facilitation is affected by the **institutional location** of champions and the **wider political environment**, which affect the kinds of networking strategies that champions can successfully employ. This evidence resonates with theories of policy networks discussed in [Section 1.2.2](#) above; which suggest that evidence use in policy processes is influenced by a wide and fluid range of actors working both within and outside government.

3.3. Organisational change

Organisational change refers to change in the systems, policies and procedures, practices, culture or norms within an organisation. This section draws on evidence from five primary intervention studies, six non-intervention studies and three secondary reviews – as summarised in Table 9 below.

Table 9. Summary of evidence relating organisational-level interventions

Source	Field	Geographical context	Type of evidence	Research approach and methods	Quality (/12)	
Dobbins, Robeson, et al. 2009	Health	Canada	Primary intervention study	Observational	Observational findings relating to above experimental study, including reflective journals	8
Gabbay et al. 2003	Health	UK	Primary intervention study	Observational	Case study drawing on observation and interviews	11
Nutley et al., 2013	Health	Kenya	Primary intervention study	Observational	13 IDIs with tool users and non-users	10
Peirson et al. 2012	Health	Canada	Primary intervention study	Observational	Case study: 27 semi-structured interviews and FGDs with 70 staff members; and document review	12
Yost et al., 2014	Health	Canada	Primary intervention study	Observational	Reflective diaries kept by KBs, semi-structured interviews, document reviews	12
ICAI 2014	Development studies	UK	Primary non-intervention study	Observational	Document review; analysis of DFID staff surveys; semi-structured interviews and FGDs with 92 individuals	
Shaxson, 2014	Public Administration	UK	Primary non-intervention study	Observational	Case study of organisational development process	
Waldman, 2014	Development Studies	Afghanistan, Nepal, Sierra Leone	Primary non-intervention study	Observational	52 in-depth interviews and field visits	

Gagliardi et al 2014	Health	Mainly high-income countries	Secondary review	Systematic review
Walter et al. 2005	Health	Global (mainly developed countries)	Secondary review	Systematic review
World Bank 2015	Development studies	Global, including lower-income contexts	Secondary review	Other review

The findings can be categorised into evidence on EIPM ‘tools’, and evidence on broader EIPM ‘systems and incentives’. Organisational ‘tools’ include checklists, guidance notes, assessment criteria and templates, designed to help individuals search for, assess and interpret evidence. Organisational ‘systems’ for EIPM are broader; including processes, procedures and events at an organisational level that promote access, appraisal and use of evidence. These may include strategic plans, committee meetings, performance measures and programme approval processes.

Organisational tools

Two intervention studies considered the role of ‘tools’ to assist with EIPM.

1. One examined a Canadian EIPM intervention in three public health organisations, assessing how well checklists, guidance notes, assessment criteria and templates helped individuals search for, assess and interpret evidence (for example, a data extraction table helping users to extract relevant information from systematic reviews) (Yost et al. 2014).
2. Another study examined how the District Health Profile (DHP tool) affected health decision making in Kenya (Nutley et al. 2013). The DHP tool aggregated and analysed health data from a number of different reporting spreadsheets, to automatically produce reports and graphs in response to 11 priority health questions (e.g. ‘are HIV positive individuals who are eligible for treatment receiving treatment?’).

EIPM tools such as guidance, templates, checklists and assessment criteria can result in improved capacity by facilitating behaviour change, increasing self-efficacy, and increasing the value staff place on evidence.

The Canadian study found that tools were perceived by staff as helping to keep EIPM practices ‘on track’ by providing a structure and concrete process for public health officials to follow (Yost et al. 2014). The tool therefore appears to have resulted in change through the mechanism of **facilitation** – enabling or facilitating staff to adopt EIPM behaviours, which led to the outcome of self-reported **improvements in individual capacity and use of evidence in day-to-day work**. This mechanism is underpinned by change management theories, which ‘emphasise the importance of enabling strategies providing practical assistance for individuals and groups to change’ – for example, by providing technical, financial, organisational or emotional support (Walter et al. 2005). Similarly, the study of the decision support tool in district health decision making in Kenya found that the tool seemed to work by making users’ existing work easier and more efficient – leading to the outcome of **improved data analysis, review and interpretation at a district level**, which in turn enabled staff to solve problems resulting in **better health services** (Nutley et al. 2013). The facilitation mechanism is also evident in a systematic review of interventions to promote EIPM, which found that computerised support

“Organisational ‘tools’ include checklists, guidance notes, assessment criteria and templates, designed to help individuals search for, assess and interpret evidence.”

systems can result in the outcome of **improved evidence-based health practice** by *removing barriers* to the use of evidence (Walter et al. 2005).

In the study of the Canadian intervention, tools also seemed lead to change through the mechanism of improving staff **self-efficacy**; increasing staff confidence to use EIPM processes by providing step-by-step guidance (Yost et al. 2014). Another interesting mechanism is discussed in this study, suggesting that tools **increased the value staff placed on evidence** by improving people's confidence in the findings they gathered through tools. Similarly, in Kenya, use of data in the tool by decision makers resulted in increased demand for additional data – a 'virtuous cycle' – by flagging up areas where more data was required that was not currently contained in the tool. The authors suggest that that 'the use of the DHP tool may result in a deeper understanding of the value of data in decision making and in turn result in improved attitudes about the usefulness of data in general' (Nutley et al. 2013).

Contextual factors enabling the success of EIPM tools include pre-existing motivation for EIPM, sufficient ICT literacy, and sufficient instruction and support.

Explicit in the Kenyan study and implicit in the Canadian one is the suggestion that tools help people to do what they are already doing better – implying that **pre-existing EIPM values and practices** are present in the context for tools to build on. This is highlighted by one interview respondent in the study by Yost et al. (2014), who enthused: 'Finally! I'm getting the tools that I need to do the work that I think is the work that I'm supposed to be doing!' A respondent in the Kenya study also 'pointed out that data has to be appreciated in order to embrace [the tool's] usefulness'. Tools also require a **sufficient level of ICT literacy** in order to access and use them effectively – something that requires particular consideration in lower and middle-income contexts where these skills may be especially low (C. J. Uneke et al. 2011). A **low level of skills** in the Kenya study was highlighted as a constraining contextual factor affecting use of the tool, along with a **lack of technological infrastructure** (computers and printers). **Capacity support** was therefore found to be an important intervention feature enabling use of the tool (Nutley et al. 2013), also emphasised by Yost et al. (2014).

The Canadian study also emphasises the importance of several intervention features to promote tool effectiveness, including **simple and clear instructions** and the **accessibility** of tools (e.g. they are easy to find, available online, quick and easy to download, and available in editable Microsoft Word and PowerPoint formats rather than PDFs), and the **relevance and timeliness of tools** to current and anticipated work. This particular intervention also included a **KB who provided support to staff members** to help them use tools effectively (Yost et al. 2014).

Organisational systems and incentives

Two primary intervention studies explicitly considered the role of organisational systems change in promoting EIPM within organisations.

1. One study of a Canadian EIPM strategy in a public health organisation discussed the impact of incorporating EIPM into strategic plans, committee meetings and conferences (Peirson et al. 2012).
2. The second study discusses an RCT of a KB intervention in Canada, in which the KB promoted the inclusion of EIPM components in performance measures, and encouraged managers to require staff to provide evidence to support recommendations while posing critical questions (Dobbins, Robeson, et al. 2009).

In both these studies, changes to systems were part of a broader multifaceted capacity development intervention involving other strategies such as training and knowledge brokering (discussed earlier in this section). Neither study provides much detail on how the organisational systems components of the intervention specifically resulted in change.

Studies suggest that organisational systems may result in change through the mechanism of self-efficacy, as well as through *facilitating* EIPM behaviours and *reinforcing* them.

The study of the Canadian EIPM strategy stressed that systems changes helped staff become more comfortable and familiar with EIPM as its language ‘permeated’ throughout the organisation. One interview respondent claimed ‘staff are more comfortable using the terminology...It’s in their minds, in their conversations’ (Peirson et al. 2012). This suggests that change at an organisational level can play a role in promoting **self-efficacy** and, in doing so, lead to the outcome of **improved individual capacity for EIPM**, perhaps particularly when **combined with other forms of capacity development** as in this particular intervention. This study also suggested that systems could be used to **facilitate EIPM behaviours**, similarly to the tools discussed above. For example, interview informants talked about the role of annual reviews in making practice into a routine, suggesting that EIPM concepts should be added to the review process. However, it is not clear from the study how far the mechanism of facilitation contributed to the observed outcome of **enhanced EIPM within the organisation**. The facilitation mechanism also seems to have been in play within the UK’s Department of Farming and Rural Affairs – in which systems and budgetary processes were developed to help provide a structure for how evidence should be used and handled, helping lead to the **embedding of EIPM principles in the organisation** (Shaxson 2014).

Peirson et al. also suggest the role of organisational systems in **reinforcing EIPM behaviours**; a mechanism involving positive reinforcers (e.g. rewards) or negative ones (e.g. audit and the risk of negative feedback) acting to influence behaviours and actions. The reinforcement mechanism is based on behavioural learning theories; the idea that behaviour can be influenced by controlling external factors (discussed in Section 1.3.1, and in Walter et al. 2005). For example, the study emphasised the importance of including EIPM expectations within performance, accountability and incentive structures, such as individual performance objectives (Peirson et al. 2012). Including EIPM components in performance measures was also encouraged by knowledge brokers in the study of the KB intervention, although the results do not suggest how this aspect of the KB’s work helped contribute to the ultimate outcome of **improved capacity for EIPM** and (in certain organisations) **more evidence-based policies** (Dobbins, Robeson, et al. 2009; Dobbins, Hanna, et al. 2009). Interesting evidence on the reinforcement mechanism is also discussed in the 2015 World Development Report, which summarises evidence suggesting that ‘non-instrumental incentives’ such as status and recognition can be as effective as monetary incentives in motivating people to exert effort. Two examples from Switzerland and Zambia suggest that the outcome of **improved workplace performance** resulted from staff being promised ‘non-instrumental’ awards for good performance, such as a personal thank you from the manager, or a publicly presented chart to represent sales (World Bank 2015b).

A non-intervention study examining the use of evidence by DFID advisers suggests that the ‘business case’ process resulted in the outcome of **greater use of evidence in the organisation** (Waldman 2014). Staff were required to complete a ‘business case’ template, including sections for appraising evidence, in order to secure funding for new programmes. This appeared to work through both the **facilitation** and **reinforcement** mechanisms – by providing a template to guide staff through the process of appraising and applying evidence, and also by setting standards that a programme design must meet in order to receive approval. The study identified the business case as a ‘major factor causing staff to seek out relevant research to justify their planned programmes’ (Waldman 2014).

Systems (such as ‘business cases’) to promote EIPM may also result in negative outcomes.

[Section 2.1](#) discussed evidence suggesting that, in contexts where evidence is valued, this can encourage its use as a ‘weapon’ to confer legitimacy on decisions. The primary evidence on organisational systems sheds more light on this barrier to evidence use and the mechanisms which potentially explain it.

Waldman’s study of the use of evidence by DFID advisers in fragile states pointed to some unintended consequences of business cases – policy makers ‘**recycling**’ evidence from previous successful cases in order to improve the likelihood of approval, and inserting widely used terms and concepts in order to **secure ‘brownie points’ with senior management** (Waldman 2014). These responses appear to be negative manifestations of the **reinforcement** mechanism – organisational systems created perverse incentives for staff to ‘misuse’ evidence. Waldman found a large amount of ‘symbolic’ use of evidence in the business case process (a model from the EIPM conceptual literature in which evidence is used to support pre-existing positions, discussed further in [Section 1.2.1](#)). This was ‘understood as being wholly normal practice.’ This review found little evidence on how systems can be designed to avoid perverse incentives, although one report suggested that **independent quality assurance** of DFID business cases has helped improve the use of evidence over time (ICAI 2014).

As well as creating perverse incentives, organisational systems may actually **hinder the facilitation mechanism** by making it more difficult to use evidence effectively. For example, one report mentions the ‘**unwieldy and overly bureaucratic**’ nature of the business case process, which it feels presents a **barrier to organisational learning** (ICAI 2014).

Finally, a study of CoPs in the UK discussed in [Section 3.2](#) above (Gabbay et al. 2003) suggests that without the contextual factor of **existing commitment to and belief in the importance of research evidence**, the business case process did not fully change behaviour – although it did force CoPs to consider evidence more than they may otherwise have done. The study found ‘there always remained a tension’ between the need to construct a business case using evidence, and the ‘default setting in which personal experience was highly valued by the CoPs.’

Summary: in what ways do organisational tools and systems support EIPM, how, in what circumstances and why?

This section draws on evidence from five primary intervention studies, six non-intervention studies and three secondary reviews. The evidence suggests that tools and systems can lead to the outcomes of **improved individual capacity and use of evidence**, for example by improving data analysis, review and interpretation; and in one case resulting in **improved evidence-based health practice**.

Tools and systems appear to lead to these outcomes through two main mechanisms: facilitation, and reinforcement. Firstly, two studies suggest that tools and systems can work through **facilitating staff to adopt EIPM behaviours**, by providing resources and processes that enable and support people to change their behaviour, or make people’s jobs easier. Linked to this, two studies suggest that tools can **promote self-efficacy** – for example by providing step-by-step guidance that increases an individual’s confidence in her ability to successfully access, appraise or apply evidence; or in a more subtle way by helping to permeate the language of EIPM throughout an organisation, making it an accepted part of the culture. Two studies also suggest that tools may **increase the value staff members place on evidence**, for example through deepening their understanding of the benefits data can bring to decision making.

Secondly, two studies suggest that organisational systems may work by **reinforcing EIPM behaviours** – through positive reinforcers (rewards) or negative ones (e.g. audit and the risk of negative feedback) influencing individual choices and actions. However, one study suggests that using systems to reinforce behaviour may create perverse incentives, for example to recycle evidence, use evidence symbolically to support pre-existing positions, or include widely used terms to secure ‘brownie points’ with managers. This builds on findings discussed in [Section 2.1](#), suggesting that organisational incentives can act as a barrier to effective EIPM.

A variety of studies suggested a small number of contextual and intervention features that influenced the success of organisational tools and systems for EIPM:

- **Low levels of skills and limited technological infrastructure** can constrain the successful use of tools, particularly in low-income contexts. **Capacity support** is important to enable their successful use.
- The use of tools may be promoted by providing **simple and clear instructions** and ensuring **easy accessibility** and the **relevance and timeliness of tools** to current and anticipated work.
- Systems to promote EIPM may be improved by ensuring they are **not overly time consuming or bureaucratic** – factors that can present a barrier to learning. Incorporating **independent quality assurance** into EIPM systems may also reduce the risk of symbolic use of evidence, or using evidence to secure ‘brownie points’.

3.4. Institutional change

Institutional change refers to change in the wider operating environment of individuals or organisations. This includes change within civil society and the media, as well as broader social change (e.g. in culture, norms, collective beliefs, attitudes, values) and change in external influencing factors (e.g. global events, political and economic factors, donor influence). While several BCURE projects work with civil society, the programme does not involve institutional-level interventions (an example might be providing capacity development to CSOs or journalists, to help them advocate for EIPM). Evidence on institutional change was therefore a relatively minor part of this review.

The database and snowball searches found limited evidence on capacity development interventions focused on the wider enabling environment (e.g. civil society, the media and the general public), with the aim of promoting EIPM. Most evidence considering institutional factors affecting EIPM related to features of the institutional environment that promoted or constrained EIPM, and is discussed in [Section 2.4](#) above.

However, due to time constraints this review did not consider the broad literature on empowerment and accountability, which is likely to contain some useful insights. For example, evidence is emerging to suggest that **providing seed funding, capacity development and relationship brokering support to small groups of local actors** to enable them to use evidence and conduct advocacy can result in **policy influence and policy change** (DFID 2014b). This approach clearly links to the theory of ‘policy networks’ discussed in [Section 1.2.3](#), as it focuses on bringing together various actors from different spheres (including academics, government employees wearing a non-government ‘hat’, and activists) who are united around an issue (e.g. on state budget advocacy) and who have some influence, rather than drawing a divide between ‘researchers’ and ‘policy makers’.

3.5. Policy change and policy quality

The BCURE [Theory of Change](#) hypothesises that a combination of changes at individual, organisational, network and institutional level will catalyse demand for and use of evidence among targeted stakeholders.

This will result in **policy change**, with policy and practice being increasingly informed by evidence. This in turn will lead to improved **quality** of policies and programmes.

This review located a number of papers with insights into the impact of interventions on policy change and policy quality. However, these papers largely focused on the **impact of specific research findings on policy change**. This ‘supply-side’ evidence was examined in a recent literature review (Newman 2014), which highlighted several collections of case studies detailing ways in which research findings have led to policy change and development impacts (Court & Young 2003; Carden 2009). This literature lies outside the scope of this review, which instead aims to examine the ‘demand side’ evidence on how and in what circumstances *capacity development interventions* for EIPM have resulted in policy change and improved policy quality.

Five primary intervention studies discussed in Sections 3.1-3.4 present evidence of policy change and improvements in policy quality as a result of capacity development interventions; while one further study provides evidence that CoPs did *not* lead to positive outcomes. Most of these studies did not explicitly attempt to measure the extent of policy change or improvements in policy quality as a result of the interventions – mainly focusing on measuring improvements in capacity, or changes in behaviour (discussed above in Sections 3.1–3.4). The evidence on policy change and policy quality from these studies therefore largely consists of ad hoc examples rather than systematically measured outcomes, and so it is not clear how representative these examples are of overall project success. The studies also provide little insight into *how* change happened at a policy level, or the *contextual* and *intervention conditions* that helped enable change at this level.

The limited evidence available from the six studies is summarised in Table 10, according to whether it relates to change in **policy processes, policy decisions or actions, and policy outcomes** – three aspects of the broad definition of policy adopted in this review, and discussed in [Section 1.2](#). (see Hallsworth et al. 2011; Jones 2009; Cloete & De Coning 2011; Dunn 2012):

- The quality of **policy processes** refers to factors such as the efficiency, productivity, scheduling, participation and timeliness of the processes used to make decisions and take actions.
- The quality of **policy decisions and actions** refers to the internal logic of the theory underpinning the decision or action; for example its level of compliance with current knowledge, its relevance, or its feasibility.
- The quality of **policy outcomes** refers to *what happens as a result* of a policy decision or action – its impacts on different groups of people.

These three ‘levels’ of policy quality have their limitations. As [Section 1.2.4](#) discussed, defining ‘policy quality’ is a challenge as existing definitions are often rational in nature and based on linear conceptions of policy processes, which several EIPM sources examined in [Section 1.2.1](#) reject as unrealistic. These definitions are therefore viewed as a starting point for understanding ‘policy quality’, which the evaluation team will aim to further develop and nuance as the evaluation progresses.

Table 10. Summary of empirical findings relating to policy change and policy quality

	Nature of policy change		
Source	Policy processes	Policy decisions/actions	Policy outcomes
Dobbins, Hanna, et al. 2009		Statistically significant increase in evidence-informed decision making among a sub-set of health organisations	

Gabbay et al. 2003		Negative outcome: observational evidence that CoPs made recommendations that did not make full use of available evidence	
Nutley et al., 2013			Self-reported improvements in the targeting and planning of health services among tool users
Jacobs et al. 2014		Examples in survey responses of health programmes being selected based on evidence	
Peirson et al. 2012	Reports of evidence reviews being used to inform health decision making		
Pappaioanou et al. 2003	Reports of increased use of evidence in health policy making		Anecdotal example of district health officers averting an epidemic using new skills

Improvements in policy processes

Two studies provide evidence that capacity development interventions led to improvements in policy processes. One study of a multifaceted EIPM strategy in a Canadian health organisation found evidence that progress was being made towards ‘becoming an evidence informed decision making organisation’ – for example inclusion of explicit standards and expectations around evidence use in planning processes. The study suggested that ‘**reviews using the new methods and tools were being completed and used to inform decision making**’, but does not provide any detail on specifically *how* evidence was informing policy change (Peirson et al. 2012). Another study of the DDM programme in Bolivia, Cameroon, Mexico and the Philippines (mainly involving training and mentoring) suggested that the training resulted in **improved use of evidence in health policy making**; although this change was not systematically measured (Pappaioanou et al. 2003).

However, in both studies the increased use of evidence in policy processes is viewed as a positive end in itself. Neither of these studies examine *how* evidence has improved the quality of processes (for example, by making them more efficient, productive or participatory).

Improvements in policy decisions or actions

Three studies provide evidence relating to the quality of policy decisions and actions. One study of an EIPM training course in the US found that 45% of participants felt that EIPM had increased within their agency since completing the training. Examples provided by survey respondents included **programmes being selected based on evidence** (Jacobs et al. 2014).

Another RCT of a knowledge-broker intervention found a **statistically significant increase in evidence-informed decision making** at follow-up, but only among organisations that had a low initial ‘culture of evidence use’ (measured through a staff questionnaire) at baseline. This finding was reached by combining two measures of EIPM (Dobbins, Hanna, et al. 2009):

- The extent to which evidence was considered in a recent planning decision, as reported by staff members.
- The number of evidence-based policies and health interventions that were being implemented pre- and post-intervention, out of a list of 11 interventions selected by the evaluation team based on systematic review evidence.

However, implicit in these findings is the assumption that policy decisions and actions are matter-of-factly *better* when they are selected based on evidence; which a range of conceptual literature discussed in [Section](#)

1 suggests may be an oversimplification given the messy, political and contested nature of evidence use in policy processes.

Finally, Gabbay et al. (2003) examined the workings of two CoPs in the UK's National Health Service, presenting evidence of a capacity-building intervention that did *not* result in more evidence-informed practice. This study found that 'the CoPs did not follow the conventional tenets of an evidence-based model of practice, despite considerable efforts (e.g. facilitation, agenda structuring, library services) to help them to do so.' Rather, as discussed in [Section 3.2](#) above, personal experience, trust in expert opinion and persuasive communication were more important in getting evidence accepted by the group. This ultimately resulted in the groups **making recommendations that did not make full use of the research evidence available to them.**

Improvements in policy outcomes

Two studies provide evidence of improvements in policy outcomes as a result of capacity development interventions. However, in both cases the evidence on improved outcomes is fairly thin and anecdotal rather than deliberately or systematically measured.

One study relates to the DDM capacity development project, which largely involved training for health decision makers. The study provides an anecdotal example of improved policy outcomes, when Cameroon district health officers involved in the training used their new skills to detect an impending meningitis epidemic (with the help of visiting DDM consultants) through the analysis of surveillance data. As a result, participants **averted a large scale epidemic** (Pappaioanou et al. 2003).

In another study examining the impact of a tool for health decision making in Kenya, interview respondents provided examples of the tool leading to programme improvements. Health staff reported that the tool had enabled them to identify trends and problems, resulting in **improvements in the targeting and planning of services**. Specific examples of change included increases in the number of mothers delivering babies at health facilities, and increases in the number of staff and testing kits (Nutley et al. 2013).

Summary: in what ways can capacity development interventions promote policy change and improvements in policy quality, how, in what circumstances, and why?

This section draws on six primary intervention studies providing evidence relating to policy change and policy quality. However, most of these studies did not explicitly aim to measure these outcomes, and so this evidence is sparse and generally ad hoc rather than systematically measured.

Two studies provide evidence that capacity development lead to improvements in the **quality of policy processes**: in that training resulted in increased use of evidence in decision making. However, both studies view evidence use as a positive end in itself, rather than shedding light on *how* evidence improved the quality of processes (for example, by making them more efficient, productive or participatory).

Three studies provide evidence relating to the **quality of policy decisions and actions**. Two provided evidence that capacity development resulted in an increased number of programmes being based on evidence. However, implicit in these findings is the assumption that decisions and actions are inherently better when they are selected based on evidence; which [Section 1](#) suggests may be an oversimplification given the messy, political and contested nature of evidence use in policy processes. A third study presented less positive results, finding that an EIPM intervention involving CoPs ultimately resulted in **recommendations that did not make full use of the evidence available**, because personal experience and group dynamics proved more influential than concerns over the objectivity and representativeness of evidence.

Finally, two studies provide evidence of improved policy outcomes as a result of capacity development interventions – the **averting of an epidemic** following EIPM training, and **improvements in the targeting and planning of health services** as a result of using a decision support tool. Again, in both papers the evidence on improved policy outcomes is fairly thin and anecdotal rather than deliberately or systematically measured.

3.6. Conclusions and implications for the BCURE evaluation

This section has investigated *what works* to build capacity among decision makers for EIPM, *for whom, in what circumstances, and why*. Overall, the evidence on capacity development for EIPM is limited and the majority of papers relate to training courses narrowly focused on improving individual skills and capacity. Many studies do not explicitly discuss mechanisms, consider contextual factors in any great detail, or provide disaggregated information to look at *who* benefits or fails to benefit from capacity development interventions.

Despite these limitations and the small evidence base, useful insights can be distilled from the studies considered in this section on *how* and *why* different interventions may have resulted in (or not resulted in) change, and the contextual and intervention factors that helped or hinder programme success. The mechanisms identified need further refinement and testing, especially in light of the very small evidence base behind certain findings. However, they do provide a useful starting point for the BCURE evaluation, helping to identify the potential ways in which BCURE activities might result in change. They may also be of interest to other policy makers and practitioners grappling with the challenge of building capacity for EIPM; in helping think about not only what types of intervention might be appropriate, but *how* and *why* they might work.

The main outcomes, mechanisms, and contextual and intervention factors discussed in this section are summarised below.

Individual-level interventions: training. Eleven primary intervention studies and one secondary review provide evidence suggesting that professional training can lead to **self-reported improvements in individual capacity** for EIPM, including improvements in individual skills, knowledge and attitudes relating to the access, appraisal and use of evidence. However, there are some reliability issues with self-reported measures, and only a few studies provided more objective evidence that training **influenced EIPM behaviours** (for example improving decision making or resulting in the completion of an EIPM-related task).

The evidence suggests that training may lead to improvements in capacity through the mechanism of **self-efficacy**, by improving participants' beliefs (or confidence) in their capability to perform a certain task or handle a particular situation – although other models of learning may provide valid alternative ways to conceptualise the mechanisms at work within training interventions. Combining classroom training with on-site projects, and actively engaging participants' organisations, were two intervention features frequently linked to training success; especially as supportive organisations seemed to be an important contextual factor influencing the impact of training. The risk of other work commitments or lack of time inhibiting changes in behaviour may potentially be mitigated by post-training mentoring.

Interpersonal-level interventions: networks. Evidence from four primary intervention studies, two non-intervention studies and two secondary reviews suggests that networks for EIPM may **promote knowledge sharing or exchange**, although most studies do not discuss whether or how this results in behaviour change. Some evidence suggests that networks involve a mechanism of **social learning**: discussing ideas with colleagues providing the opportunity for people to be influenced by others. There is little detail on intervention or contextual factors that might make networks successful, although supportive management and the input of external experts or senior individuals may encourage people to participate.

In providing opportunities for participants to interact, two studies suggest that networks may also result in individuals' beliefs shifting towards a consensus, through the mechanism of **social processing**. However, one study finds that social processing does not necessarily lead to improved use of evidence; it may in fact result in evidence being collectively 'misinterpreted' by networks, resulting in non-evidence-based recommendations. In this study, evidence was more likely to be accepted and processed if it chimed with existing experience, was relayed by an expert, or was communicated by someone with good interpersonal skills.

Interpersonal-level interventions: knowledge brokers. KBs play a *formal* (usually paid) role in *connecting* decision makers with research and research producers. Two primary intervention studies and several secondary reviews suggested that KBs can **increase individual or organisational capacity and promote behaviour change**. Both primary studies imply that KBs may influence change through the mechanism of **cheerleading**, stimulating and maintaining staff and managerial enthusiasm for EIPM. One study also suggests KBs may work through promoting **self-efficacy** either through formal training or informal encouragement. The literature suggests a number of skills and qualities that a good KB should possess, including the ability to quickly pick up evidence and provide objective guidance that takes into account wider policy agendas; skills and knowledge in teaching, EIPM and the technical field in question; and interpersonal skills such as respect, leadership, positivity and responsibility. In terms of contextual factors, organisational support was highlighted as crucial by both primary studies. Although successful KBs are able to build managerial support, an initial level of buy-in appears to be important.

Interpersonal-level interventions: champions. Champions are people *embedded within* an organisation or institutional context, who (formally or informally) promote EIPM practices. Evidence from two primary intervention studies, four non-intervention studies and two secondary reviews examined the role played by champions in promoting EIPM. These suggest that champions can help **improve use of evidence within organisations or institutional environments** through (at least) three different mechanisms:

1. **Transformational leaders** may mobilise support for change within an organisation, including through securing resources for EIPM. Champions' seniority and vision, commitment, and dedication seem to be important here, along with their stability and continuity within an organisation.
2. Two secondary reviews suggest that champions may also work through **social learning** as they 'role model' particular EIPM behaviours that others follow, or lead opinion in new directions. In this case the seniority of champions may not necessarily be as important – with peers potentially playing this role as well as leaders.
3. Finally, one study suggests that champions may act as **network facilitators**, developing coalitions between different groups or individuals around particular issues. This study found that network facilitation is affected by the institutional location of champions and the wider political environment, which influence the kinds of networking strategies champions can successfully employ.

Organisational interventions: tools and systems. Five primary intervention studies, three non-intervention studies and three secondary reviews provided evidence to suggest that tools and systems can **improve individual capacity and use of evidence**, for example by improving data analysis, review and interpretation. Four potential mechanisms may help explain the influence of tools and systems:

1. Two studies suggest that they may **facilitate** staff to adopt EIPM behaviours, through providing resources and processes that enable and support them to change their behaviour, or make their jobs easier. These studies suggest the importance of tools being relevant and timely, and having simple and clear instructions. Low levels of skills and limited technological infrastructure can constrain the

successful use of tools, particularly in low-income contexts – suggesting the importance of capacity support.

2. Two studies found that tools may also **increase the value** staff place on evidence, for example through deepening their understanding of the benefits data can bring to decision making.
3. Two studies suggest that systems may **reinforce EIPM behaviours** through positive means (rewards) or negative ones (e.g. audit and risk of negative feedback) – although using systems to reinforce behaviour may also create perverse incentives to recycle evidence or use it in a political or tactical way, particularly if systems are time consuming or bureaucratic.
4. Finally, two studies imply that tools and systems may **promote self-efficacy** – for example by increasing staff confidence in their ability to successfully appraise evidence, or more subtly by helping to permeate the language of EIPM throughout an organisation and make it an accepted part of the culture.

Evidence on policy change and improvements in policy quality: The studies discussed in this section predominantly discuss how far interventions improved capacity or led to behaviour change around evidence use. Evidence on policy change and policy quality as a *result of* increased evidence use is fairly **thin and anecdotal** rather than deliberately or systematically measured. In total, five primary intervention studies provide evidence that capacity development interventions resulted in improved **policy processes, policy decisions and actions**, and/or **policy outcomes**. However, these studies tend to view evidence use as a positive end in itself, rather than shedding light on *how* evidence improved the quality of processes. Similarly, implicit in these findings is the assumption that decisions and actions are inherently better when they are selected based on evidence; which [Section 1](#) suggests may be an oversimplification given the messy, political and contested nature of evidence use in policy processes.

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Annex 1. Full search strategy and search terms

This review used an iterative search strategy, with new searches (using new and revised search terms) conducted as understanding grew about particular theories, and as new theories were uncovered in the literature. A paper was deemed relevant if it was **judged to contribute to our understanding of the BCURE Theory of Change**: did it provide evidence to support, challenge or further articulate the outcomes, the hypothesised causal links, or the assumptions?

Relevant thematic domains: We focused our search on academic fields above and beyond the international development literature that we believed, based on our initial reviews during the proposal stage, may contain useful information for the literature review. These fields included: **Political Science** (civil society and accountability, political processes and systems, institutional reform); **Development Studies** (politics of aid, good governance); **Public Administration of Central and Local Governments** (including institutional design and reform performance management, with a focus on selected key initiatives to institute new practices, such as gender mainstreaming, and use of research evidence and data; **Health Systems** (policy and management); **Medical Sciences** (management, education); **Adult Education and Training** (including capacity development to increase use of research evidence); and **Behaviour Science and Social Marketing** (decision making theory, diffusion of innovation, influencing behaviours).

We targeted this literature through tailored search terms, searches of relevant databases, and by including experts from these fields in our snowball search strategy. We did not exclude evidence from other fields if it was identified through structured or snowball searches; but we did not explicitly look for it.

Structured searches: The following search terms were used for the Boolean and smart-searches:

Research question <i>(Words in bold and their synonyms are also search terms)</i>	Search terms <i>(There is considerable overlap between RQs, so many terms are only listed once. Searches were conducted using both British and American spellings)</i>
1. What factors can promote and constrain evidence-informed policy making in public sector environments?	Research, evaluation, data, evidence use, culture, decision making, stud*, policy making, evidence-based management, evidence(-)informed policy making/ EIPM, performance/ performance data, support, block, challenge, imped*, "public sector", "civil service", government, politician, "decision maker", "health policy", "health systems", "healthcare systems", "public health" "social determinants of health," "health promotion", Implementation science, results- based management, RBM, 'technical assistance' + evidence
2. What factors lead to professional skills and/or knowledge being acquired by public sector workers through teaching and training ?	Learn*, teach*, train*, pedagog*, skills, edu* adult, work, workplace, "professional development", "adult learning", cognition, "self-efficacy", Life long learning, critical appraisal, critical appraisal training, transformative, catalysing, organisation development, tipping points
3. How and in what circumstances can capacity development interventions promote individual behaviour change within organisations ?	Staff, work*, motivat*, programme, project, initiative, application, "adult learning", vocational training, mentor*, "on-the-job", behaviour, "behaviour change", productive*, sustained, change, success, confidence, capabil*, belief, attitude, commitment, champion, incentiv*
4. How and in what circumstances can capacity development interventions promote organisational, network and institutional change?	Culture, "culture change" leadership, management, support, change management, innovation, influence, reform, "performance management", complex* system*, "organisations for the 21 st century", "good governance", "networked governance", engage*, interact*, relationship, system, proced*, budget*, policy, guideline, "quality assurance", competency, media, press, "civil society", "enabling environment", "the public", "general public", "organisational transformation", Learning culture, champion, leadership, network, dialogue, relationships
5. How and in what circumstances can capacity development interventions increase the	"Evidence literacy", "decision making", decision, "use of evaluation*", impact, access, apprais*, appl*, "evidence use" "policy entrepreneur"

demand for and use of evidence in policy making?	
6. How and in what circumstances can interventions that increase demand for and use of research evidence lead to improved policy quality?	"Policy design", implement*, program*, project, initiative, success, "value for money", "policy process" "policy content", "technical assistan*"

- Boolean searches were developed based on these search terms; for example (for RQ 1): *(Evidence OR research OR stud* OR evaluation) AND (use OR decision OR management OR policy) AND ("public sector" OR "civil serv*" OR government)*. After first searching for these terms 'anywhere in the document', it was found that this generated too many hits to be screened in the time available for the review. We therefore changed our strategy to search for the terms only in 'title' or 'abstract' data fields. In the cases where this did not generate sufficient results, the search was expanded to 'all fields'.
- Particularly fruitful search strings included:
 - "professional development" + "evidence base*" + decision making
 - capacity development + "evidence base*" + decision making
 - title: capacity development + public sector
 - title: "professional development" + public sector
 - title: public sector+ learn OR learning
 - title: capacity development +evidence
 - evidence literacy, decision making, decision