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TRANSLATING HEALTH RESEARCH TO POLICY:

Breaking through the impermeability barrier*

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ABSTRACT

This chapter analyses an experience of addressing the often impermeable barriers between health research and policymaking in India. Typically, researchers located within government institutions struggle for autonomy, while those outside face difficulties in getting heard, generating unhealthy competition among researchers. Between 2010 and 2012, the authors were part of the Fostering Knowledge Implementation Links Project (FKILP), which brought together health researchers in the state of Karnataka (India) and senior to mid-level health programme managers and implementers on a range of issues linked to maternal health. The project succeeded in breaking communication barriers through two strategies: (1) Embedding the project in a World Bank funded government programme, while retaining an independent and respected academic institution as the nodal agency; (2) Creating an interactive trust-based network of researchers, policymakers and field practitioners. As a result, unhealthy competition was minimised and the benefit–cost ratios for all key stakeholders were favourable to participation.

KEYWORDS

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1. INTRODUCTION

This chapter analyses an experience of addressing the often-impermeable barriers between health research and policymaking in India. Between 2010 and 2012, the authors were part of the Fostering Knowledge Implementation Links Project (FKILP),[2] which created a network linking health researchers in the state of Karnataka with senior and mid-level health programme managers and implementers on a range of issues linked to maternal health and healthcare quality. The chapter identifies the key factors that worked to break down seemingly impenetrable limitations to communication between researchers and the government's health programme managers.

Despite significant financial and related investments in high-level research institutions in India, the extent to which health research done in the country actually informs policymaking or programme implementation is unclear. Because policymaking and programme delivery are largely viewed as the exclusive purview of a bureaucracy with limited lateral entry,[3] health researchers (especially behavioural and health systems researchers) struggle to obtain a hearing for their ideas and research results. While researchers located within government institutions struggle for autonomy, those outside face difficulties in getting heard. This scenario also tends to generate unhealthy competition among outside researchers for contacts, connections and influence with government.

A further challenge is posed by the fact that senior and middle-level civil servants who are viewed as part of the so-called steel frame of governance in the country function as the executive heads of ministries and departments (just below the ministers) but hold transferable positions. For an external researcher or organisation, attempting to establish connections and credibility amid recurrent changes in personnel can become a Sisyphean slope. The absence of mechanisms within government for systematic consideration of research evidence or project outputs (including sometimes even the government's own designated pilot projects) can act as a major barrier to evidence-based policymaking. As discussed in Box 1, health managers are often constrained by inadequate human, financial and institutional resources for the creation of knowledge infrastructure,[4] including for training and capacity building (Belay, Mbuya and Rajan 2009; Ellen *et al.* 2014; Lavis *et al.* 2008), and the inherently time-consuming nature of knowledge translation activities (Lavis *et al.* 2008). The ability to institutionalise knowledge translation initiatives so that they can be proof against bureaucratic transfers may hold the key to longer-term impact and sustainability, but it can also be very hard to accomplish.

The translation of knowledge to policy thus faces barriers at three levels in the Indian policy system: at the immediate levels of (1) *communication and* (2) *uptake*, and at the medium- and longer-term level of (3) *institutionalisation*. These concepts are discussed in more detail below. Though this chapter focuses mainly on *communication*, it is worth noting that effective reciprocal communication is an important basis of *uptake* and

institutionalisation. Unfortunately, the time frame of the project was too short to allow a proper assessment of the latter barriers, as discussed later in the chapter.[5]

Channels of communication between researchers and policymakers (and implementers) tend to be weak and sporadic in many countries and contexts (Bennett and Jessani 2011; Bennett *et al.* 2012; Decoster, Appelmans and Hill 2012; Jessani, Kennedy and Bennett 2016). Policymakers complain that research findings are inaccessible or impractical (Belay *et al.* 2009; Innvær *et al.* 2002; see also Box 1). As a consequence, policies are often uninformed by insights from research and sometimes may even conflict with existing evidence. Similarly, researchers are often not attuned to the needs of policymakers and programme implementers. It is worth noting, of course, that the relationship between research and policymaking is seldom linear. Rather, research may influence policies in more indirect ways, by seeding new ideas and by affecting how policymakers think about problems or find solutions (Weiss 1980, 1986). This awareness has led to emphasis in recent years on programmes that seek to increase collaboration between researchers and policymakers through enhanced knowledge sharing, focusing on how knowledge is produced and consumed, the positionality of various stakeholders in the translation process and its implications for how knowledge translation activities are structured.

Ellen *et al.* (2013) and Lavis *et al.* (2006) highlight the need to build a knowledge culture by sensitising stakeholders, promoting stakeholder ownership of the process, ensuring proactive participation and securing overall commitment to the process. Knowledge-related public resources, tools and products such as scoping or systematic reviews, policy briefs and research databases have also been highlighted as useful end outputs of knowledge translation projects (Ellen *et al.* 2013, 2014; Lavis 2009; Lavis *et al.* 2006, 2008).

This chapter focuses particularly on the need to move beyond a unidirectional approach to knowledge transfer and uptake, discussing the FKILP's experience of breaking the divide between communities of researchers and policymakers. The resulting co-production of knowledge and institutionalisation of communication can leverage the power of networks that engage along the whole research–policy continuum.

Evidence-informed policymaking is still in its nascent stages in India. Health system reforms in the last decade, particularly the launch of the National Rural Health Mission (NRHM), have been accompanied by a more concerted effort on health systems research. The establishment of the National Health Systems Resource Centre (NHSRC) and the Public Health Foundation of India at the national level, and the State Health Systems Resource Centres in the states, has played an important role in furthering this agenda. However, Rao, Arora and Ghaffar (2014) find that the bulk of the research capacity is concentrated in a few research institutions and is focused on only select states and domains. Critical sectors such as

health-care human resources, financing and governance remain neglected. Research capacity is thus a critical concern. India is also one of the lower-ranking countries in knowledge translation efforts globally, regionally and among the BRICS countries (Brazil, Russia, India, China, South Africa) (Decoster *et al.* 2012). Formal knowledge translation programmes that systematically engage policymakers, researchers (within and outside government), interest groups and civil society organisations to jointly discuss key policy challenges and take stock of the available research around those issues, are rare.

The FKILP was one such endeavour to link health research and policy in the state of Karnataka. In the following sections of the chapter, we discuss this experience in terms of the strategies and methodology employed, the major successes of this project and some of its limitations. We then draw lessons for other knowledge translation initiatives, identifying the key factors that worked to break down seemingly impenetrable barriers to communication between researchers and the government's health programme managers.

2. | THE FKILP

2.1 Origins

The FKILP was commissioned in July 2010 as a joint initiative of the Centre for Public Policy at the Indian Institute of Management Bangalore (IIMB) and the Department of Health and Family Welfare (DoHFW) of the Government of Karnataka. The project was an attempt to formally link research institutions, civil society organisations and government ministries working on health or related issues, for the purpose of knowledge translation. The project was commissioned on a pilot basis under the aegis of the World Bank assisted Karnataka Health System Development and Reform Project (KHSDRP), as part of a larger process of organisational development and capacity building within the DoHFW.

2.2 Objectives

The goal of the project was to facilitate partnerships between academic/research institutions and the government in Karnataka, in order to maximise access to new knowledge by government officials engaged in programme implementation, and to indicate relevant knowledge gaps for research. The project was aimed at enhancing the capacity of senior officers in the DoHFW to appreciate the role of evidence in policymaking and develop evidence-based responses to pressing policy problems; and also at supporting district-level health staff to identify and deal with bottlenecks that weaken service delivery on the ground.

2.3 Approach and strategy

2.3.1 Choice of knowledge broker

IIMB was appointed by the DoHFW as the nodal agency to steer this effort. IIMB's role was to foster a process of mutual exchange of ideas among the academic/research community, civil society organisations and the

government, and to help create learning opportunities for all participants, i.e. the role of a knowledge broker. The project came about through intensive efforts by IIMB, supported by key staff at the World Bank. IIMB is an autonomous public institution of national importance and one of India's premier management institutes, recognised for its teaching, research and consulting capacities.

It has been noted in the knowledge translation literature that messages are more convincing when delivered by messengers who have credibility with the target group.[6] Even so, overly close relationships can lead to conflicts of interest and create biases in research prescriptions (advertently or inadvertently), thereby diminishing their usefulness (Jessani *et al.* 2016; Lavis *et al.* 2008).[7] The identity of the knowledge broker can therefore have major implications for the sustainability and autonomy of the knowledge translation effort. Processes led by reputed academic institutions have the advantage of being insulated from political interference and these institutions can thus be more independent and objective in their actions, while still maintaining good rapport with diverse stakeholders (El-Jardali *et al.* 2014). For the DoHFW, the choice of IIMB was a carefully considered one, which in hindsight was instrumental in the project's effectiveness.

The project was housed within the Centre for Public Policy at IIMB, a policy thinktank created in partnership with the Department of Personnel and Training of the Indian government and the United Nations Development Programme. Moreover, the project director was a member of the Mission Steering Group, the apex body of the NRHM; on the governing board of the NHSRC; and on the High Level Expert Group on Universal Health Coverage set up by the Planning Commission of India. The project's core team had been involved over a number of years in conceptual and field-based research on reproductive health, health inequalities, health system performance and non-government-to-government partnerships in health-care delivery, and thus it was well networked with key researchers and research institutions in Karnataka and outside. This unique positioning gave IIMB the ability to quickly bring together relevant stakeholders and the credibility to vet the evidence objectively and make independent recommendations, while giving both sets of stakeholders at least some feeling of working with 'one of their own'.

2.3.2 Collaboration and co-production of knowledge: overcoming the 'us' versus 'them' divide
Because this was uncharted territory, the project adopted an exploratory 'ground-up' approach to identify the best way of bringing diverse groups of stakeholders together, keeping them engaged, and providing them with the required technical assistance to make the research-to-policy transition. It started with a basic strategic framework that drew on some of the key elements that are known to be effective means for linking research to action (Lavis *et al.* 2006). Thus, the project included overlapping phases of network building, research mapping and review, operations research, learning workshops and production of policy briefs.

It was determined at the outset that the project would not attempt to force-feed research to the policymakers. Researchers and practitioners, based on their respective experiences, often have differing notions of what constitutes actionable evidence, which evidence is more crucial and even what is good evidence (Shrivastava and Mitroff 1984), and they may have distinctive policy priorities and constraints (Johns 1993; Thomas and Tymon 1982).[8] They are often sceptical of each other's motivations and competence, which creates mutual suspicion and makes them more resistant to change (Ellen *et al.* 2014). Various authors have recognised the need for more inclusive and collaborative approaches to knowledge translation (Baumbusch *et al.* 2008; Ellen *et al.* 2013, Lavis *et al.* 2006), instead of more traditional methods that regard researchers as originators or keepers of knowledge and policymakers as passive recipients (Weiss 1979). Accountability, reciprocity and mutual respect have been identified as key ingredients of an effective knowledge translation project.

In this spirit, the FKILP recognised the need for both sides to engage with one another without reservation and in a spirit of cooperation and joint discovery. Researchers and civil society members, on the one hand, and government officers, on the other, do not always trust each other sufficiently to join the same platform. As described later in the chapter, the project worked to create a congenial environment that would inspire trust between stakeholders, dismantle the inherent power dynamics between and within the groups, and provide avenues for an open, yet critical, exchange of ideas.

2.3.3 Leveraging the power of networks

The project put together a state-wide knowledge network comprising government officers, researchers and civil society organisations working on health or related issues and initiated a formal dialogue between network members, in recognition of their shared interests. The network was intended to enable all factions to understand each other's perspectives, create opportunities to include each other in their respective agendas, nudge groups towards lowering their resistance to each other's positions, and open up new windows of cooperation. It aimed to help the government tap into the considerable technical expertise of network partners, thereby increasing its knowledge resource pool at low cost and in a very short time.[9]

It was envisaged that the institutionalisation of such linkages through the project would help sustain interaction between the stakeholders during and beyond the life of the project itself. It would lend legitimacy to the evidence-based movement and eventually lead to greater infusion of research into policy processes at the state level. At a higher (national) level, it would help demonstrate the potential usefulness of network-based approaches in knowledge translation and offer a set of tested strategies that could be emulated in other contexts.

To lay the groundwork for productive dialogue and to support network members in their deliberations, the project undertook the following:

- Syntheses of research evidence and best practices in priority policy areas, which were identified in consultation with the government;

- Rapid operations research studies to generate further field evidence to fill in gaps in current research; and

- Clear evidence-based policy directives based on network discussions and the reviewed evidence.

2.4 Methodology and outputs

A project office was opened at IIMB. A small team comprising a project coordinator, research coordinator and project assistant was put together to manage project activities under the overall direction and supervision of the project director. The work of this team was backed up by a larger research team that had been engaged in health research at IIMB over many years. A brief description of the project's activities and outputs is shown in Figure 1.

Figure 1 **Project activities and outputs**

Multi-stakeholder network of around 200 government officers, researchers, practitioners and members of civil society

KNOWLEDGE NETWORK

RESEARCH EVIDENCE

Compendia of research and best practices in maternal health, health-care quality and maternal anaemia
Operations research on maternal death reviews and primary provider competency

Three workshops for government officers and members of knowledge network on maternal health, health-care quality and maternal anaemia

CONSULTATIVE WORKSHOPS

RESEARCH EVIDENCE

Four policy briefs on maternal health based on reviewed evidence, presented research and workshop consultations

2.4.1 Technical Advisory Committee (TAC)

A TAC including researchers, civil society and government was convened in order to serve as a scientific group for reviewing research and policy papers, identifying research gaps, guiding operations research studies and advising the project team. TAC members were also tasked with assisting the project team in constituting task groups or working groups to address specific issues as they arose. They made specific recommendations on policy-relevant research for presentation and discussion during workshops and helped facilitate these discussions. Because of members' seniority and consequent time constraints, it was not possible to organise multiple repeat meetings of the TAC. However, TAC members were very open to meeting one-on-one with the project coordinator to provide feedback and suggestions.

2.4.2 Knowledge network

The first initiative was to set up a knowledge network to maximise access to new knowledge and best practices by government officials engaged in programme implementation and to support state-level advocacy. A provisional list of researchers and community-based organisations working on health and health system issues in Karnataka was drafted. The project undertook a systematic process of reaching out to these groups in order to build rapport and to get a sense of their research or other activities. The project's objectives, intended activities and tentative action plan were discussed with each as they were invited to become network members. The list was updated through snowballing as the project went along, and more members were enrolled. Eventually, the network came to include members from a wide spectrum of policy actors including staff of the DoHFW, the Department of Women and Child Development, the Karnataka State Health System Resource Centre, the NHSRC, multilateral organisations such as the World Bank and the United Nations Population Fund, academic and research institutions, independent researchers and consultants, non-governmental organisations (NGOs), civil society groups, medical and public health professionals and health-care providers. In the final tally, the network consisted of approximately 200 individual members or member organisations, including officers from the DoHFW. The project office at IIMB maintained an inventory of all previous and ongoing health research by network members.

2.4.3 Research repository

The project conducted a systematic mapping exercise to identify, review and collate relevant research evidence and best practices on three linked themes: maternal health, health-care quality and maternal anaemia. These themes were chosen through discussions in the TAC and with senior members of the network's different stakeholders. For this purpose, the project drew upon the inventory created from contributions made by members of the knowledge network and from literature searches. These included both published and unpublished resources (journal articles, books, book chapters, working papers, reports, discussion drafts, fact sheets or policy briefs) extracted from libraries, selected websites and electronic databases. Prior to their inclusion in the repository, the studies were screened for their methodological and analytical rigour, contextual and contemporary relevance, and expected utility to the policymaker. These resources were compiled in the form of thematic compendia and made available in both print and electronic versions to members of the knowledge network and workshop participants. In addition, a project website was created to serve as a knowledge-hub for the dissemination of project updates, research compendia, workshop summaries and policy briefs, freely accessible as a public resource.[10]

2.4.4 Operations research

The project executed short operations research studies to generate further field evidence on two critical areas related to maternal health. The first study evaluated the capacity of primary health-care providers in Koppal district in northern Karnataka to prevent and manage obstetric emergencies, through an assessment of their medical knowledge with respect to identification and management of obstetric risks and complications. It also sought to determine whether the Skilled Birth Attendant or Emergency Obstetric Care trainings are able to improve their knowledge. The study was triggered by an investigation of maternal deaths, which found a high incidence of deaths resulting from poor identification of maternal risks and ineffective management of obstetric emergencies (Iyer *et al.* 2012). The second study evaluated the government's tool for conducting Maternal Death Reviews (MDRs), to test its ability to generate reliable evidence on the causes of death. Findings from both studies were used to contextualise current policy pitfalls and suggest methods for course correction.

2.4.5 Learning workshops

Three consultative learning workshops (one each on maternal health, health-care quality and maternal anaemia) were organised to discuss a smaller subset of the most relevant and the most recent research in these areas and to discuss recommendations. The senior leadership in the DoHFW and programme implementers at different levels attended these, as specified in the terms of the project's contract. Being able to include their participation in the contract was unusual and pointed to the credibility of the knowledge broker and the enthusiasm of the policy managers. The research to be presented was selected through a rigorous review process and underwent multiple rounds of iterative feedback through pre-workshop consultations with presenters (including from the government). Its purpose was to vet the content and form of workshop presentations and to make sure the messaging was on target. Other background work also contributed to the efficiency and substantive contribution of the workshops. These included development of concept notes and production of research compendia via contributions from members of the network and online literature searches.

These workshops brought together diverse stakeholders including senior and mid-level officers from the government such as the health secretary, mission director (NRHM) and programme managers, members of the knowledge network including researchers, NGOs, civil society groups, medical and public health professionals, representatives of professional associations such as the Federation of Obstetric and Gynaecological Societies of India and the Society of Community Health Nurses of India, health-care providers and invited experts. One-third to one-half of the participants in each workshop were from the government. Table 1 summaries the themes, participants and outputs of the learning workshops.

Table 1 **Learning workshops**

THEMES DISCUSSED	PARTICIPANTS	OUTPUTS
WORKSHOP 1 MATERNAL HEALTH IN KARNATAKA, 9 DECEMBER 2010		
Programmatic challenges in delivery of maternal health care from the perspective of the DoHFW Strengthening the quality and adequacy of health system responses to maternal health needs Tackling iron deficiency anaemia in pregnancy Learning from MDRs	Government: 2 senior officers 7 mid-level officers (state) 8 mid-level officers (field) 2 junior officers 23 academics 5 NGO representatives 1 professional association representative	Concept note Compendium of policy analyses, estimates of maternal health outcomes and relevant research Workshop presentations Summaries of the empirical research informing workshop presentations
WORKSHOP 2 HEALTHCARE QUALITY, 8 JUNE 2011		
Applying quality management methods to healthcare Lessons learned from (1) Quality Assurance Programmes in the public health-care system in Karnataka, Maharashtra, Rajasthan; (2) Quality improvement of PHCs in Andhra Pradesh Evidence of health-care quality in public health facilities in Tamil Nadu, Karnataka, Bangalore Suggestions for the way forward	Government: 2 senior officers 1 senior adviser (research) 8 mid-level officers (state) 10 mid-level officers (field) 3 mid-level consultants (research) 23 academics 5 NGO representatives 2 multilateral agency representatives	Concept note Compendium of resources on the principles, concepts, approaches, innovations and best practices on quality improvement in Karnataka and across India Workshop presentations
WORKSHOP 3 MATERNAL ANAEMIA, 29 SEPTEMBER 2011		
Overview of maternal anaemia in Karnataka Current governmental approaches and challenges in addressing maternal anaemia Synthesis of findings about programmatic strategies for tackling maternal anaemia: what works, what does not work Synthesis of findings about the assessment and treatment options for anaemia in pregnancy	Government: 2 senior officers 1 senior officer (research) 1 mid-level consultant (national) 11 mid-level officers (state) 1 junior officer 17 academics 5 NGO representatives 3 professional association representatives 9 practising doctors	Concept note Compendium of relevant research and best practices in Karnataka and across India Workshop presentations

In the first workshop, presentations focused on policy-relevant questions emerging from empirical research on maternal health in different parts

of Karnataka. In the second, presentations focused on the theory and practice of quality-of-care interventions within health-care organisations in the public sector. Both workshops used a fairly traditional top-down model with researchers playing the role of knowledge producers and the health personnel acting as the recipients. This initial approach was based on the organisers' experience in academic settings. But we learned through discussion and reflection that we needed a much more participatory approach if we were to get middle-level health managers to open up during the discussions. Indeed, the presence of the top leaders of the DoHFW was not sufficient to elicit open participation from those below them. Their trust had to be built and painstakingly earned.

The third workshop on maternal anaemia differed dramatically in its approach. The workshop was shorter (half a day) and designed to be more interactive. Its focus on maternal anaemia was initially suggested by the health secretary and resonated with both communities alike. A short opening presentation by the project director defined the extent of the problem in the state and identified a number of questions requiring policy attention. This was followed by a presentation from the government's side spelling out the measures the government was taking to tackle anaemia. Two short syntheses of research evidence and best practices followed on the approaches, challenges and programmatic strategies to address maternal anaemia. There was a lot of time available for discussion, and almost all of the 54 policymakers, programme implementers, researchers and public health practitioners in the room managed to have their say in a spirit of collective learning and reflection.

The question of the most cost-efficient and effective way of screening for anaemia has been a vexed one. Because of the high prevalence of anaemia and the consequent need for universal testing of pregnant women, this has been a pressing concern. The Government of Karnataka had used the unreliable 'filter paper' method for a very long time. By the time of our third workshop, the government was moving towards replacing this with Sahli's hemoglobinometer, which is relatively more accurate, although far from being fully reliable. Having just introduced this change, the government side were naturally somewhat reluctant to reopen the question. However, researchers pressed for re-examining the issue and the possibility of introducing the HemoCue, which is far more accurate. There was a lively debate on the pros and cons, and on different funding possibilities. This discussion illustrated the point that the issues that evoked maximum discussion were those where there had been prior advocacy or recent government action. Completely new ideas emerging from research were usually met with silence or wary responses.[11]

2.4.6 Policy briefs
A set of four policy briefs was prepared based on an analysis of the findings from existing and new research and workshop consultations, outlining the implications of the reviewed research and making recommendations for the programme and policy. These included recommendations for (1) strengthening the government's maternal death review protocols,

(2) improving the capacity of health workers at the primary care level to identify risks and prevent and manage obstetric emergencies, (3) programmatic strategies for tackling maternal anaemia, and (4) evaluating options for screening and treatment of moderate to severe anaemia in pregnancy. The objective was to clearly communicate what was wrong with current programmes and how this could potentially be fixed.

The policy briefs represented two distinct approaches. The briefs on maternal death reviews and the competence of health-care providers served as a way to raise issues, problematise areas of the programme and policy that were otherwise getting little attention, and provide recommendations for action. They were outcomes of exploratory operations research under the project and the research areas were determined by our team early in the project life cycle. To that end, they resonated more with conventional understandings of knowledge transfer. The briefs on maternal anaemia, on the other hand, were aimed to guide policymakers on how to deal with a problem that was already identified as important by both senior representatives of the DoHFW and other members of the network. These briefs were a culmination of a longer process of engagement with stakeholders and reflected greater participation, collaboration and co-production of knowledge.

Policy briefs on maternal death reviews (MDRs) and provider competence
Two briefs drew on primary research conducted under the project and responded to specific components of maternal health policy as they operate in Karnataka (FKILP 2012a, 2012b). MDRs were adopted by the Karnataka government in 2009 to strengthen reductions in maternal mortality. Based on a study of maternal deaths in the district of Koppal in Karnataka, the brief (FKILP 2012a) summarised findings on critical lacunae in the government's MDR process that contributed to incorrect diagnoses of causes of death and a failure to capture health provider lapses, among other deficiencies. Specific recommendations were presented on how to improve the quality, reliability and accuracy of the information captured. The second policy brief (FKILP 2012b) was based on a study to assess the knowledge and practices of medical officers and staff nurses to prevent and manage obstetric emergencies at the primary care level in Koppal. The brief summarised findings on the differential impact of training across cadres of providers and deficiencies in the quality of training itself, and it recommended changes to training and related protocols.

Policy briefs on maternal anaemia
Despite long-standing programmatic efforts, anaemia is recognised as a widespread and persistent problem nationally and in Karnataka. At the time of the project, the state government had introduced a new anaemia screening method across the state, and was engaged in a pilot intervention in partnership with an NGO to better treat and track populations at risk. Additionally, interest groups were at the stages of testing and advocating

alternative treatment options for severe anaemia. The issue was therefore seen as important to programme managers and researchers alike. Not only did members of the network express interest in addressing anaemia, but (as noted previously) the health secretary himself chose this topic for the third and culminating workshop under the project.

Two researchers who were part of the network were engaged to synthesise evidence on programmatic strategies and on screening and treatment options for severe anaemia for the workshop. Since both groups were invested in the issue, the workshop created an opportunity for researchers to propose what is 'good' or strong evidence and for policymakers to debate what evidence is actionable. To increase collaboration on the production of the brief, the researchers who conducted the reviews were also invited to co-author the briefs. One brief summarised literature on barriers to effective prevention and treatment, and lessons from other states (FKILP 2012c). The other brief assessed the most commonly used screening methods and treatment options for moderate to severe anaemia, weighing the evidence on effectiveness, safety and cost (FKILP 2012d). The briefs also responded to key points of debate in the workshop and proposed recommendations that reinforced ideas and proposals generated from discussions. It is likely that this fostered a sense of joint ownership of the process and outputs, and potentially reduced biases in how policy recommendations were shaped.

Several measures were taken to ensure that all briefs would be relevant and of interest to policymakers. First, the research areas chosen spoke to the existing maternal health policy context, and drew on research either conducted in Karnataka or on evidence from other settings that have direct application. They aimed to make clear the implications of the findings in terms of programme performance and thereby health outcomes. Importantly, they proposed specific, practical and actionable recommendations that were careful not to undermine existing efforts, but to build on them incrementally. Formulation of the latter two briefs on anaemia was characterised by communication and collaboration. Such co-production created value in the process of generating the briefs, in addition to increasing the potential for uptake. Notably, these briefs facilitated policymakers to be more active players in the generation of knowledge and challenged the unidirectional view of knowledge translation.

3.|AN ASSESSMENT OF THE FKILP

The FKILP did not have a very long life for reasons unrelated to its effectiveness or its perceived value for network members. The project was funded as a consultancy to IIMB under the World Bank supported KHSDRP. The initial contract lasted for a little over a year, although the work continued beyond that with small supplementary funds. All involved parties had been more than satisfied with the outputs and potential of the project and were set to renew the grant for a further period. At that stage there were unrelated glitches in the World Bank's funding to Karnataka state and, as a result, project funding halted. By the time these problems were sorted out over a year later, practical limitations made it impossible to continue the project, even though the DoHFW was eager to renew the grant to IIMB.

Nonetheless, in its short time span, the FKILP was able to accomplish a considerable amount of work. A number of knowledge outputs were delivered, including a vibrant knowledge network, operations research, research compendia, three consultative workshops, four policy briefs and a 'one-stop shop' project website – all of which output types have been widely acknowledged in literature as valuable end products of knowledge translation processes (*Ellen et al.* 2013, 2014; Lavis 2009; Lavis *et al.* 2006, 2008). For the project team, it was a fairly intense two years with a high workload but also a high pay-off in terms of learning and knowledge networking. Team members learned to adapt and be flexible, as evidenced by the shift in the methodology of conducting the consultative workshops and producing the policy briefs.

The project was an attempt to address the prevailing deficit in formal knowledge translation efforts in the country (Decoster *et al.* 2012). It demonstrated a potentially replicable model for engaging diverse stakeholders in tackling outstanding policy challenges in other states and sectors, based on inputs from research and practice. The process of interaction and networking showed both researchers and policymakers what is possible in terms of knowledge translation even in India's complex policy environment. There were around 50 participants in each of the learning workshops with roughly equal numbers of researchers and government personnel (see Table 1). There was considerable enthusiasm for the project outputs and consistent and sustained interest in the workshops and in the possibilities they opened up for further exchange and interaction between stakeholders.

A POLICY MANAGER'S PERSPECTIVE[12]

A major challenge faced by the policy manager or administrator who is interested in evidence-based policymaking and implementation in India is the paucity of institutional tools dedicated to this purpose. There are no human resources available in-house who can access or sift research results or ground-level experiences in order to guide policymakers and managers and make cross-learning possible. Typically, access to published research is very limited within the administration. But even if research materials and results were available, there have to be people who can analyse their policy and programme implications and suggest changes. Such people are few and far between and rarely interact systematically with researchers outside government.

In this context, the FKILP was an innovative platform providing suggestions to policy managers based on pulling together research on maternal health in Karnataka including the work done in Koppal, a district with major health challenges. From the government's perspective, a broader focus than only maternal health would have been useful to provide a more holistic picture, but this was certainly a good beginning with potential for growth. The project made the government's state-level health managers and officers aware of many ground-level realities through facts and anecdotes, which we would not otherwise have known.

For instance, in the second workshop there was an anecdote of a maternal death due to haemorrhage that occurred because of delays in transporting a woman from the primary health centre to the tertiary hospital. Even though free transport to health facilities had come in through the NRHM, it was limited to the nearest health facility and did not provide further transportation. The incident made us think about the challenge of transport during referral, and ambulances were made functional or new ones were made available for this purpose.

Another instance was the intensive discussion during the third workshop on the HemoCue as a tool to ensure accurate haemoglobin test results. Although introduction of the HemoCue had been under consideration by the Health Department for quite some time, this workshop helped in piloting its usage by the auxiliary nurse midwives.

Getting the FKILP to be effective was not without challenges. Government institutions, especially district-level officers, are not used to continuous interaction with researchers or NGOs on an equal footing. There was a lot of inertia and even resistance to participation in the workshops or using the research findings and insights. But the support of the most senior civil servant (the Secretary, DoHFW) and the fact that he was open-minded and had a more holistic view of the health system helped a great deal.

Although, for various reasons, the FKILP itself had a short duration, it showed that regular and systematic interaction between policymakers, researchers and NGOs holds many potential benefits for bridging the existing divides between research and policy.

3.1 What accounted for the FKILP's effectiveness?

Undoubtedly the existence of high-quality researchers and research on health in Karnataka was a key prerequisite. The fact that the project leader and team were already well-networked and recognised health researchers certainly speeded up the process of network creation and linking. The interest and physical presence of a succession of interested senior health bureaucrats helped considerably. The provision of tangible materials, especially the research compendia, and the opportunity to be able to meet the government people across the table in an open atmosphere were especially valuable to researchers and drew their continuous participation. However, there are other factors that were at least as important.

Knowledge translation literature has widely acknowledged that weak channels of communication between researchers and policymakers (and implementers) make research findings inaccessible or impractical for use (Belay *et al.* 2009; Bennett and Jessani 2011; Bennett *et al.* 2012; Decoster *et al.* 2012; Innvær *et al.* 2002; Jessani *et al.* 2016;). The FKILP was able to break through the seemingly impermeable walls barring communication between these two distinct groups through the following strategies:

- Embedding the project in a World Bank funded government programme resulted in both funding and government ownership being secured.
- Retaining an independent and respected academic institution (Centre for Public Policy at IIMB) as the nodal agency permitted the FKILP network to be convened by a credible and effective knowledge broker acceptable to both researchers and policymakers.
- Investing time and effort to build trust, negotiate rules and processes, and manage or even subtly transform in-built power relations.
- Adopting an approach to communication that gradually became more open and genuinely interactive, and broke with traditional unidirectional methods, thereby enriching the quality of the debates and interactions.
- Attempting to learn from the process, being open to suggestions, and to make course corrections.
- Creating an open multi-stakeholder network that included researchers, policymakers and field practitioners served to minimise unhealthy competition among research and other groups vying for attention.

The FKILP did not challenge the power of the state through head-on confrontation. Rather, it focused on building relationships towards a more sustained and open, yet critical engagement. It had all the benefits of networking, allowing researchers to reach and communicate with policymakers at the highest level as well as with middle-level implementers, and making it possible for policymakers to tap into the considerable research resources available outside the government's system to overcome the inherent capacity constraints that typically hinder the government's use of research in policymaking (Belay *et al.* 2009; Ellen *et al.* 2014; Lavis *et al.* 2008). With both sides benefiting in these ways, the benefit–cost ratios for all key stakeholders from both the research and the policy sides were favourable to participation, and a significant amount of 'translation' could be done within a relatively short time period.

This chapter presents the project's experience and salient issues from the authors' perspectives and does not include those of other participants in the knowledge network. These perspectives, though limited, are important because they seek to explain the process we adopted (why we did what we did and how we did it) and what our experiences were as knowledge brokers who led the effort, as research aggregators, and as researchers who contributed to the primary research that fed into the project's policy prescriptions. We are hopeful that these will be useful to other knowledge entrepreneurs working in this space.

The chapter does not attempt to evaluate the project's success in terms of research uptake and concomitant policy outcomes. The project was not set up in a way that this could be established and, as acknowledged, the duration of the project was far too short for major changes to be effected. What this chapter has tried to demonstrate is the collaborative nature of the process itself and the usefulness of such efforts in creating ownership and value for research within the government, and spaces for candid dialogue between stakeholders, the need for which has been recognised in literature (Baumbusch *et al.* 2008; Ellen *et al.* 2013; Lavis *et al.* 2006). That we were able to get this to happen in a sustained manner over the duration of the project is an achievement. The chapter argues that such channels of communication and trust-based relationships are critical precursors for effective uptake, and that it is important for knowledge translation efforts to first invest in creating a congenial environment to catalyse the adoption of research into the policymaking process.

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ENDNOTES

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2 FKILP was underway while Gita Sen was professor at Indian Institute of Management Bangalore, and it was part of a larger body of work on changing the policy and social environment for maternal health in Karnataka.

3 'Entrance to the civil service by external recruitment or otherwise than through promotion or transfer from within the service' (World Bank, n.d.).

4 By knowledge infrastructure, we mean the organisational elements required to support the production, preservation, distribution and assessment of knowledge, including libraries, databases, research teams, technical/expert groups, etc.

5 The project was intended to set the foundation for greater collaboration; therefore, we focused on the very first step – communication. It was not really designed to measure impact through uptake.

6 Professional groups such as medical associations may be able to better convince physicians to adopt certain protocols or clinical practice guidelines (Hayward *et al.* 1997).

7 Lavis *et al.* (2008) report how locating researchers within institutions fully funded by the Thai Ministry of Health created tensions when research findings challenged government positions on policy, making it difficult for researchers to speak truth to power. Likewise, vested interests of physicians in the pharmaceutical and medical equipment industries in the Philippines affected their practice and shaped their views on research.

8 Policymakers are wary of just following the evidence, because policy recommendations are sometimes based on flimsy or contradictory evidence (Boaz and Pawson 2005), or because policymakers are generally cautious and prefer incremental change (Starkl *et al.* 2009).

9 It is well recognised in the public management literature that multi-stakeholder research networks are a collaborative response by diverse organisations having different self-interests and varied views on policy problems and preferences, which are unified in their efforts towards the fulfilment of shared objectives (Agranoff and McGuire 2001; Klijn 2007; Provan and Kenis 2008). Such networks have many strategic advantages over hierarchical forms of knowledge translation for governments, researchers and civil society organisations (Jessani, Boulay and Bennett 2015).

10 The project website was not in the original plan but evolved out of project discussions and turned out to be a very useful output.

11 For example, discussions on the suggestion that the DoHFW switch over to the HemoCue to test haemoglobin counts were lively and varied, given its recent decision to use another inexpensive but less sensitive method. In contrast, the suggestion to set up independent Maternal Death Review Committees, a topic on which enough prior discussion had not occurred and which was a source of some nervousness among front-line health providers, evoked considerably less enthusiasm.

12 S. Selvakumar, author of the text in Box 1, belongs to the Indian Administrative Service, which has the main responsibility for policy formulation and implementation in India. From 2009 to 2012 he was the Mission Director for the National Rural Health Mission and Project Administrator of the World Bank assisted KHSDRP in the state of Karnataka. The FKILP was negotiated and implemented during his tenure. His views present the alternate perspective of a policymaker. While they may not be sufficient to validate our findings, they provide credible support to our assertions about the benefits of engaging in such a process, even if they do not amount to evidence of its effectiveness.