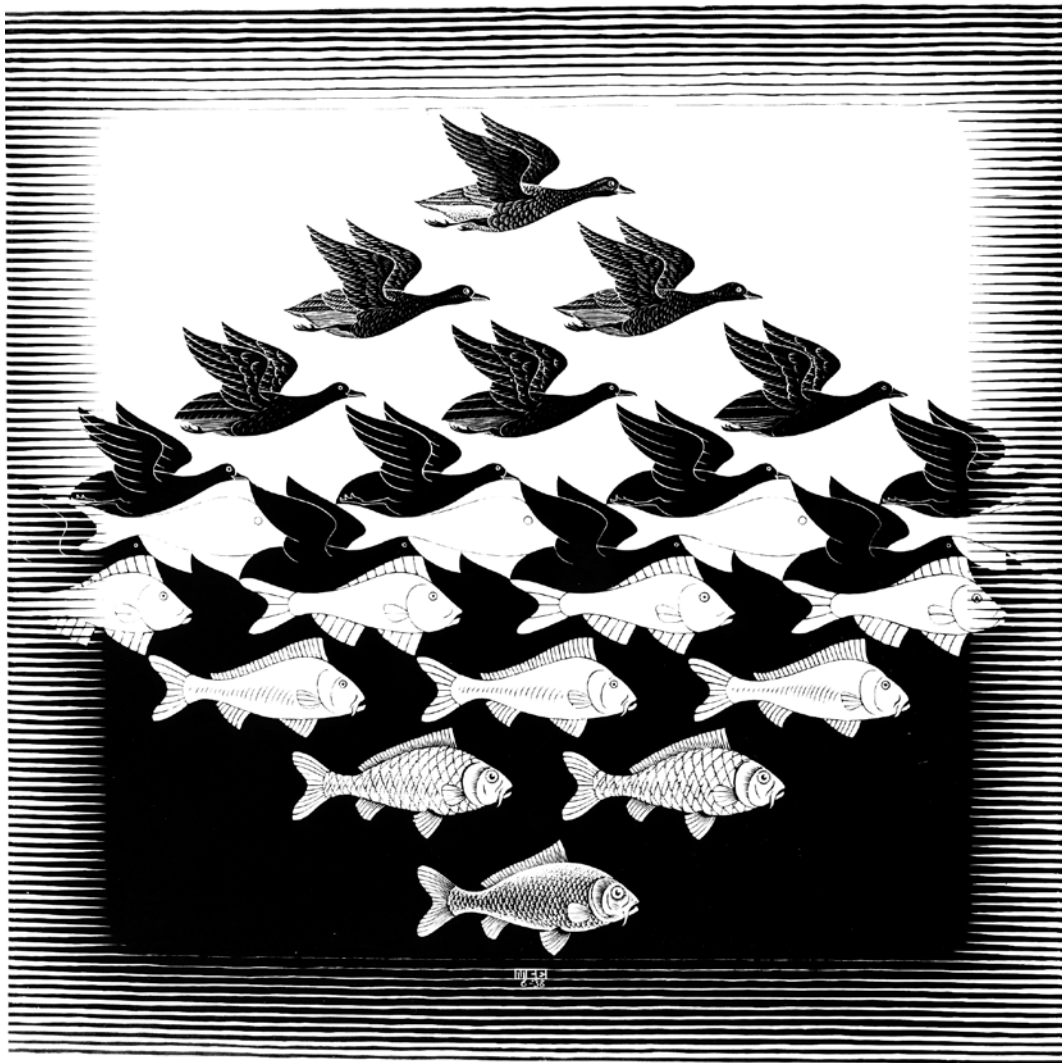


# CHANGING MINDSETS

STRATEGY ON HEALTH POLICY AND SYSTEMS RESEARCH



World Health  
Organization



# CHANGING MINDSETS

STRATEGY ON HEALTH POLICY AND SYSTEMS RESEARCH

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## Foreword

*In November 2010, more than 1200 diverse stakeholders from the realms of health research, policy, funding, implementation and civil society gathered for the first time in Montreux, Switzerland (at the First Global Symposium on Health Systems Research) to discuss and debate the important role and contribution of health policy and systems research (HPSR) in decision-making. Together, they called for the development of a Strategy on Health (Policy) and Systems Research in order to advocate for greater generation and use of research evidence in health policy and build a case for further investment in this critical area of research.*

*The World Health Organization took the lead in developing this strategy based on robust science while also drawing on the experience and wisdom of multiple stakeholders in a transparent, inclusive and participatory manner. For this purpose, a 29-member advisory group was established, composed of men and women, research leaders and policy-makers, and from all over the world. The group was co-chaired by Julio Frenk (Dean, Harvard School of Public Health) and Sujatha Rao (former Secretary of Health, India).*

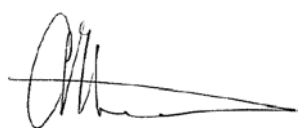
*Four background papers were commissioned to inform the development of the strategy: A review of WHO documents on health research; Conceptual issues related to HPSR; Embedding research into decision-making processes and a HPSR mapping exercise in 26 low- and middle-income countries. A concept note and outline of the strategy were published on the web site of the AHPSR for public feedback and comments. Interviews and discussions were held with top-level decision-makers from more than 20 countries.*

*As the first-ever global-level strategy on HPSR, this document represents a unique milestone in the evolution of health policy and systems research. It has three broad aims. First, it seeks to unify the worlds of research and decision-making and connect the various disciplines of research that generate knowledge to inform and strengthen health systems. It is targeted at decision-makers at all levels of the health system—from national policy-makers to front line providers of health services, and seeks support to make HPSR increasingly demand-driven and responsive to the needs of 21<sup>st</sup> century health systems.*

*Second, this strategy contributes to a broader understanding of the field of HPSR by clarifying the scope and role of HPSR. It provides insight into the dynamic processes through which HPSR evidence is generated and used in decision-making.*

*Finally, it is hoped that this strategy will serve as an agent for change. It advocates for a paradigm that emphasizes the need for close collaboration between researchers and decision-makers rather than work along parallel pathways. The strategy speaks to decision-makers and researchers as part of one community and proposes actions that both can take in order to strengthen the performance of health systems. It calls for a more prominent role for HPSR at a time when the health systems mandate is evolving towards broader goals of universal health coverage and equity.*

*The true test of the strategy now lies in the hands and minds of the many stakeholders who develop and use evidence to inform health policy and management decisions. A continued spirit of collective ownership and commitment is needed to translate the proposed options for action into tangible results that will benefit policy decisions and health outcomes in future years. I conclude with the hope that new ways of thinking and working among researchers, decision-makers, and other relevant actors, will play a pivotal role in extending the use of knowledge and evidence in policy-making. The collaborative approach adopted in creating this strategy is a critical first step towards changing the mindset of the community of health systems researchers, decision-makers and other stakeholders in order to accelerate momentum for strengthening health systems and improving health outcomes.*



Dr Carissa Etienne  
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**SECTION**

**1**

# **The Case for Health Policy and Systems Research**

# 1. The value and promise of health policy and systems research

■ As nations across the world move to become knowledge-driven societies in the 21<sup>st</sup> century, the value of research as a major generator of knowledge has become greatly enhanced (Balabanova, McKee, Mills, & Haines, 2010). In the domain of health, the remarkable improvement in global health indicators over the past 60 years has been attributed to astounding advances in science as well as improvements in the social determinants of health which accompanied accelerated economic development (Marmot, et al., 2008).

The need for continued commitment to research-driven knowledge generation and increased investment in scientific enterprise has been ably articulated in several earlier reports which espoused the cause of health research (WHO, 2004) (WHO, 2008). Recent WHO publications and conferences which convincingly made the case and set the course are: World Report on Knowledge for Better Health (2004); Bamako Call to Action on Research for Health (2008); WHO Strategy on Research for Health (2009/2010) and the First Global Symposium on Health Systems Research (Montreux, 2010). The next World Health Report will also highlight the importance of health research. The Second Global Symposium on Health Systems Research, in Beijing in 2012, showcases the growing importance of health policy and systems research.

While many of the foregoing publications and events have succeeded in raising the profile of health research among policy-makers, only a few specifically focused on research related to health policy and systems (Gilson & Raphaely, 2008) (Oxman, et al., 2007) (Peters, et al., 2009). Although the need to make evidence-informed decisions for configuring health systems and making the right policy choices was emphasized, the role of all stakeholders and, especially, health system decision-makers in setting the agenda of health policy and systems research was not fully appreciated or adequately emphasized (Oxman, et al., 2007).

This Strategy on Health Policy and Systems Research is intended to augment and amplify WHO's previous affirmations on the importance of health research, by explaining how the evolving field of health policy and systems research is sensitive and responsive to the knowledge needs of decision-makers, health practitioners, citizens and civil society, who are responsible for the planning and performance of national health systems. By doing so, it does not move away from the field of health research – it aims to move the field ahead.

This strategy aims to change the way HPSR is managed as a research endeavour, embedding it much more effectively in the domains of policy-making and implementation. It sets out to encourage active engagement between researchers and policy/decision-makers and calls for both sides to understand the value and need to build capacity in HPSR. Equally importantly, the strategy also seeks to unify the diverse disciplines of research and combine the several platforms of knowledge generation, which are at present weakly connected, into a truly integrated instrument of change that can provide impetus to health system strengthening and health transformation across the world.

### Box 1: The role of WHO in advancing health policy and systems research

Today, WHO continues to play a central role in the promotion and development of health policy and systems research, as it has during the last four decades. Early on, WHO helped identify the need to focus on health services and systems research (Advisory Committee on Medical Research, 1976) and in 1996 convened an Ad-Hoc Committee on Health Research which led to the establishment of the Alliance for Health Policy and Systems Research in 1999. The launch of the AHPSR signified an important commitment and investment of human and financial resources in HPSR by WHO and donors. The release of the World Health Report in 2000 helped elevate the importance of health systems strengthening and the need for research to inform that process. In 2004, at the Ministerial Summit on Health Research in Mexico and again in 2008 at the Global Ministerial Forum on Research for Health in Mali, WHO, mobilized the community of decision-makers to address critical gaps in the generation and use of research to improve the performance of health systems. The value of HPSR has also been emphasized by WHO Director-General, Dr Margaret Chan, who has long-highlighted the need for greater investment in HPSR:

*"Public health [today] enjoys commitment, resources, and powerful interventions...but the power of these interventions is not matched by the power of health systems to deliver them to those in greatest need, on an adequate scale and on time...This arises, in part, from the fact that research on health systems has been so badly neglected and underfunded...In the absence of sound evidence, we will have no good way to compel efficient investments in health systems."*  
Dr Margaret Chan, Director-General, World Health Organization, Beijing, China, 29 October 2007.

Following this statement, the commitment of WHO to strengthening HPSR was reflected in the creation of the Director-General's High Level Task Force on Scaling Up Research and Learning for Health Systems in 2008. More recently, the 2010 WHO Strategy on Research for Health and the Global Symposium on Health Systems Research in Montreux, Switzerland, helped to identify priorities, advanced the science of HPSR, and, most importantly, created a platform for interaction and collaboration among the diverse disciplines and sectors that contribute to the generation and use of evidence in decision-making.

With the launch of this strategy, WHO is once again signaling its readiness to stimulate and steer global dialogue—with both researchers and decision-makers—on the scope and role of HPSR in decision-making and health systems strengthening. Through its many and various research initiatives, WHO will highlight to Member States and other global actors, the core messages of this strategy, especially the need to embed research into decision-making. As an important part of this, an internal platform will be established to facilitate greater coordination, alignment of priorities, and a unified position on HPSR within WHO. The creation of this platform will also enable further integration of a 'systems approach' to the delivery of health programmes as well as the use of HPSR in achieving those objectives.

Next, in collaboration with partners, WHO will lead a two-yearly global effort to monitor and assess the capacity for, and investments in HPSR. WHO will also monitor the use of HPSR-generated evidence to help Member States and funders of research to optimize existing resources and identify priorities for future investments. Finally, WHO will support the establishment of a global repository of evidence generated from programme activities and other practice-based knowledge. This repository will complement evidence emerging from peer-reviewed literature and provide a strong basis to support health sector decision-making and health systems strengthening.

The real and potential value of HPSR is increasingly recognised. HPSR enables the identification of gaps in capacity, barriers to efficient functioning and effective performance of the health system and methods by which the existing resources can be optimally utilized (Sheikh, et al., 2011) (Gilson, et al., 2011). It is also used in the design and evaluation of innovative interventions which can improve the outreach and quality of health services and reduce health inequities (Bennett, et al., 2011). This strategy describes the scope, role and relevance of HPSR in improved policy and decision-making and provides real examples of its positive impact on health outcomes.

As both policy-makers and communities increasingly demand better returns on investments in health, HPSR has the potential to enable health system interventions to achieve better value for money. The infusion of expertise from multiple disciplines is also enabling better measures of efficiency and impact. For example, health economics is now being widely used to argue for greater resource allocation to health from a macroeconomic perspective as well as to assess performance of health programmes in terms of cost-effectiveness and impact. Likewise, burden of disease estimates are helping to set priorities as well as measure responsiveness to health system interventions.

From innovative models of health financing and demand generation (through conditional cash transfers) to improved delivery of health services (through non-physician health care providers and the use of information technology for health care in remote areas), HPSR has also supported the health system response to the MDGs (Ponsar, et al., 2011). As development is increasingly quantified in terms of health indicators, within and across countries, HPSR will become a major component of health research, driving interventions that will improve those indicators. This strategy aims to excite and engage the next generation of researchers to lead health research into that future. Case-study evidence from China, India, Mexico, and Thailand convincingly illustrates the active use of HPSR in influencing health reforms and improving health outcomes.

### **Box 2: Health policy and systems research success stories (see Case-Studies 1-4 from China, India, Mexico and Thailand)**

What do China, India, Mexico and Thailand have in common? They have successfully adopted evidence-informed approaches to health reform, thanks to knowledge generated by health policy and systems research and resulting in stronger health systems, progress towards universal health coverage and the promise of better health for their citizens.

The common factors in their success were:

- establishing health policy and systems research institutions with able leadership and competent staff;
- involvement and influence of prominent health researchers and health leaders in advocating and highlighting the role and promise of HPSR;
- increased allocation of resources towards health policy and systems research;
- prominent role of press and public opinion in highlighting important issues related to health policy and health systems;
- positive contribution of international funders in strengthening the generation of evidence and its use locally;
- support of parliamentary standing committees in demanding policy-relevant knowledge;
- orchestrated efforts to embed research into decision-making;
- use of evaluation as a tool for learning, transparency and the scale-up of programmes.

Renewed interest in primary health care and the global push for sustainable development offer further opportunities for HPSR to demonstrate added value in advancing health agenda in the future. Commitments at national and global policy levels have placed steady importance on health systems and HPSR will continue to feature prominently under the same spotlight.

This strategy should also serve as an agent for change to maximize the potential of HPSR to inform and drive health system reforms. It supports a paradigm in which the generators and intended users of evidence, as well as other interested or influential stakeholders, engage collaboratively as interdependent and mutually supportive allies. The final chapter of this strategy proposes a number of options for action to enable the embedding of research and decision-making processes in the health ecosystem and, ultimately, to increase evidence-informed decision-making at all levels of the health system. Clearly, the responsibility for change and the selection and implementation of specific actions, lies in the hands of researchers, decision-makers, implementers and all key stakeholders from the field of HPSR, who see the value in setting aside their differences to contribute, collectively, towards the common goal of better health outcomes for communities and individuals.

As 2015 approaches, countries are intent on hastening progress towards the Millennium Development Goals (MDGs) and preparing to develop a post-MDG road map for global health. It is an appropriate moment for HPSR to position itself as the able aide of health systems (Reich, et al., 2008) (Mills, 2012) (AHPSR, 2011). Whatever the menu of prioritized health programmes in a country, and whatever their level of integration, the family of HPSR actors, including decision-makers, managers, implementers and transdisciplinary researchers, should now step up to the centre stage and lead the efforts to strengthen health systems. The time to act has come and HPSR—more than ever before and more than any other field of research, offers the unique potential and promise to make those actions count (Hafner & Shiffman, 2012).

## CASE-STUDY 1

### DEMAND-DRIVEN RESEARCH INFORMS ALLOCATION OF RESOURCES AND REDUCTION OF DISPARITIES

China's experience with the generation and use of evidence centres on demand-driven research. Research is commissioned to university researchers or to institutes such as the Institute for Health Economics by the Ministry of Health (MOH). China's success lies in strong research institutions for policy-relevant research, and the extent to which those institutions are embedded in government through linkages between individuals in both arenas as well as collaboration on projects through commissioning of research. Press and public opinion have also played an important role in opening policy windows to new research. In 2005, an evaluation of the health reform in the 1980s and 1990s was published in newspapers and the reform was deemed a failure. This evaluation heightened the need for new health reform and importantly, opened up opportunities for researchers to get involved at the initial planning stage.

Outside consultations with institutions such as the World Bank and the World Health Organization, as well as advice from individual champions in the field, are regularly sought in order to identify priorities, design reform, and revise health policy profiles. For instance, in 2007, seven health policy profiles were developed through consultations and reviews by leading health economists; issues addressed included hospital reforms, essential medicines, primary health care, public health and financing. Research evidence was used to design interventions and to identify challenges.

China's Ministry of Health has a department devoted to health policy and research, with consultation committees set up for health. International commitments and resources such as the United Kingdom's Department for International Development's (DFID) Health Policy Support Project are also important components in ensuring use of evidence in policy-making by providing resources for capacity building. Furthermore, the interconnectedness of research in policy-making is partly attributable to individuals who wear both the hats of a policy-maker and a researcher such as the vice-president of parliament who also serves as director of a research centre. Individuals also help with the setup of critical institutions such as the Health Economic Network and the Civil Society Health Policy Association. The Chinese Government uses these resources to carry out a consultative and evidence-informed process in designing new policies or interventions. Pilot sites are identified and pilot projects evaluated, then projects are scaled up following the evaluation with the necessary changes implemented. Finally, the entire project is evaluated for future use and replication. For example, public hospital reform was initially piloted in 16 cities to determine the effectiveness of the reform and then was eventually rolled out elsewhere, based on the summaries of evidence from the evaluation of the pilot cities.

Strong institutions that link research with policy-making, together with individual champions, and public opinion are some of the reasons why evidence-informed policy-making has been a success in China. For example, the government of China had been aware of problems in maternal health thanks to routine data; however, they were unaware of the causes behind the causes of mortality. Therefore, links to researchers and research institutions were used to commission research which empowered the providers of evidence and allowed for identification of priorities such as looking at disparities across rural versus urban China and between regions—for example the East versus the West, where maternal mortality was high due to preventable causes such as haemorrhage. In-depth research also highlighted other important aspects such as quality of care and patient health seeking behaviour. This evidence, generated from demand-driven research, has allowed the government to justify a revised allocation of resources and to develop evidence-informed strategies in order to reduce disparities.

## CASE-STUDY 2

### BALANCING COMPETING DEMANDS

Over the years, India's health policies and delivery systems have been influenced and driven by research and evaluation studies undertaken by research institutions, nongovernment organizations, and donor organizations. Examples of evidence-informed policies include the work of the Tuberculosis (TB) Research Center in Chennai that informed the DOTS strategy for the TB programme. Similarly, the National AIDS Control Strategy, incorporated lessons learned and evidence generated by research and civil society organizations to develop strategies for the implementation of vertically driven programmes while at the same time strengthening the public health delivery system. It was under the Danish International Development Agency (DANIDA)-funded Blindness Control Programme that the concept of decentralization emerged, which has now become the cornerstone of public policy.

More recently, evidence from various programme reports and national surveys of growing impoverishment related to health spending, as well as high rates of maternal and infant mortality provided the impetus for the establishment of the National Rural Health Mission (NRHM) which is aimed at revitalizing the state of primary health care in the country. The NRHM enabled federal funding to states and introduced several innovative approaches of financing for specific programs, such as vouchers, conditional cash transfers, and other schemes to engage over 800 000 community health workers on performance based payments. To further refine national policies based on evidence, the Government of India launched in 2010 a survey of over 18 million households in the nine low-performing states of the country in order to improve the targeting of interventions to those in greatest need and facilitate district level planning and resource allocation.

Thus, many core features of today's health system architecture in India were founded in research undertaken by research institutions, civil society organizations, and government bodies as well as tacit knowledge and best practices generated from programmes. The elevation of the Indian Council for Medical Research to the status of a department (Department of Health Research) within the Ministry helped to embed research into decision-making processes. This increased acceptance and recognition of the value of research also resulted in the establishment of the National Health Systems Resource Center which provides support for data analysis, evaluations, and capacity building at the national and state levels. Similar resource centers have now been established at the state level.

As is the case in all countries, health policy-making in India is a complex process involving multiple stakeholders including government agencies, research institutions, donors, and civil society. Among other factors, it is influenced by public perceptions as well as commitments made by elected representatives. The use of evidence generated through rigorous research along with other knowledge generated from practice is an important means of ensuring objectivity in the decision-making process. As demonstrated by the experiences in India, using evidence to inform decisions can help to balance the competing demands and interests of the various stakeholders involved in the decision-making process. Comprehensive, inbuilt evaluations of existing projects are an important means of generating knowledge on policy impact and provide the justification for continued funding or scaling-up of projects, as well as for reforms.

## CASE-STUDY 3

### A CULTURE OF EVIDENCE-INFORMED DECISION-MAKING

Mexico is a prime example of a country that has successfully embedded research within decision-making processes at all stages of policy and programme development. This started in 1987 with the establishment of the National Institute of Public Health (INSP) which was set up specifically to address research that could inform public health practice and policy. The INSP was modeled after biomedical and clinical research institutions, but its unique focus on public health practice and policy helped to increase the awareness among decision-making bodies within the government of the value of health policy and systems research in informing policy and programme development.

In addition to the establishment of the INSP, which ensured both the capacity for knowledge generation and a supply of evidence to respond to decision-making needs, Mexico enacted legislation requiring that all large-scale social programmes be independently evaluated. The institutionalization of evidence generation as part of routine programme planning fostered an enabling environment which facilitated strong relationships between research institutions and government ministries. This 'culture' of evidence-informed decision-making and value for research is reflected in the national leadership and exemplified by the appointment of four researchers as ministers of health between 1982 and 2000.

The seamless integration of research and decision-making is illustrated best by the way that the researchers and decision-makers engaged to collaboratively design and evaluate the roll out of a *conditional cash transfer* programme that was implemented in the late 1990s and is still active. The phased approach for scale-up was intentionally employed to facilitate measurements of programme impact, while the use of random allocation and matching of communities mitigated the political tension that would have otherwise resulted from the necessary assignment of communities to intervention and comparison sites.

A number of actions have been taken to sustain this culture of evidence-informed decision-making in Mexico. An international congress of public health research is convened biennially, bringing together decision-makers, implementers, researchers, and other stakeholders, in order to review progress and identify priorities for policy action and research. Other ways in which decision-makers and researchers engage include mid-career training programmes, public seminars, intensive summer courses and training, which expose decision-makers to new research and help to make researchers sensitive to decision-making needs. Additionally, the media were involved as important stakeholders in facilitating the dissemination of research and survey results, which helped to stimulate public interest and engagement in the policy process. This resulted in greater community participation in the identification of research priorities and accountability for actions by decision-makers.

Individual champions of HPSR have also played a critical role in ensuring the use of evidence in decision-making. For example, an outgoing minister of health insisted that the reform process initiated under his administration be externally evaluated so that the incoming government would have greater confidence in these policies. The use of evaluative research by the Mexican government enabled decisions about health reforms to transcend party politics and rational decision-making. The demonstration of positive gains by the evaluation provided compelling evidence for the incoming government to maintain and continue the reforms.



## CASE-STUDY 4

### INSTITUTIONALIZING THE USE OF EVIDENCE

Since the 1960s, Thailand has been building capacity both in its health (in particular primary health care) and policy-making infrastructure. However, it was not until the 1990s, with the establishment of a more robust health policy and systems research infrastructure and increased capacity to carry out research, that decision-making became increasingly guided by evidence. The establishment of the Health Policy and Systems Research Institute (HPSRI) in 1992 helped to institutionalize the use of evidence for health policy and management decision-making in Thailand. The success of the HPSRI triggered the propagation of more specialized research institutions that generate evidence to respond to policy-making needs. The IHPP (International Health Policy Program) and HITAP (Health Intervention and Technology Assessment Program) are among research institutions which have emerged as key partners to decision-making bodies and today are seen as integral partners that are embedded within the health policy ecosystem.

The systematic use of evidence in policy, planning and evaluation—including assessments of political, financial and programmatic feasibility of Universal Health Coverage (UHC) schemes, led to the decision to adopt universal health coverage in March 2001. This has been followed by a recent external assessment of the impact of the UHC ten years after its initial adoption, providing an evidence-base for continuing these schemes as well as sustained political support for this policy. Through these institutional arrangements, HPSR and other research evidence are effectively used to guide the allocation of resources, as well as the development, implementation and evaluation of public policy interventions in Thailand.

Thailand's success in institutionalizing evidence use has been driven by several factors. First, press and public opinion played a significant role as triggers of evidence-based policy-making. Although the media do not serve as providers of evidence, together with civil society, they acted as advocates who are able to highlight challenges and issues that need to be addressed by policy-makers. Secondly, public investment in the health sector has grown over time, particularly in developing and strengthening capacity for research. Training and postgraduate education, domestically and supported by international institutions have produced many influential PhD graduates, who have gone on to become champions in the field of HPSR. Finally, long-term fellowships and engagements with external experts have enabled young researchers to bring skills and experience acquired in international settings, back to local settings. International collaboration has also helped to strengthen capacity within the country. This form of capacity building also enables individual researchers to mobilize more financial resources from both local and external sources.

Although researchers in these institutions maintain scientific and intellectual independence, they are trusted by decision-makers within the Ministry of Public Health. The arm's length relationship means that researchers are not too close to be dominated, and not too distant to be irrelevant. As they have become embedded within decision-making processes through linkages with government agencies, they have contributed to a culture of evidence use in the country. Through this closely linked, but relatively independent relationship, researchers and policy-makers in Thailand are able to work together to address some of the health concerns highlighted through routine data and raised in public debates.



**SECTION 2**

# **The Science of Health Policy and Systems Research**

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## 2. Health policy and systems research: the GPS of health decision-making

■ *“Two things should not be seen while they are being made – sausages and public policy.”*

This remark, attributed to Bismarck, is often quoted to deride the messy manner in which the making of any public policy is perceived by its critics. When the nineteenth century German Chancellor made that unappetising comparison, he was commenting on the complex process of law-making which he felt would put off people not well versed in politics or statecraft. Policy-making has grown even more complex since those times. While democratic governance brings in more transparency and accountability to the policy-making process, many more actors are now engaged in shaping, making, implementing, evaluating and critiquing public policy (Oxman, et al., 2009). Decision-makers in the health system are, therefore, diverse. They include policy-makers and implementers as well as frontline workers. Those who shape decisions include researchers, media, civil society and funding agencies.

Today’s complex interplay between local, regional, national and global factors influences health system decision-making processes as never before. Health has multiple determinants and health policy and practice require multisectoral pathways of action. Decisions made in different sectors need to be sensitive and responsive to health concerns (WHO, 2008). Ultimately, how effectively the health system coordinates internally and engages with other sectors externally, determines the health outcomes of communities and individuals (Shankardass, et al., 2012). HPSR identifies and responds to the need for closer collaboration between researchers and decision-makers in order for research findings to be translated into policy and effectively utilized. At its best, HPSR should function as the GPS of health decision-making, providing navigational support to the decision-maker, locating the starting point for the journey (the health problem), the desired destination (the health outcome) and options for getting there (health solutions).

It is intuitive to assume – some would say it is common sense – that health policy should be adequately informed and suitably enabled by scientific evidence generated by robust research. There are, however, debates on what constitutes good evidence for health policy and whether evidence gathered by public health researchers is, by itself, adequate for guiding policy (Humphreys & Piot, 2012).

In an ideal world, all health decisions would be adequately informed and suitably enabled by scientific evidence generated through robust research. Indeed evidence, derived from many disciplines and composed of several methodological strands, is readily available (Lewin, et al., 2012). However, evidence is not always sufficient for making decisions and research is not always commissioned with the sole intent to influence decision-making. Furthermore, decision-makers must consider complex health system decisions within the context of a broader decision-making universe and not in isolation (Shiell, et al., 2008) (de Savigny, 2009). In the most effective decision-making environments, all relevant parties – researchers, decision-makers and other stakeholders, including civil society actors, work together as interdependent allies in an environment of mutual trust and respect. This enables major decisions to be based on a solid foundation of evidence and benefit from a broad range of inputs.

More commonly, however, researchers and decision-makers are divided by a gulf of misunderstanding, unaware of the added value they could bring by working together in a collective unit. There have been past attempts to bridge the distance between those who generate the knowledge through research and those who can potentially use it to shape policy and also inform decision-making at various operational levels of the health system but new efforts are needed to bring together the demand and supply side (Oxman, et al., 2009).

The frequent lack of appreciation of this need clouds the perceptions and conduct of both the health policy and systems researcher and the policy-maker. The researcher is impatient for immediate acceptance and early implementation of his or her recommendations, oblivious to the larger universe in which the policy-maker operates and the externalities that must be factored into the difficult exercise of crafting policy (Lewin, et al., 2012). The policy-maker/implementer, on the other hand, is often dismissive of the researcher's recommendations, as they present an incomplete solution or are viewed as sectarian advocacy of a special interest. The contrary may also happen. The policy-maker's excessive dependence on limited research, to the exclusion of other sizable evidence, may lead to serious policy errors (Lavis, et al., 2012).

For health policy and systems research to be most effective, it should provide directional inputs (to initiate and advance policy) as well as correctional inputs (to amend policy which is moving in the wrong direction). While doing so, it must understand that its role is that of an enabler (shaping policy) and not that of a decision-maker (making policy). The policy-maker/implementer will remain the driver, making decisions on matters such as speed, resources and diversions in case of uncharted barriers or new demands that may suddenly call for a change of course. It is in recognizing the role and limitations of its ability to guide health policy that the future of HPSR will lie (Hanney & González-Block, 2009). It is important to clarify its purpose (strengthen the health system), process (through demand-driven research) and products (evidence to inform policy and knowledge to shape decisions), because these attributes are essential for defining and delineating the identity of HPSR (Mills, 2012).

### 3. Coming of age: distinguishing the role of HPSR in the health research universe

■ This chapter aims to clarify and distinguish HPSR within the broader realm of health research. There are many types of health research (WHO, 2010). Biomedical research focuses on basic research such as the study of physiologic systems, drug discovery or molecular genetics of pathogenic organisms (Bowling, 2009). The search for an anti-malarial vaccine falls into this category. Clinical and behavioural research aims to study disorders of health as well as interventions to protect, restore or improve health at the individual level (Feinstein, 1985). Trials to study the comparative efficacy of different anti-malarial drugs exemplify this type of research. Population health research investigates the determinants of health at the population level, evaluating interventions which can impact the health of populations and communities (Hawe & Potvin, 2009). The impact of the distribution of insecticide sprayed bednets on the incidence of malaria in a population with a high burden of the disease is one such example.

Public health researchers have mostly engaged in population research but have also lent their methodological skills to clinical and behavioural research. Drawing upon the strength of quantitative sciences like epidemiology, biostatistics and demography, public health research developed well-defined study designs and criteria for assessing the strength and validity of associations between biological and behavioural variables and health outcomes (Diez-Roux, 2007). Further strength was acquired from the integration of social and behavioural sciences, including economics (Green, et al., 2009). In recent years, public health research has grown to encompass the wider determinants of health, like agricultural and trade policies and societal characteristics, such as income inequity and respect for human rights, in relation to their impact on human health. As 'new public health' began to extend its field, its engagement with other research communities increased, embracing fields as varied as environmental sciences and business management (Frenk, 2010) (Baum, 2007).

Although health policy and systems research originates from public health research, initially focusing on the design and delivery of health services (Bennett, et al., 2011), it has developed unique and distinguishing characteristics over the course of its evolution. As components of the health system have been further defined, HPSR has become home to a range of disciplines, united by the common objective of improving system characteristics to increase health returns on investment. HPSR has become increasingly demand-driven in defining its research agenda and problem-solving in its product profile (Gilson, et al., 2011). Its engagement with policy-makers, health system managers, service providers, civil society actors and community-based organizations has become much more intimate and interactive. This so-called 'embedded' nature of HPSR has begun to distinguish it from other forms of public health research which are generally more distant from the object of study in order to preserve scientific integrity.

HPSR has emerged as an excellent example of trans-disciplinary research, capable of incorporating the products of independently conducted inter-disciplinary or multi-disciplinary research into its analytic framework. The very nature of trans-disciplinary research calls for the various disciplines involved to work together as a team to define the nature of the problem to be resolved, thereby greatly increasing the opportunity for useful outcomes (Misra, et al., 2011). By evolving in this way, HPSR has freed itself from constraints that have frequently prevented public health research from engaging vigorously with policy and practice. As a result, HPSR has become more focused on solving problems rather than testing hypotheses. While transforming the results of relevant research into policy and practice, HPSR

also benefits by drawing on lessons generated from existing practices, which add to the knowledge obtained from designed research studies and also help generate fresh research questions which need to be answered. Knowledge generation and knowledge translation are, therefore, not unidirectional in HPSR. They are bidirectional, with the decision-makers, as well as the researchers, teaching each other and learning from one another.

Health systems are highly complex systems which are multi-layered, non-linear, and very vulnerable to a domino effect when any component of the system is unsettled or malfunctions (WHO, 2007). Multiple research designs and several analytic tools may need to be employed to assess the interventions that aim to influence this system (de Savigny & Adam, 2009). The 'messy' nature of the health system, which has several actors and a multitude of influences operating simultaneously, creates difficulties in the evaluation of cause and effect and means that the design of the intervention and evaluation of its impact is less clean cut than conventional public health research demands (Remme, et al., 2010). The field now combines 'fixed' quantitative methods with 'flexible' qualitative designs in exploring the sources and solutions of a problem (Brownson, et al., 2011). The diffidence with which such 'soft science' was once defended, has now been replaced by the confident assertion that HPSR is a field of research that has greater potential relevance and application due to its use of a medley of methods to identify fit-for-purpose health system interventions.

An attribute which HPSR has displayed so far, and must demonstrate to greater effect as it advances, is the adaptability with which it moulds its methodological tools to meet the complex and varying demands of the health system. While the overall architecture of research remains true to sound scientific principles, there is great fluidity of movement within that space to enable research to respond to the changing nature of health system challenges. In accordance with a Darwinian design, adaptation to a changing environment and acquisition of problem-solving skills will principally drive the further evolution of HPSR. The conceptual model of HPSR, as it evolves, should emphasize its integrative character which enables trans-disciplinary approaches to create problem-solving products demanded by the health system (Rosenfield, 2008). It should draw upon knowledge creators from multiple disciplinary domains (entry barred to none) yet focus on identifying solutions that can enhance the outreach, effectiveness and equity dimensions of health system performance (Wallerstein & Duran, 2010). It will be defined more by what it does than what it claims to be in terms of disciplinary composition. Each contributing discipline will retain its identity and its defined community of dedicated researchers but their identities are subsumed when they mingle in the unifying body of HPSR, just as rivers shed their identity when they merge into an ocean.

As it overcomes the identity crisis of the past and acquires a composite identity of its own, HPSR must not judge itself by the standards that biomedical research, clinical research or traditional public health research have set. It has to develop its own standards for evaluating 'evidence', assembling 'knowledge' and translating it into recommendations that decision-makers and researchers in the health system can comprehend, trust and implement (Mills, 2012). The scientific basis for these recommendations will more likely emerge as a 'construct' than as a tested hypothesis, though the latter too is possible in some research designs. Each of the contributing disciplinary groups will come with its own rules of evidence or preferred weights for each type of evidence (Mann, et al., 2011). HPSR has to judiciously integrate these varied perspectives while developing the 'construct' that draws upon the whole body of research. Quite often the recommendations would need to be based on the 'best-available' knowledge rather than on the 'most-desirable' evidence (Hanney & González-Block, 2009). When the perfect is not possible, HPSR must perfect the possible (at present) and then work to make the perfect possible (in the future).





**SECTION 3**

# **Transformational Thinking**

## 4. Changing perspectives

■ *“There is nothing more powerful than an idea whose time has come.” - Victor Hugo*

Increasingly, both researchers and decision-makers are recognizing the importance and application of HPSR. As previously discussed, some countries, such as China, India, Mexico and Thailand, are already using evidence-informed policy-making to achieve universal coverage and influence overall health system reform. Others, such as, Chile, Ghana, Lebanon, Nepal and Zambia are undergoing paradigm shifts within government and research institutions towards an evidence-informed approach to decision-making. Closing the research/policy gap requires a change in the mindset of researchers and research users - policy-makers, policy advisors, implementers, and civil society - alike.

Not only do perspectives need to change with regards to the role and autonomy of the researcher and the decision-maker individually, they must also change with regards to the interrelationship between the two. Accountability for actions, including accountability for research results, the means to scrutinize evidence and methods of reviewing and evaluating activities, are all triggers for this change (WHO, 2011).

Traditionally, reporting of routine health management information systems (HMIS) data has been considered largely an administrative exercise. Countries that have experienced a shift in the mindset, however, have taken a closer look at such data sets and effectively incorporated them into decision-making processes. As HPSR gains in prominence, decision-makers are beginning to look towards research as a better means of answering the puzzles unveiled by routine data. As HPSR conducts a critical appraisal of such data and interprets the information in a policy and programme-relevant manner, decision-makers have begun to appreciate the potential benefits of commissioning relevant research to find the root causes of figures revealed by the existing data collection infrastructure.

The disconnect between research-generated evidence and policy often arises when researchers fail to align their research with the perceived needs of those who govern or manage the health system. Research may generate an abundant supply of information, but if there is no demand for it, there will be very low uptake of the information into the policy-making process (Hanney & González-Block, 2011). Both developed and developing countries offer examples of such underutilized research (Jirawattanapisal, et al., 2009). There is a need to conduct timely, policy-relevant research, with input from research users (programme managers, implementers, civil society, etc.) throughout the entire process.

Traditionally, government policy-makers and managers of public sector health programmes have been seen as the main consumers of knowledge generated by HPSR. However, the private sector, too, is an important contributor to health care, in its own right and as part of public-private partnership initiatives. HPSR should therefore also recognize the private sector as a key decision-making stakeholder with whom to engage, without compromising public service ideals and the independent nature of research.

HPSR, by the very nature of the constituency it serves, cannot adopt the position of a disengaged and distanced supplier of knowledge (Mills, et al., 2008). This constituency not only includes policy and decision-makers but all those who share a stake in improving policies, such as programme managers, implementers, researchers as well as citizens and civil society. This is consistent with systems thinking principles where the roles, perspectives, values and power of all stakeholders should be considered in understanding and addressing health systems issues and problems (de Savigny & Adam 2009). By providing a timely response to the demand set by the HPSR constituency,

taking into account their views and values, improvements in the health system can be successfully accomplished, informed by sound evidence (Bamako, 2009).

There have been past attempts to bridge the artificial divide between those who generate the knowledge through research and those who can potentially use it to shape or make policy (Lavis, et al., 2010). Knowledge translation platforms and independent knowledge brokers have attempted to transfer information from the researcher to the policy-maker. These attempts have met with limited success, because they have merely acted as promotional agents after a copious supply of research results have already been released, without considering the nature of the demand (Beynon, et al., 2012). This signifies a need for change in the researcher mindset. The translational barrier arises not only because decision-makers might lack the capacity to absorb the information but, more importantly, because they might not have felt the need for it in the first place. In circumstances where research institutions and decision-makers are not formally linked, it has been an efficient process for decision-makers to seek solutions to observed shortcomings in the health system by developing a trusted and sustained relationship with researchers. As a result, demand and use of research becomes an integral component of any policy change.

There are also barriers to consider. These include the different characteristics of research and policy-making as well as questions about the objectivity of research when conducted in close proximity to policy decisions. By its nature, research can be a time intensive process while policy-making is fast moving and puts pressure on decision-makers to find solutions quickly. A change in thinking is necessary here, to align the researchers and research users, in terms of direction and speed, even as they run on parallel tracks. The decision-making environment is an important factor that determines the ability of a research institution to influence decisions made for or within the health system (Lavis, et al., 2009). The environment can act as an enabler or as a barrier. Evidence from countries which have successfully transitioned from low to high use of evidence indicates that they have created an environment which fosters connections between evidence and policy-making by appointing senior researchers, with a proven track record in public health, to influential policy positions for a reasonably long tenure. Such an arrangement allows for sustainable changes in the institutional mindset. For example, in Mexico, four consecutive health ministers have had expertise in health research. This is central in instigating progress towards informed policy and decision-making and creating a more enabling environment.

Implicit, in this new mindset, is the need for HPSR to become embedded in the ecosystem in which the decision-makers operate. All those who shape or make decisions related to the health system should become valued 'client counsellors' (key informants) who will help the researchers to identify the nature of demand and estimate the likely 'realised value' of any research endeavour (Provan, et al., 2009). Embeddedness of research processes accelerates the speed at which research evidence can be made available to decision-makers. Preferably, the nature of embeddedness should be one of close connectivity while maintaining scientific independence in order to retain objectivity in the design, conduct and interpretation of research. Important considerations in ensuring a lasting and functional relationship include trust between decision-makers and researchers, sufficient capacity to address the demand for in-depth and high quality research, close connectivity and objectivity.

The value of embeddedness is best exemplified by the manner in which China, India, Mexico and Thailand drew upon research institutions to introduce comprehensive health care reform, especially health financing programmes which paved the way for universal health coverage (Tantivess & Walt, 2008) (Jirawattanapisal, et al., 2009). An excellent example of this is the phased scale-up of the conditional cash transfer programme in Mexico, where HPSR was embedded in the overall design and implementation of the reform process and key programmes. In Mexico, the strategic use of the science of randomization, to guide the implementation process across subregions, minimized the political friction that would have otherwise resulted from the phased scale-up of the programme.

While these countries relied heavily on research institutions created by public mandate, they also invited contributions from other sources including international academic institutions. Over time, the Indian Medical Research Council, the Department of Health Policy and Research in China's Ministry of Health, the National Institute of Public Health in Mexico and the Health Policy Research Institute in Thailand have become major engines of health system reform in their countries and provide excellent role models for other national research institutions that wish to become similarly embedded.

There is also a need for changes in attitude among decision-makers. Lack of familiarity with the purpose and process of HPSR can lead to scepticism and dismissal of research results as irrelevant to the decision-making process. Increasing exposure of decision-makers to documented experience of the value added by HPSR in different settings, and the creation of platforms for their regular interaction with researchers, will make them more open-minded and receptive to collaboration, ultimately leading to the successful and sustainable embedding of research in decision-making processes.

Embedding of research leads to greater accountability of evidence, both in terms of the evidence obtained and its use in decision-making (Roux, et al., 2010). Policy-makers and researchers must not only work together as allies, they must work as accomplices and hold each other accountable for the impact—or lack thereof, of policies intended to improve the health of populations.

### **Box 3: Triggers of transformation (see Case-Studies 5-9, from Chile, Ghana, Lebanon, Nepal and Zambia)**

The following common factors have been identified as critical in igniting change and enabling countries to increase the generation and use of evidence for decision-making:

- recognize the value of routine data, including grey literature, for identifying further policy-relevant research questions;
- introduce mechanisms to reduce the high turnover in senior level policy-making positions;
- create opportunities for dialogue between researchers and decision-makers to discuss HPSR priorities;
- create infrastructure for cross-training and work experience in research for decision-makers in public health policy and research;
- involve civil society and media in policy-relevant dissemination of research evidence.

## CASE-STUDY 5

### EVIDENCE-DRIVEN HEALTH REFORMS

The transformation of the Chilean health system during the 20th century evolved from an early attempt to achieve universal access to health care through a tax funded National Health System (NHS) implemented in 1952. This resulted in a system of unregulated private insurance during the military regime which then led to further reforms based on a *'right to health'* approach to reduce inequities in the health system. In 1990, after 17 years of dictatorship, Chile started rebuilding its political system with a focus on improving social conditions and health. These health reforms were aimed at 1) restoring the network of public health facilities, and 2) strengthening the regulation of private health insurers. Throughout this process, Chile successfully used knowledge and evidence generated through research to guide the development and implementation of health policies.

The first stage of the reforms comprised infrastructure investment studies, the start-up phase of the health information system, as well as training and information workshops, among other components. This effort was instrumental in generating an evidence-base on sector performance and needs. As part of this work, the first burden of disease study was carried out in 1995, followed by the first study on social priorities that evaluated the expectations and priorities of individuals for health care. These studies highlighted deficiencies in health information systems as well as the importance of assessing needs through routine health surveys. Additionally, a cost-effectiveness analysis of health priorities and survey of social and geographic health inequities was implemented, resulting in evidence that supported the second stage of the reform process in 2000.

During the second stage of the reforms, the MOH implemented a system of routine health surveys including a burden of disease study to measure prevalence of priority diseases and risk factors, a quality-of-life survey, as well as a survey of out-of-pocket health expenditures which preceded the establishment of the National Health Account. In parallel, a National Fund for Research was created by the National Commission of Science and Technology, to support public health research. In 2002, the MOH launched the National Health Objectives for 2000–2010 as goals for health reform. In 2005, parliament approved the President Lagos Health Care Reform legislation which identified priority health conditions that were based on rigorous studies of disease burden, equity, social preferences, and cost-effectiveness of prevention/treatment. In 2007, the social protection initiative, *Chile Crece Contigo*—aimed at providing universal social services to children and pregnant women, was launched in response to evidence generated by the Early Child Development (ECD) knowledge network of the Commission on Social Determinants of Health.

Throughout the health reform process, the link between researchers and the users of research (policy-makers, programme managers, beneficiaries, etc.) was strengthened as a result of the mutual exchange of knowledge. This was facilitated by opportunities for researchers and policy-makers to engage in both research and decision-making activities. Many of the decision-makers working in the MOH have a link to the research community, having previously worked either in academia or in research institutions. This provides a unique perspective to these individuals and contributes to increased appreciation for the role of research in policy-making by other decision-makers within the ministry as well.

CHILE

## CASE-STUDY 6

### INVOLVING RESEARCHERS AND LOCAL DECISION-MAKERS

In the early 1990s, a visionary Director of Medical Services (DMS) in Ghana was concerned about the system of user fees and felt it would be ideal if an alternative method, such as health insurance, could be put in place to replace the 'cash and carry' system. As a public health physician and a firm believer in evidence-informed decision-making, he provided major support for the establishment of a Health Research Unit (HRU) within the MOH in 1989, and initiated a process to strengthen the capacity for knowledge-generation—particularly health systems research, to inform decision-making. Early on, the DMS became a driving force behind the HRU and in supporting efforts to build the capacity of local researchers. For example, in order to get evidence on the feasibility of a national health insurance scheme, he mobilized a staff member of the MOH, who was undertaking doctoral training in the United Kingdom, to focus her doctoral thesis work in health economics on the feasibility of health insurance for the non-formal sector in a low-income setting like Ghana.

Using this evidence, the DMS advocated for the MOH to support a pilot study in Ghana. In 1993, with strong support from the MOH, the United Nations Children's Fund (UNICEF) funded the initial exploratory research on the feasibility of district wide health insurance for the non-formal sector. A follow-up pilot and evaluation of a district-wide health insurance scheme was then proposed in the study district. A European Union (EU) grant for research into community-based health financing in low-income countries (including Burkina Faso and Ghana), in collaboration with the London School of Hygiene and Tropical Medicine and Heidelberg University, was obtained to support the evaluation of the intervention. The development and implementation of the pilot district health insurance intervention was to be financed by the MOH. However, the DMS, who had been a major high level advocate and supporter of the work, retired soon after the EU grant was obtained. His retirement signalled the end of MOH interest in the research and no additional resources were made available for design and implementation of the pilot. Therefore, due to the lack of MOH follow-up, after the initial funding for the baseline, the EU grant for evaluation was not renewed for the next phase of work.

Despite the unanticipated setbacks from loss of central government interest, as a result of the active engagement of the local government in the exploratory research and planning for the pilot study, there was still interest and commitment in the district to move forward with the next phase of work. The design of the pilot intervention therefore continued but at a much slower pace than initially planned, given the limited local government resources. In October 2000, a district-wide pilot health insurance scheme finally took off with delivery of benefits to registered beneficiaries. To overcome the funding gap that was created when central MOH funding did not come through and the EU grant ended, the district assembly contributed part of its United Nations Development Programme (UNDP) poverty reduction fund to support implementation. The WHO Regional Office for Africa also provided further support. The design, implementation, and evaluation of the pilot scheme were carried out through a collaborative effort engaging the district health directorate and research centre, the district government and local communities. This inclusive process helped to sensitize researchers to decision-making processes and highlighted the value of policy-relevant research. In 2001, in response to several proposals from the district team seeking support to be able to complete the pilot, DANIDA and the MOH provided further funding.

The evidence generated from this work contributed towards the development of the framework and ideology for what eventually became the National Health Insurance scheme in Ghana. In January 2001, a party was elected and took power with a major election promise to replace the cash and carry system with National Health Insurance. The developers of the National Health Insurance policy drew heavily on the evidence from this pilot scheme and the experience and expertise within the pilot district. The availability of evidence alone did not mean that decision-making would be optimally evidence-informed. Political interest and conflicts meant that sometimes the evidence available was used and sometimes it was ignored. This case demonstrates that not only is research critical to support health systems development, but support and capacity building for health systems research must target decision-makers as well as researchers. Health systems researchers must also understand the political as well as technical dimensions of decision-making in health. It was through involvement of local community leaders and researchers that use of evidence remained an important part of Ghana's health insurance scheme and funds were mobilized for this process. This experience underscores the importance of establishing robust research institutions and, providing sufficient funding. It also underscores the need to maintain the sustainability of these institutions and the flow of funds through the engagement and sensitization of researchers and decision-makers to the importance of policy-relevant evidence, at the local, as well as central level.

## CASE-STUDY 7

### OVERCOMING CONSTRAINTS

Policy-making in Nepal is increasingly evidence-informed as a result of the work of institutions such as the Nepal Health Research Council, the Nepal Public Health Foundation, the Nepal Health Economics Association, as well as support from international donors such as DFID that have helped to support this process. While this shift towards evidence-informed decision-making represents an important step forward by the government, several challenges still remain.

The most prominent challenges are the lack of appropriate capacity to disseminate knowledge, resource constraints—specifically the limited financial and human resources, as well as the lack of alignment between evidence generated and the priorities of decision-makers. To address these barriers, bilateral agencies have provided funding to support relevant research through programmes such as DFID’s Nepal Health Sector Support Program. Additionally, several individuals who—having worked in government and international organizations, understand the value of research, are now returning to Nepal as champions advocating for greater generation and use of evidence in decision-making. As experts in the field, these individuals have the necessary experience to mobilize people, increase credibility in the eyes of stakeholders, and introduce the expertise necessary to bring about changes.

In Nepal, knowledge agents are available but they are underutilized due to the low recognition of local researchers and the lack of incentives to keep them involved in policy-relevant research. Press and public opinion have served as important triggers of change by highlighting important issues in the media, which propelled policy-makers to look into the issues and to make the necessary policy change based on available evidence. An example of this is the legalization of abortion where available evidence appeared in the print media leading the public to demand for policy change, which ultimately led to legislation on this issue.

These examples highlight the importance of effective interaction and communication with people in the community and the beneficiaries of research. Policy decisions are often based on incentives offered by favourable public opinion; therefore, by effectively communicating research evidence to the public, researchers can ensure appropriate use of evidence in policy-making. Other triggers include better orientation of researchers within the policy-making infrastructure, increased demand for research by policy-makers, provision of research dissemination tools such as policy briefs, support of media for effective dissemination of evidence, and technical capacity building for both researchers and research users to generate good quality, policy-relevant research and to use it appropriately.



## CASE-STUDY 8

### GENERATING KNOWLEDGE FROM PRACTICE

The use of evidence in decision-making is changing in Lebanon as a result of a shift in thinking among researchers and decision-makers as well as a change in the way that routine data is utilized. Policy-makers are increasingly making use of available information collected from the implementation of existing programmes to inform policy and practice. For example, routine data from the “Healthy School” programme identified high rates of oral health problems—specifically tooth decay, among school-aged students. In response to these trends, the MOH commissioned the central administration of statistics to conduct research to understand the underlying cause and related factors that contributed to this problem. The identification of low fluoridation in public water sources by researchers led to the passing of legislation increasing fluoride levels in public water.

This example illustrates how the value of research can be demonstrated to decision-makers and drive a change in established attitudes. The problem and need for research was identified by policy-makers through routine data generated by a government programme, which resulted in the commissioning of research to find a solution. The evidence generated was then used to implement a policy change that addressed the root cause of the problem. Factors that led to the successful passing of this law included the engagement of both the research users and the researchers at all stages: in analysing the programme data, identifying the problem, as well as exploring and testing possible solutions.

The Lebanese Government recognizes that evidence is available in many forms, including reports and documents that are not published in peer-reviewed literature. For this reason, it is supporting the establishment of a repository of grey literature comprised of programme evaluations and other reports, to inform decision-making. This is especially important as policy-makers and the public often read these sources of information more frequently than they would read a scientific journal. Since decision-makers are accountable to their constituents, raising awareness of issues and stimulating demand for policy change among the public can be an effective strategy to influence policy. As such, the dissemination of research should extend beyond peer-reviewed journals and include other media such as newspapers and grey literature. Researchers should consider civil society, the press, and the general public as potential audiences for the evidence that they generate, as these groups are important stakeholders in the formulation of public policies. In order for this to occur, however, career incentives and performance measures for researchers should be based not only on the volume of publications in peer-reviewed journals but also the impact of research on policy and practice.

Shifting prior mindsets and attitudes requires time but can be achieved through the sensitization and orientation of the next generation of researchers and decision-makers. Teaching institutions in Lebanon are encouraging cross-training in research and public policy. Through formalized exchange programmes, research trainees undertake work experience within the ministry and are exposed to decision-making processes. These peer exchanges are an effective means of strengthening the linkages between research and decision-making institutions as well as building a cadre of leaders who understand both research and decision-making processes.

## CASE-STUDY 9

### CREATING A CULTURE OF CHANGE

Zambia does not have a history of formal structures where evidence is translated to policy. However, a process is currently underway to move towards such a structure where policy-relevant knowledge and evidence are demanded and used. Changing mindsets have led to this shift as more and more advocates have taken on the responsibility of developing the necessary infrastructure to facilitate the use of evidence in decision-making. The recognition of the role of research in decision-making is reflected in Zambia's 2006–2011 National Strategic Plan which highlighted that the "institutionalisation of the use of research outcomes for health planning, policy and decision-making and programme implementation... is currently unsatisfactory", and that "it is important to develop and strengthen existing health research systems at all levels". By 2008, government efforts were already moving towards the creation of a national health research authority. This, and other actions promoting the use of research evidence, led to an urgent need to find mechanisms to harvest research, synthesize and translate its results and feed them into decision-making systems and structures.

Next, it was necessary to create structures and processes to facilitate functional use of evidence-informed decision-making and knowledge translation. In Zambia, Research-to-Action Groups were established to steer the process of collating, synthesizing and presenting research evidence for policy decisions. These groups are composed of researchers, health programme managers and at least one person with skills in knowledge translation. By confirming the appropriate structures, the government can ensure a continued trend of use of evidence in policy and decision-making. These structures can be viewed as embedded institutions which are well-connected, reputable and provide links to good quality research.

Efforts are underway to institutionalize the process of obtaining research evidence and applying it to the issues as they arise. Research has sometimes been regarded as a delaying tactic, but as the paradigm shifts towards research demanded in parallel with policy needs, decision-makers in Zambia are asking questions as policy processes move along and are using the evidence to inform their decisions. Moreover, what is new is that evidence is deliberately sought at the managerial level. Evidence from routine surveillance data is being used to generate knowledge to improve decision-making. The thinking has moved away from assumptions regarding what would be appropriate towards use of facts, creating an answer-seeking ecosystem within government, which is transcending all sectors of society. This phenomenon has been brought to life in Zambia by some champions, but more than that, the number of decision-makers and researchers who are more and more convinced of the importance of research has helped to turn the tide through political awareness, a strong civil society and more.

The Zambian Government is working to institutionalize this new way of thinking so that even individuals at the field level are aware of the role of evidence in the procedures which they are using to achieve positive health outcomes. While the intentions (and, to some extent, the structures) were in place to promote the use of evidence in policy-making and programme management, the actual capacity to understand available knowledge translation processes and use these tools, is weak. Specific training programmes were needed to prepare both researchers and research users to learn these processes and apply these tools. These training programmes are being designed to primarily attract the "next generation" of researcher and research user.

**SECTION**

**4**

# **Options for Action**

## 5. Options for action

■ Outlined below are a number of options for action by stakeholders to facilitate evidence-informed decision-making and the strengthening of health systems. These complementary options are intended to support the embedding of research within decision-making processes and promote a steady programme of national and global investment in HPSR. Member States of WHO may opt to pursue some or all of these actions, based on their individual context and available resources. In making these choices, countries should remain ever-conscious of the ultimate goal of HPSR and health systems strengthening: to improve the health of populations.

### 1. Embed research within decision-making processes

Evidence-informed decision-making is most effective when research is embedded at all stages of policy and programme development. When this happens, researchers and decision-makers are linked through a system in which the need for evidence to inform policy is understood by decision-makers who can readily reach out to researchers within their network to support this process. Health policy and systems researchers, who are integrated in the ecosystem in which decision-makers operate, are better positioned to provide relevant and timely evidence that can inform the design and implementation of policies as well as challenge their effectiveness.

*Action: To facilitate the systematic use of research evidence in the development of public policy and programmes, efforts should be made to establish institutional mechanisms such as protocols for policy formulation, planning, and implementation that explicitly refer to research evidence, which could be used by decision-makers.*

*Action: To ensure a benefit to society, efforts should be made by ministries to systematically evaluate public policies and large-scale social programmes. Such evaluations, whether conducted internally or externally, should be planned for in consultation with researchers, during the design of the programme.*

*Action: To strengthen the relationship between researchers and decision-makers, efforts should be made to create opportunities for greater engagement and collaboration in both the research and in policy-making processes. Placing data in the public domain along with other mechanisms for policy dialogue could be implemented as a means of increasing transparency and fostering greater trust between the two and building a culture of evidence-informed decision-making.*

### 2. Support demand-driven research

In order to be relevant to decision-making, HPSR has to be responsive to the need to identify the cause of problems and find feasible solutions when health systems are not delivering the desired health outcomes. It has to be demand-driven and cannot be viewed only as a supply-driven activity wherein the researchers pursue an area of interest and expect decision-makers to readily alter policy in response to the results. However, the articulated demands for evidence should come from a wide range of stakeholders including decision-makers, implementers, civil society, communities at large, and researchers themselves.

*Action:* To facilitate the generation of demand for research evidence, efforts should be made to establish national platforms to identify research needs. Stakeholder consultations, open calls, and similar inclusive processes for priority setting could be used to systematically assess the needs of the health system as well as the research needed to address these gaps.

*Action:* To ensure greater alignment with articulated demands of diverse stakeholders and needs of health systems, funders of HPSR should direct resources towards priorities that have been identified through a systematic, transparent, and inclusive process.

### 3. Strengthen capacity for research and use of evidence

Increased evidence-informed decision-making and health systems strengthening will not be possible without adequate numbers of trained researchers who are able to undertake HPSR and advocate for its use in decision-making. While a lack of capacity has been previously enumerated, few strategies have been successfully implemented to rectify the problem. Decision-makers too need to be assisted in developing an understanding of the purpose and process of HPSR so that they can better appreciate the products of research. The use of 'evidence' and 'knowledge' for decision-making must be extensively illustrated during such interactions, so that the benefits of evidence-informed decision-making and the pitfalls of ignoring good evidence are adequately recognised.

*Action:* To ensure ongoing development of capacity within countries, efforts should be made to develop HPSR teaching and training programmes within academic and research institutions. Both short-term (courses) and long-term (degree programmes) strategies could be employed to enhance the sustainability of capacity strengthening efforts.

*Action:* To facilitate the use of HPSR to answer complex questions relating to health systems strengthening, efforts should be made to advance methods of research as well as develop common taxonomies, reporting guidelines, quality assessment instruments and evaluation platforms. Standardizing these processes could enable cross-country comparisons and facilitate the sharing of learning.

*Action:* To increase peer-to-peer learning and collaboration, efforts should be made to establish linkages between researchers engaged in HPSR. Regional networks among countries at similar stages of development could be formed to facilitate joint research endeavours as well as create opportunities for mentorship.

*Action:* To strengthen the capacity for the uptake of evidence, efforts should be made to provide decision-makers with training on the role of research in decision-making and health systems strengthening. Schools of public policy and/or other executive training institutes could be supported to develop courses or modules on HPSR and its application to the policy development process.

*Action:* To reinforce the capacity of decision-makers to use evidence, efforts should be made to expose them to the research process. Rotations of staff between health ministries and research institutions could be instituted to help decision-makers—and researchers, better understand and appreciate the challenges and requirements related to the generation and use of policy-relevant knowledge in decision-making.

#### 4. Establish repositories of knowledge

The complexity of decision-making requires inputs from a broad evidence-base that includes knowledge generated from research, best practices, as well as tacit knowledge. Some of this knowledge is published in peer-reviewed journals but a lot of it is confined to project/programme reports and not shared more broadly. As a result, many successful innovations go unnoticed, and the knowledge generated from these experiences is not optimized by decision-makers, researchers, and other stakeholders in the development of policy and programmes.

*Action:* To increase the uptake of evidence by decision-makers, efforts should be made to synthesize and consolidate relevant evidence as well as other knowledge. A national repository of evaluations, best practices, and grey literature could be established within countries to enable greater access to existing knowledge that could improve decision-making.

*Action:* To facilitate the dissemination of evidence globally, efforts should be made to synthesize and consolidate relevant evidence as well as other knowledge. A global repository of evaluations, best practices, and grey literature could be established to inform decision-making as well as to ensure that the benefits of research and other learning activities are shared globally.

#### 5. Improve the efficiency of investments in research

Despite increased calls for greater investments in health policy and systems research, a major barrier to the generation of evidence is the limited availability of financial resources, particularly in low- and middle-income countries. Moreover, traditional research funding mechanisms, in most countries, are severely restricted by disciplinary boundaries and limited time frames. These make trans-disciplinary collaboration and measurement of health system change very difficult. Consequently, the most meaningful questions often fail to get addressed through the most rewarding research methodology.

*Action:* To support the ongoing generation of evidence for decision-making, efforts should be made by funders of research to prioritize HPSR. Minimum targets for HPSR funding, as a proportion of all health research funding, could be established by donors and governments in order to ensure sufficient resources for the conduct of research.

*Action:* To increase the efficiency of existing resources, efforts should be made to allocate resources for HPSR as part of programme activities (planning, implementation, and evaluation). Establishing designated line items for knowledge generation activities within programme budgets would ensure adequate funding for relevant research to inform these processes.

*Action:* To facilitate the generation of evidence that responds to complex health system challenges that can only be understood over an extended period of time, efforts should be made to establish flexible funding mechanisms that are not restricted to individual projects. Institutional endowments and/or cooperative agreements could be used by funders of research to support a range of trans-disciplinary research activities to address multi-faceted health system problems.

## 6. Increase accountability for actions

Sustaining a culture of evidence-informed decision-making will require greater transparency and accountability by all those who contribute to the development of public policies and programmes. Researchers and decision-makers must share responsibility for the health impact—or lack thereof, on populations. Similarly, donors and governments must also ensure that investments in HPSR are producing the desired improvements in capacity, conduct, and use of research.

*Action: To increase the accountability for investments in HPSR, efforts should be made to assess the capacity for, and investments in HPSR on a routine basis. The use of HPSR-generated evidence should also be monitored. This will help Member States and funders of research to optimize existing resources and identify priorities for future investments.*

*Action: To encourage shared responsibility among researchers for the health outcomes they seek to improve, efforts should be made to reorient performance measures within academic and research institutions. Shifting of incentive structures from publication in high-impact journals to measures of policy influence and impact could be institutionalized to increase the accountability of researchers.*

*Action: To ensure greater accountability among decision-makers for evidence-use, efforts should be made to allow public access to policy debates, dialogues and evaluations. Creating opportunities for public input during the policy development process could make decision-making more transparent and help to ensure greater use of evidence.*





**SECTION 5**

# **Annexes**

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## Annex 3. References

1. AHP SR, 2011. Alliance for Health Policy and Systems Research Strategic Plan 2011–2015, Geneva, Switzerland: World Health Organization.
2. Atun, R. et al., 2010. A systematic review of the evidence on integration of targeted health interventions into health systems. *Health Policy and Planning*, 25(1).
3. Balabanova, D., McKee, M., Mills, A. W. A. & Haines, A., 2010. What can global health institutions do to help strengthen health systems in low income countries. *Health Research Policy and Systems*, 8(22).
4. Baum, F., 2007. *The New Public Health*. 3 ed. New York: Oxford University Press.
5. Bennett, S. et al., 2011. Building the Field of Health Policy and Systems Research: An Agenda for Action. *PLoS Medicine*, 8(8).
6. Beynon, P., Chapoy, C., Gaarder, M. & Masset, E., 2012. What Difference does a Policy Brief Make? Institute of Development Studies, International Initiative for Impact Evaluation, The Norwegian Agency for Development Cooperation.
7. Bowling, A., 2009. *Research Methods in Health: Investigating Health and Health Services*. 3 ed. s.l.:McGraw-Hill.
8. Brownson, R. et al., 2011. *Evidence-Based Public Health*. New York: Oxford University Press.
9. de Savigny, D. & Adam, T., 2009. *Systems Thinking for Health Systems Strengthening*. Geneva: Alliance for Health Policy and Systems Research.
10. Diez-Roux, A., 2007. Integrating Social and Biologic Factors in Health Research: A Systems View. *Annals of Epidemiology*, 17(7).
11. Feinstein, A., 1985. *Clinical epidemiology: The architecture of clinical research*. Philadelphia: W.B. Saunders Co.
12. Frenk, J., 2010. The Global Health System: Strengthening National Health Systems as the Next Step for Global Progress. *PLoS Medicine*, 7(1).
13. Gilson, L. et al., 2011. Building the Field of Health Policy and Systems Research: Social Science Matters. *PLoS Medicine*, 8(8).
14. Gilson, L. & Raphaely, N., 2008. The terrain of health policy analysis in low and middle income countries: a review of published literature 1994–2007. *Health Policy and Planning*, 23(5), pp. 294-307.
15. Green, L., Ottoson, J., Garcia, C. & Robert, H., 2009. Diffusion Theory and Knowledge Dissemination, Utilization, and Integration in Public Health. *Annual Review of Public Health*, Volume 30.
16. Hafner, T. & Shiffman, J., 2012. The emergence of global attention to health systems strengthening. *Health Policy and Planning*, 27(2).
17. Hanney, S. & González-Block, M., 2009. Evidence-informed health policy: are we beginning to get there at last? *Health Research Policy and Systems*, 7(30).

18. Hanney, S. & González-Block, M., 2011. Yes, research can inform health policy; but can we bridge the 'Do-Knowing It's Been Done' gap? *Health Research Policy and Systems*, 9(23).
19. Hawe, P. & Potvin, L., 2009. What is population health intervention research? *Canadian Journal of Public Health*, 100(1).
20. Humphreys, K. & Piot, P., 2012. Scientific evidence alone is not sufficient basis for health policy. *BMJ*, 344(1316).
21. Jirawattanapaisal, T., Kingkaew, P., Lee, T. & Yang, M., 2009. Evidence-based decision-making in Asia-Pacific with rapidly changing health-care systems: Thailand, South Korea, and Taiwan. *Value Health*, 12(3).
22. Lavis, J. et al., 2010. Bridging the gaps between research, policy and practice in low- and middle-income countries: a survey of researchers. *Canadian Medical Association Journal*, 182(9).
23. Lavis, J. et al., 2012. Guidance for Evidence-Informed Policies about Health Systems: Linking Guidance Development to Policy Development. *PLoS Medicine*, 9(3).
24. Lavis, J. et al., 2009. SUPPORT Tools for evidence-informed health Policymaking (STP) 4: Using research evidence to clarify a problem. *Health Research Policy and Systems*, 7(S1).
25. Lewin, S. et al., 2012. Guidance for Evidence-Informed Policies about Health Systems: Assessing How Much Confidence to Place in the Research Evidence. *PLoS Medicine*, 9(3).
26. Mann, G. et al., 2011. The role of health economics research in implementation research for health systems strengthening. *The International Journal of Tuberculosis and Lung Disease*, 15(6).
27. Marmot, M. et al., 2008. Closing the gap in a generation: health equity through action on the social determinants of health. *The Lancet*, 372(9650).
28. Mills, A., 2012. Health policy and systems research: defining the terrain; identifying the methods. *Health Policy and Planning*, 27(1).
29. Mills, A. et al., 2008. What do we mean by rigorous health-systems research? *The Lancet*, 372(9649), pp. 1527-1529.
30. Misra, S., Stokols, D., Hall, K. & Feng, A., 2011. Community-Based Participatory Research Contributions to Intervention Research: The Intersection of Science and Practice to Improve Health Equity. *Converging Disciplines*, Volume 4.
31. Oxman, A., Lavis, J. & Fretheim, A., 2007. Use of evidence in WHO recommendations. *The Lancet*, 369(9576), pp. 1883-9.
32. Oxman, A., Lewin, S., Lavis, J. & Fretheim, A., 2009. SUPPORT Tools for evidence-informed health policymaking (STP) 15: Engaging the public in evidence-informed policymaking. *Health Research Policy and Systems*, 7(S15).
33. Oxman, A. et al., 2009. SUPPORT Tools for evidence-informed health policymaking (STP) 2: Improving how your organisation supports the use of research evidence to inform policymaking. *Health Research Policy and Systems*, 7(S2).
34. Peters, D. et al., 2009. Improving Health Service Delivery in Developing countries: From Evidence to Action. Washington, DC: The World Bank.

35. Ponsar, F. et al., 2011. No cash, no care: how user fees endanger health—lessons learnt regarding financial barriers to healthcare services in Burundi, Sierra Leone, Democratic Republic of Congo, Chad, Haiti and Mali. *International Health*, 3(2).
36. Provan, K., K., H. & Milward, H., 2009. The evolution of structural embeddedness and organizational social outcomes in a centrally governed health and human services network. *Journal of Public Administration Research and Theory*, 19(4).
37. Reich, M., Takemi, K., Roberts, M. & Hsiao, W., 2008. Global action on health systems: a proposal for the Toyako. *The Lancet*, Volume 371.
38. Remme, J. et al., 2010. Defining Research to Improve Health Systems. *PLoS medicine*, 7(11).
39. Rosenfield PL. (2008). Toward transdisciplinary research: Historical and contemporary perspectives. *American Journal of Preventive Medicine*, 35(2S), S225–S234.
40. Roux, D. et al., 2010. Framework for participative reflection on the accomplishment of transdisciplinary research programs. *Environmental Science & Policy*, 13(8).
41. Shankardass, K. et al., 2012. A scoping review of intersectoral action for health equity involving governments. *International Journal of Public Health*, 57(1).
42. Sheikh, K. et al., 2011. Building the Field of Health Policy and Systems Research: Framing the Questions. *PLoS Medicine*, 8(8).
43. Shiell, A., Hawe, P. & Gold, L., 2008. Complex interventions or complex systems? Implications for health economic evaluation. *BMJ*, 336(7656).
44. Tantivess, S. & Walt, G., 2008. The role of state and non-state actors in the policy process: the contribution of policy networks to the scale-up of antiretroviral therapy in Thailand. *Health Policy and Planning*, 23(5), pp. 328-38.
45. Wallerstein, N. & Duran, B., 2010. Community-Based Participatory Research Contributions to Intervention Research: The Intersection of Science and Practice to Improve Health Equity. *American Journal of Public Health*, 100(S1).
46. WHO, 2004. *World Report on Knowledge for Better Health: Strengthening health systems*. WHO Report.
47. WHO, 2007. *Everybody's Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action*, Geneva: World Health Organization.
48. WHO, 2008. Bamako Call to Action on Research for Health. Global Ministerial Forum on Research for Health.
49. WHO, 2008. *Closing the Gap in a Generation*, Geneva, Switzerland: Commission on Social Determinants of Health.
50. WHO, 2009. *Scaling up research and learning for health systems: now is the time*. Geneva, World Health Organization.
51. WHO, 2010. *Research and the World Health Organization: A history of the Advisory Committee on Health Research 1959–1999*. Geneva: World Health Organization.
52. WHO, 2011. *Keeping Promises, Measuring Results. Commission on Information and Accountability for Women's and Children's Health*. Geneva: World Health Organization.

**“Public health [today] enjoys commitment, resources, and powerful interventions...but the power of these interventions is not matched by the power of health systems to deliver them to those in greatest need, on an adequate scale and in time...This arises, in part, from the fact that research on health systems has been so badly neglected and underfunded...In the absence of sound evidence, we will have no good way to compel efficient investments in health systems.”**

Dr Margaret Chan, Director-General, World Health Organization  
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